



GOVERNMENT OF KERALA

# ECONOMIC REVIEW 2024

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GOVERNMENT OF KERALA

# ECONOMIC REVIEW 2024

State Planning Board, Thiruvananthapuram, Kerala, India  
January 2025

**Volume One**

**Economic Review 2024**

Kerala State Planning Board, Thiruvananthapuram, Kerala, India

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## FOREWORD

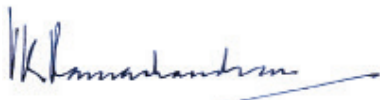
According to quick estimates, the annual rate of growth of the Gross State Domestic Product (GSDP) in Kerala in 2023-24 was 6.5 per cent at constant prices. The corresponding figure for the previous year was 4.2 per cent. The data show positive growth in all sectors of the economy. Per capita GSDP in constant prices grew 5.5 per cent in 2023-24, and now stands at Rs 1,76,072 (the national average is Rs 1,24,600). The role of State policy has been central to the growth of incomes in Kerala over the preceding year.

Economic planning is central to Kerala's development. The 14th Five-Year Plan continues to deepen and widen the scope of social provisioning in the State, and to use human development achievements as a springboard for economic growth. There has been increased investment in the productive sectors, in high quality infrastructure, in income-bearing services (including tourism and information technology), in small and medium businesses, and in local governments. The State continues to invest in modern employment, and to promote social services for the working people and people in need.

In 2023, the NITI Aayog Multi-dimensional Poverty Index (MPI) ranked Kerala as the State with the lowest poverty, with an MPI score of 0.002. Kerala has achieved most of the Sustainable Development Goals. The India Skills Report 2024 identified Kerala as the most preferred State to work in, by both male and female employable talent.

The theme chapter for this year's Economic Review is on Kerala's recent achievements in the industrial sector. The Kerala Industrial Policy 2023 is a landmark initiative. Flagship programmes to encourage the growth of MSMEs in the State, to create a new environment for industry and for Kerala's young and educated working class, and to create a new environment for industrial investment have been discussed in detail in this chapter.

The Economic Review 2024 includes the most recent data available on economic performance, Plan priorities, and ongoing schemes, programmes, and projects of the Government of Kerala. Volume I covers the policies, programmes, and achievements of Government departments, and Volume II, the data. Economic Review 2024 is published in English and Malayalam. A digital version is uploaded on the State Planning Board website, [www.spb.kerala.gov.in](http://www.spb.kerala.gov.in).



**V K Ramachandran**  
Vice Chairperson  
January, 2025



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## KERALA AT A GLANCE

Kerala stands out as a leading State in India with high GSDP and per capita GSDP. With an MPI score of 0.002, Kerala reported the least poverty among the States for the second time consecutively, as per the NITI Aayog Multidimensional Poverty Index, 2023. In the SDG India Index 2023-24, Kerala ranked top for the fourth consecutive year, and achieved an overall score of 79. Kerala topped the States in Goal 2 (Zero Hunger, score 84) and Goal 4 (Quality Education, score 82). Most of the SDGs adopted by Government of India have already been achieved by Kerala. India Skills Report 2024 placed Kerala as the most preferred State to work for both male and female employable talent. Kerala has been recognised as the top performer in the State Business Reforms Action Plan (SBRAP) 2022, earning the 'Top Achiever' title in nine out of 30 reform areas—the highest number of such recognitions among all States and Union Territories.

Kerala continued its strong growth in 2023-24, as well. In 2023-24, the State economy posted a robust growth. GSDP in real terms grew by 6.5 per cent (QE), compared to 4.2 per cent in 2022-23. The Gross State Value Added (GSVA) at constant 2011-12 prices increased by 7.2 percent in 2023-24, as against 5.3 per cent achieved in 2022-23. Kerala is placed among the top ten States in India with high per-capita Gross State Domestic Product. The per capita real GSDP of the State increased by 5.5 per cent to Rs 1,76,072 in 2023-24, as against the national average of Rs 1,24,600. The average income per person in Kerala is higher than the national average.

The sectoral composition of GSDP reveals strong positive growth across sectors in 2023-24, as compared to the previous year. The primary sector posted a robust growth of 4.7 per cent in 2023-24, as against 0.9 per cent recorded in 2022-23. The secondary sector grew at 4.1 per cent in 2023-24, as against 3.2 per cent in 2022-23. The tertiary sector achieved strong growth of 8.9 per cent in 2023-24, as compared to 7.0 per cent growth in 2022-23. The spillovers of proactive policy interventions of the Government have strengthened growth across sectors.

Kerala has followed a prudent fiscal consolidation through revenue augmentation and expenditure rationalisation. The fiscal deficit as a per cent of GSDP was 2.5 per cent in 2022-23, marginally increased to 2.9 per cent in 2023-24, and is estimated to be 3.4 per cent in 2024-25. Similarly, the revenue deficit is 1.6 per cent of GSDP in 2023-24, as against 0.9 per cent in 2022-23. In 2023-24, the State's total revenue receipt decreased by 6.2 per cent compared with previous years. This is primarily because of the decline in Central transfers, which decreased by 26 per cent in 2023-24 as compared to 2022-23. However, the State's own revenue receipts have been increasing over the years, except for a negative growth marked in 2020-21 because of the unprecedented outbreak of Covid-19. In 2023-24, the State's own revenue receipts increased by 4 per cent compared with previous year. In the same period, the State's own tax revenue increased by 3.3 per cent and own non-tax revenue increased by 8.1 per cent.



The total expenditure has registered a positive growth of 0.5 per cent in 2023-24, as compared to the negative growth (-2.7 per cent) in 2022-23. Capital outlay and capital expenditure have decreased by 2.9 per cent and by 0.6 per cent, respectively, in 2023-24.

According to the National Statistical Office (NSO), CPI-Combined inflation stood at 5.49 per cent and 5.52 per cent respectively in India and Kerala, in September 2024. In both India and Kerala, rural inflation is higher than urban inflation in September 2024.

All sectors of the primary sector posted a positive growth in 2023-24. Agriculture and Allied activities grew by 4.7 per cent in 2023-24, as against 0.5 per cent in 2022-23. Forestry and Logging and Livestock sectors grew by 8.5 per cent and 6.4 per cent, respectively, in 2023-24 (QE). The share of Agriculture and Allied Activities in the total GSVa at constant prices decreased marginally from 8.5 per cent in 2022-23 to 8.3 per cent in 2023-24 (QE).

According to land use data, in 2023-24, out of the total geographical area of 38.86 lakh ha, the total cultivated area and net area sown were 25.36 lakh ha (65.3 per cent) and 19.7 lakh ha (50.8 per cent), respectively. The land put to non-agricultural use was 6.1 lakh ha (15.7 per cent), and forest area was 10.82 lakh ha (27.8 per cent).

The production of food crops such as pulses, ragi, small millets, and sweet potato, among others, have increased in 2023-24, as compared to 2022-23. Of the gross cropped area in Kerala, food crops are 9.8 per cent and cash crops, 65.7 per cent. Rice and plantation crops have shares of about 7.1 per cent and 28 per cent, respectively. Coconut occupies a significant portion of gross cropped area (30.2 per cent), followed by rubber (21.6 per cent).

The total irrigated area has increased over the years. The net area irrigated increased to 4.19 lakh ha in 2023-24, compared to 4.18 lakh ha in 2022-23. Wells (including bore well) are the major source of irrigation, and irrigated 1.77 lakh hectare in 2022-23. This is followed by Government canals, which irrigate 0.82 lakh ha. Among crops, paddy and coconut benefitted the most from irrigation. The gross area irrigated under paddy has increased to 1.60 lakh ha in 2023-24 from 1.53 lakh ha in 2022-23, and that of coconut has increased to 1.63 lakh ha in 2023-24 from 1.56 lakh ha in 2022-23.

In 2023-24, total fish production stood at 8.32 lakh MT, of which inland fish constitute 2.5 lakh tonne, and the remaining 5.8 lakh tonne are marine fish. Kerala is the third largest seafood exporting State in terms of quantity, and second in terms of value of exports. The export of marine products from Kerala has been increasing from 2015-16. In 2023-24, 1.97 lakh MT of sea food, worth Rs 7,231.84 crore, was exported.

Cooperatives in Kerala play a critical role in mobilising people and pooling their resources to meet the common needs of its members, and thereby the larger society. It promotes the development of weaker and marginalised sections, particularly in rural area. Kerala has 16,393 co-operative societies as on March 31, 2024, of which, 12,246 are active. Consumer co-operatives (4,617) are the largest in number, followed by credit co-operatives (3,759),

and women's co-operatives (1,262). In addition to these, there are marketing, housing, processing, health, and Scheduled Caste and Scheduled Tribe co-operatives. Kerala is the only State in India with Youth Co-operative Societies to promote entrepreneurship among the youth.

Industry plays a decisive role in determining overall growth in Kerala. The secondary sector accounted for 27.0 per cent of GSVA at constant prices in 2023-24 (QE). The performance of the sector has improved in 2023-24, as compared to previous year. The growth of real Gross State Value Added (GSVA) in the sector was higher at 4.1 per cent in 2023-24, as compared to 3.2 per cent in 2022-23. Sectors including construction and manufacturing have achieved 4.6 per cent and 3.0 per cent growth, respectively, in 2023-24. The share of construction and manufacturing sectors in real Gross State Value Added (GSVA) was 14.1 per cent and 11.5 per cent respectively, in 2023-24.

The Government of Kerala declared 2022-23 as the “Year of Enterprises” with the motto “My enterprise, Nation’s pride”. The initiatives were launched to establish “One Lakh Enterprises in 2022-23”. Under the “Year of Enterprises 1.0” campaign in 2022-23, a total of 1.39 lakh new enterprises were started, which generated investments worth Rs 8,421.6 crore, and new employment for 3 lakh people. The second edition, named “Year of Enterprises 2.0,” was launched in 2023-24. As part of this, a total of 1.03 lakh new enterprises were started with the investment of Rs 7,048.66 crore, 2.18 lakh new employment was generated. The “Year of Enterprises 3.0” 2024-25 campaign is underway. An innovative programme named “Mission 1000” was launched to convert 1000 MSMEs into ventures with an average turnover of Rs 100 crore each in four years.

A standout feature of the Kerala economy is that services have the highest share in the GSVA, 64.25 per cent in 2023-24(QE). A positive growth was registered across sectors including information technology, tourism, hotels and restaurants, communication, trade, and transport except road transport.

Information Technology is a growing sector in Kerala. The State has a network of Technoparks, Infopark, Cyber Park, and Technocity. Kerala established the first techno park in India, which has now become the largest IT Park, with 768.63 acres of land and 12.72 million square feet of built-up area. The Technocity project in Kazhakuttam is the largest integrated IT township, and is spread over 390 acres of land. India’s first Digital Science Park is in Kerala. Kazhakuttam-Kovalam (NH 66) is the first IT Corridor in Kerala. The State Government, in 2020 upgraded Indian Institute of Information Technology and Management (IIITM-K) to Kerala University of Digital Sciences, Innovation and Technology.

Kerala has been a frontrunner in e-governance and mobile governance because of its concrete interventions to develop core infrastructure and e-literacy programmes. The Government of Kerala’s landmark project is “KFON”, with a vision to provide high speed connectivity to 30,000 government and educational institutions, and free internet to 20 lakh families of the Economically Backward Community (EBC). Phase I of the project is near completion, and 51,617 connections have been provided, as on August 31, 2024. Up to November 30, 2024, through K-FON, 5,989 BPL families successfully received free internet connectivity. E-governance initiatives under the

Kerala State Information Technology Mission (KSITM) include e-office, Service plus, FRIENDS, Akshaya, SeMT, Citizen Call Centre, SPARK, and e-procurement. Core infrastructure for e-governance in the State consists of Kerala State Wide Area Net Work (KSWAN), Secretariat Wide Area Network, State Data Centre and State Service Delivery Gate way.

Kerala has a robust public distribution system, with a network of Fair Price Shop spread across State. As of March 31, 2024, Kerala has 94.31 lakh valid ration cards, which include both NFSA and non-NFSA category. The NFSA category includes 5.92 lakh AAY cards and 35.96 lakh priority cards. The non-NFSA category includes 22.72 lakh non-priority subsidy cards and 29.42 lakh non-priority non-subsidy cards. Kerala has 14,157 Fair Price Shops as of October 2024. The total food grains distribution through PDS in 2023-24 is 13,42,408 MT, which include, 2,19,770.02 MT to AAY card holders, 7,23,107.92 MT to PHH card holders, and 3,99,530.4 MT to non-priority card holders. A total subsidy of Rs 9846.05 lakh was spent on non-priority card holders in 2023-24.

Kerala has the least rural-urban divide in India, because of strong connectivity. Every village in Kerala is connected with all-weather roads. The total road length in 2024 is 1,91,292.39 km, which includes National and State highways, Major District roads, rural roads, urban roads, and other roads constructed by various departments. PWD has developed and maintained 29,573 km (15.5 per cent) of the roads in 2023-24, of which 4,128 km (13.95 per cent) are State Highways and the remaining 25,445 km (86.04 per cent) are Major District Roads (MDRs). In the State Highway category, 898 km are four-lane, 3,193 km are two-lane, and the remaining 35 km are single-lane. MDRs covers 25,445 km, of which, 52 km are four-lane, 10,593 km are two-lane, and 14,748 km are single-lane. Local Self-Governments own and operate 1.52 lakh km (79.7 per cent) of roads. In addition, 11 National Highways (NHs) pass through Kerala (a total length of 1,781 km). The Hill Highway and Coastal Highways are two landmark projects in the road sector. Work on four stretches of the Hill Highway are complete, and is in progress for the remaining stretches. Land acquisition for coastal highways is under progress.

In infrastructure development, remarkable achievements includes the land acquisition for National Highways (NH-66), the Vizhinjam International Seaport, water metro, Kochi metro, Kannur airport, and more.

Kerala is the first State in India that was declared fully electrified. Electricity is being provided throughout the State 24x7x365, without power cuts or load shedding. The total installed capacity of power in Kerala, as on March 31, 2024, is 3,818.8 MW. This is an 8.6 per cent growth from the 3,514.8 MW in 2023. Out of the total installed capacity in 2023-24, the State sector contributes 2,307.6 MW (60.4 per cent), central sector 359.58 MW (9.4 per cent), and private sector 1151.6 MW (30.1 per cent). Annual sales increased from 25,384 MW in 2022-23 to 28,360 MW in 2023-24, a growth of 12 per cent. The total revenue from the sale of power (including sales to other utilities outside the State), has increased from Rs 17,705.46 crore in 2022-23 to Rs 20,065 crore in 2023-24, a 13 per cent growth over the previous period. Per capita power consumption has increased from 682 kWh in 2022-23 to 756 kWh in 2023-24. The total number of consumers as on March 31, 2024 was 138.6 lakh, as against 136.5 lakh in 2022-23.

Robust decentralisation is the salient feature of Kerala's development. Kudumbashree has played a pioneering role in local development, particularly in women's empowerment. Initiatives include Janakeeya hotels, Kerala Chicken outlets, Pocketmart, Lunch Bell, K4Care, and Back to School campaign. To boost micro-enterprise activities, 34,526 new enterprises were formed with 39,064 entrepreneurs in 2023-24, with the handholding support of Kudumbashree. In 2024-25, Kudumbashree has formed 11,771 new micro-enterprises with 14,040 entrepreneurs. Under SHE Starts, up to September 30, 2024, 858 micro-enterprises have been established, engaging 1,283 women entrepreneurs. Under the Destitute Free Kerala programme, Kudumbashree has disbursed the Challenge Funds through 1,033 authorised general projects and 170 tribal projects, benefiting 1,57,381 people for basic needs, including food, medicine, and education.

Under the LIFE (Livelihood, Inclusion and Financial Empowerment) Mission, a total of 4.08 lakh houses have been constructed, on August 31, 2024. Under the Ayyankali Urban Employment Guarantee Scheme (AUEGS), 26,89,283 person-days were created in various Municipalities and Corporations, in 2023-24. A total of 68,864 families received employment, of which, 54,384 are general category families, 13,650 are SC families, and 830 are ST families.

In 2024, out of 12.6 lakh persons employed in the organised sector in Kerala, 5.6 lakh (44.4 per cent) are in the public sector and 7 lakh (55.6 per cent) are in the private sector.

The Government of Kerala is committed to the social protection of its people, especially the marginalised and vulnerable. Kerala has increased the monthly social security pension amount from Rs 600 per beneficiary in 2016 to Rs 1,600 per beneficiary in 2021. The total number of beneficiaries has increased from 34 lakh in 2015-16 to 50.4 lakh as on October 2024, of which 31.6 lakh (63 per cent) are women. The welfare board pensions are not included in the above. More than half of beneficiaries (53.1 per cent) receive pensions through bank transfers. About 57 per cent beneficiaries are recipients of the old age pension, 27 per cent the widow pension, 8 per cent the pension for people with disabilities, and 6.4 per cent the agriculture worker pension. The pension for unmarried women is given to 83,892 beneficiaries.

Specific schemes are implemented for the upliftment of the socially and economically disadvantaged. In 2023-24, a financial assistance of Rs. 127.6 crore (71 per cent of the outlay) has been provided to 3,340 land less SC families for purchasing land. In 2023-24, a total of 5,252 study rooms were constructed for high school and higher secondary students of the SC community. As part of the LIFE Mission, 1,10,930 SC beneficiaries have been given houses. In 2023-24, the Government supported the education of 364 students belonging to Scheduled Castes in reputed foreign institutions through the Unnathi Overseas Scholarship scheme. This scheme gives scholarships of up to Rs 25 lakh. In 2023-24, under the "Skill Training and Employment" scheme, 151 beneficiaries received the self-employment subsidy, and 749 persons availed assistance for seeking jobs abroad. Through various skill development programmes, 806 SC youths received skilling.

The Scheduled Tribe Development department runs multiple programmes for the upliftment of the ST population in Kerala. The State has consistently allocated funds to the Tribal

Sub-Plan (TSP). In 2023-24, the Tribal Resettlement and Development Mission (TRDM) distributed 2,194.81 acres of land to 1,986 tribes. As of August 31, 2024, an additional 5.81 acres has been allocated to 19 tribes under the Land Bank scheme. From 2016-17, 6,998 houses were sanctioned by the Scheduled Tribe Development Department under various housing schemes. Under the LIFE Mission, 42,363 houses have been given to Scheduled Tribe beneficiaries. Out of the total 6,578 Unnatis, 6,523 are electrified. In 2023-24, a total of 1,915 brilliant students were awarded special incentives, 279 students received pre-matric scholarships, and 26,478 students received post-matric scholarships. A total of 1,25,866 people received medical assistance under the comprehensive health care scheme.

Education and health are two areas where Kerala has a proud legacy. To promote inclusive education, facilities including free uniforms, mid-day meals, financial assistance to meet travel expenses, hostel facilities, and excursions for students, are provided. In addition, to ensure an all-inclusive education, Kerala Infrastructure and Technology for Education (KITE) has developed audio books for visually challenged, and sign-adapted classes for hearing impaired students of Classes 10 and 12. For infrastructure development, Kerala Infrastructure Investment Fund Board (KIIFB) has promised Rs 5 crore, Rs 3 crore, and Rs 1 crore each respectively for 141, 386, and 446 schools. In the Rs 5 crore and Rs 3 crore categories, 138 and 178 school buildings, respectively, have been constructed. Under the Rs 1 crore category, buildings were constructed for 192 schools. About 99.8 per cent of Government schools have access to drinking water and all Government schools have urinals/latrines facilities. A big leap in education has been the introduction of Artificial Intelligence (AI) in school education. KITE has initiated AI training for 80,000 secondary teachers and AI is included in the ICT textbook of Class 7.

Kerala has undertaken significant policy changes in higher education, with a special focus on improving quality. Three commissions have been established at the State-level to bring about apt reforms to i) examine the existing higher education system in Kerala, particularly in the light of the State's larger objective of transforming itself into a knowledge society and a knowledge economy, ii) review the examination system in universities and higher education institutions, and iii) examine the laws, statutes, regulations, and ordinances of universities, in the context of the regulations of UGC, AICTE, and NCTE. Major incentives in higher education include Hunger-Free Campus, Connect Career to Campus, CM's Prathibha Scholarship Award, Mini Industrial Unit, and Jeevani College Mental Awareness Programme. In Kerala, 16 types of Central and State sector scholarships were availed in 2023-24. A total of 3,358 students received the Kerala State Suvarna Jubilee Scholarship, and 32,427 students were selected for District Merit Scholarships.

In higher education, Kerala has a Gross Enrolment Ratio (GER) of 41.3, which is the seventh highest among the States and UTs (AISHE-2021-2022). In 2022, the University of Kerala secured the highest NAAC grading of A++, with a Cumulative Grade Point Average (CGPA) of 3.67. Kerala University received the 38th overall ranking in India by the National Institute Ranking Framework (NIRF) in 2024, and was ranked 24th among universities in 2024. Kerala University secured the 339th rank in QS World Ranking Asia 2025, improving from 451 in the previous year. Mahatma Gandhi University (MGU) has been reaccredited with an A++ grade by NAAC in the fourth cycle, with a CGPA score of 3.63. MGU is the first University in Kerala to

achieve A++ in the fourth reaccreditation cycle. In 2024, the University has secured 67th rank at the university level and 37th rank among higher education institutions (overall in India as per NIRF). In addition, 16 colleges from Kerala were listed in the top 100 colleges in the country, and 5 are ranked within the top 50 colleges, as per NIRF ranking 2024.

The public healthcare system in Kerala is accessible, equitable, affordable, and high-quality. Life expectancy (at birth) in Kerala is 75 years, the highest among Indian States, and higher than the All-India average (70 years). The Maternal Mortality Rate (MMR) in Kerala is 19, the lowest among the States and much lower than all-India average of 97. Kerala is the only big State in India with a single digit Infant Mortality Rate (IMR) of 6, whereas the all-India average is 28. Under Nava Kerala Karma Padhathi-II, the Aardram Mission-2 was launched in 2022. New initiatives under the Aardram Mission include 'ASWASAM' depression management clinics, 'SWAAS' Chronic Obstructive Pulmonary Disease (COPD) control programme, conversion of 4,261 rural sub centre's into health and wellness centre, outpatient facilities in all FHCs up to 6:00 pm every day, laboratory facilities in Family Health Centers (FHCs), lifestyle diseases clinic in all FHCs on all days, and Sampoorana Manasika Arogyam Programme (SMAP) in FHCs. A total of 649 (78 per cent) PHCs out of 886 were converted to FHCs, and 76 CHCs were converted to Block FHCs. Out Patient (OP) departments of 14 Districts/General hospitals out of 17, and 15 Taluk Hospitals out of 43, were made patient-friendly. OPs of all 8 medical colleges were made patient-friendly or modified, between 2017-18 and 2022-23. Kerala's e-Health Project has the largest database, with health details of 2,59,55,998 people collected and stored electronically.

The Government of Kerala aims to build a "Nava Keralam," with an underlying emphasis on enhancing the ease of living and doing business, and improving economic efficiency. The broad principles behind this include the creation of public goods, adoption of trust-based governance, partnering with the private sector for development, and improving agricultural and industrial productivity, without compromising on social commitments.



# KERALA'S ECONOMIC AND SOCIAL INDICATORS: A QUICK LOOK

Sl. No	Item	Units	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	Geographical Area	Sq.Km.	38856.7	38864	38863	38863	38863	38863	38863	38863	38863	38863	38863	38863
Administrative Setup														
2	Revenue Divisions	No.						21	27	27	27	27	27	27
3	Districts	No.	9	10	12	14	14	14	14	14	14	14	14	14
4	Taluks	No.	55	56	58	61	63	63	75	77	77	77	77	78
5	Villages	No.		1326	1331	1364	1452	1532	1664	1664	1664	1664	1664	1666
6	Towns	No.	92	88	106	197	159	520	520	520	520	520	520	520
Population as per Census			1951	1961	1971	1981	1991	2001				2011		
7	Total	(in 000s)	13549	16904	21347	25454	29099	31844				33406		
8	Males	(in 000s)		8362	10588	12609	14289	15469				16027		
9	Females	(in 000s)		8542	10760	12885	14810	16373				17379		
10	Rural	(in 000s)		14351	17880	20682	21618	23574				17471		
11	Urban	(in 000s)		2552	3467	4771	7018	8267				15935		
12	Scheduled Castes	(in 000s)		1422	2002*	2549	2887	3124				3040		
13	Scheduled Tribes	(in 000s)		208	193*	261	321	364				485		
14	Density of Population	No. Per Sq.Km.		435	549	655	749	819				860		
15	Literacy Rate	Percentage		55	60	70	90	90				94		
16	Sex Ratio	Females per 1000 males		1022	1016	1032	1036	1058				1084		
17	Urban Population	Percentage		15	16	19	24	26				48		
GSDP - at constant prices			1960-61	1970-71	1980-81	1990-91	2000-01	2009-10	2018-19	2019-20	2020-21	2021-22	2022-23 (P)	2023-24(Q)
18	GSDP	₹crore	462	1255	3,823	12,195	63,715	180,812	554,228	559,194	512,076	57,198,296	59,623,686	63,513,653
19	Primary Sector (GSVA)	₹crore	241	653	1,682	4,756	14,017	15,966	46,114	44,306	44,658	4,702,155	4,746,368	4,968,569
20	Secondary Sector (GSVA)	₹crore	68	163	841	3,171	14,017	38,249	130,450	132,480	128,749	14,209,309	14,658,910	15,254,256
21	Tertiary Sector (GSVA)	₹crore	153	439	1,300	4,268	35,680	126,597	303,662	317,188	271,393	31,187,885	33,357,724	36,341,477
22	Percapita Income	₹	276	594	1,508	4,207	19,951	47,360	159,878	160,506	146,246	160,791	166,938	176,072
Agriculture			1960-61	1970-71	1980-81	1990-91	2000-01	2009-10	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
23	Net Area Sown	000 ha.	1923	2171	2180	2247	2206	2079	2033	2026	2035	2029	1991	1973
24	Gross Cropped Area	'000 ha.	2349	2933	2885	3020	3022	2669	2571	2586	2568	2523	2516	2536
25	Gross Irrigated Area	'000 ha.			381	385	460	458	515	518	521	561	514	532
26	Gross Irrigated Area to Gross Cropped Area	Percentage			13	13	15	18	20	20	20	22	20	21



Gross area under principal crops			1960-61	1970-71	1980-81	1990-91	2000-01	2012-13	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
27	Paddy (wet-land)	'000 ha.	779	875	802	559	347	197	198	191.05	201.87	193.95	190.17	179
28	All Pulses	'000 ha.	44	40	34	23		3.0	2.5	2.06	2.006	1.44	1.547	1.6
29	Sugarcane Harvested Area	'000 ha.	9	8	8	8	3	2	1.01	0.95	0.92	0.92	0.93	0.7
30	Rubber	'000 ha.	133	188	238	384	474	545	551.2	551.03	550.65	550	549.78	548
31	Tea	'000 ha.	40	37	36	35	37	30	36.47	35.87	35.87	35.87	35.65	36
32	Coconut	'000 ha.	501	719	651	870	926	798	760.94	760.77	768.8	765.4	760.353	766
33	Areca nut	'000 ha.	54	86	61	65		102	95.73	96.9	96.57	93.97	94.553	96
34	Groundnut	'000 ha.	16	15	9	13		0.7	0.18	0.12	0.11	0.12	0.126	0.1
35	Pepper	'000 ha.	100	12	108	169	202	85.0	82.76	83.76	82.12	76.35	73.731	72.7
36	Cardamom	'000 ha.	29	47	56	67	41	42.0	38.88	39.69	39.14	39.14	40.345	40.4
37	Ginger	'000 ha.	12	12	13	14	12	5.0	3.27	2.82	2.7	2.92	2.581	2.2
Production of Principal Crops			1960-61	1970-71	1980-81	1990-91	2000-01	2012-13	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
38	Rice	'000 tonnes	1068	1298	1272	1087	751	509	578.25	587.1	626.90	559.30	592.684	530
39	All Pulses	'000 tonnes	18	13	22	17		3.0	2.3	2.18	1.92	1.47	1.606	1.9
40	Sugarcane	'000 tonnes	38	38	48	52	28	17	10.63	12.08	10.70	10.40	10.123	8
41	Rubber	'000 tonnes	24	88	140	308	560	800	492.5	533.5	519.50	556.60	599.375	610
42	Tea	'000 tonnes	39	43	48	63	69	63	60.76	59.26	66.85	60.36	65.98	65
43	Coconut	In million nuts	3220	3981	3008	4232	5536	5799	5299	481.4	4788.00	5535.00	5641	5523
44	Areca nut	'000 tonnes	8	13	11	13		118	99.92	92.75	103.20	103.50	98.527	104
45	Groundnut	'000 tonnes	14	16	8	10	10	9	0.24	0.15	0.14	0.16	0.193	0.15
46	Pepper	'000 tonnes	27	25	29	47	61	46	36.77	34.54	33.59	32.52	27.653	31
47	Cardamom	'000 tonnes	1	1	3	3		10	11.53	10.07	20.57	21.27	22.165	23
48	Ginger	'000 tonnes	11	20	32	46	42	22	15.12	11.92	12.09	12.87	11.006	10
Livestock Census			1977	1982	1987	1996	2003	2007						
49	Total Live-stock	in lakh	53	56	55	56	35	36						
50	Total Poultry	in lakh		152	185	308	139	127						
Forest			1960-61	1970-71	1980-81	1990-91	2000-01	2009-10	2018-19	2019-20	2020-21			
51	Forest Area	'000 ha.	1056	1056	1123	1122	1115	1131	1152	1152	1152			
Factories			1971	1981	1991	2001	2011	2018	2019	2020	2021	2022	2023	2024
52	Working Factories	No.	3024	9106	13255	18554	19676	23335	24254	24468	24453	23609	23405	22668
53	Employees	No.	206839	300515	368738	436410	644606	698679	726195	702901	652875	582419	661698	641701
54	Employees per lakh population	No.	969	1181	1267	1370	1930	2091	2174	2104	1954	2031	1981	1920
Electricity			1970-71	1980-81	1990-91	2000-01	2009-10	2011-12	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
55	Total Generation	Mu	2126	5242	5491	7656	6495	8351	7626.37	5781.23	7109.09	9858.27	8659.38	5716.40
56	Total Consumption	Mu		2869	5282	10319	12878	16182	22361.45	22948.82	22151.6	23499.54	25248.21	28105.07
57	Industrial Consumption	Mu		2025	2697	3784	4002	4926	5820.49	5683.3	3826.99	4481.02	4920.33	3820.09
58	Agricultural Consumption	Mu		125	288	350	225	286	337.65	348.48	412.22	382.73	391.52	459.2

59	Domestic Consumption	Mu		409	1621	4688	5931	7706	10864.34	11898.13	12716.47	12679.39	12400.1	13757.25
Education			1970-71	1980-81	1990-91	2000-01	2009-10	2012-13	2018-19	2019-20	2020-21	2021-22 <sup>*</sup>	2022-23 <sup>*</sup>	2023-24
60	Primary Schools	No.	9437	9605	9682	9714	9828	9737	9841	9833	9858	9847	9834	9817
61	Enrolment in primary school	'000s	4156	4284	4402	3637	3015	2545	2428	2450	2491.9	2593.6	2559.1	2478
62	High Schools	No.	1199	1971	2451	2596	2814	2890	3120	3118	3128	3125	3125	3131
63	Enrolment in high school	'000s		1310	1498	1611	1443	1426	1276	1267	1265.83	1274.51	1273.3	1269
Health			1970-71	1980-81	1990-91	2000-01	2009-10	2011-12	2018-19 <sup>*</sup>	2019-20 <sup>*</sup>	2020-21 <sup>*</sup>	2021-22 <sup>*</sup>	2022-23 <sup>#</sup>	2023-24 <sup>#</sup>
64	Hospitals	No.	553	746	1199	1319	1254	1255	1470	1471+RCC	1473+RCC	1477+RCC	1476+RCC	1476+RCC
65	No. of Beds	No.	21777	32447	38726	38242	37021	37388	56596	57713	58021	59684+RCC	59692+RCC	59847+RCC
Vital statistics (Demographic Status)			1970-71	1980-81	1990-91	2001	2009	2010	2017 <sup>**</sup>	2018 <sup>**</sup>	2019 <sup>**</sup>	2020 <sup>**</sup>	2021 <sup>**</sup>	
66	Birth Rate	per 1000 population	32	26	20	16	15	15	14.2	13.9	13.5		13.2	13.2
67	Death Rate	per 1000 population	9	6	6	7	7	7	6.8	6.9	7.1		7	7
68	Infant Mortality Rate	per 1000 population	61	37	21	11	12	14	10	7	6		6	6
Transport			1970-71	1980-81	1990-91	2000-01	2010-11	2011-12	2018-19	2019-20	2020-21	2021-22	2022-23	2022-24
69	Railway Route Length	Kms.	892	921	988	1148	1257	1257	1257	1257	1745 <sup>***</sup>	1745 <sup>***</sup>	2106 <sup>###</sup>	
70	Total Road Length	Kms.	18037	94145	128403	125835	151652	244373	273113.3	331904.11	238773.02	230934.18	235634.36	191292 *
71	Motor Vehicles	No.	86234	195000	648000	2111885	6072019	8048673	13334984	14184184	14847163	15565149	16352224	17408542
Local Governments			1990-91	2000-01	2006-07	2007-08	2008-09	2010-11	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
72	District Panchayats	No.		14	14	14	14	14	14	14	14	14	14	14
73	Block Panchayats	No.		152	152	152	152	152	152	152	152	152	152	152
74	Grama Panchayats	No.	983	990	999	999	999	978	941	941	941	941	941	941
75	Municipalities	No.	58	53	53	53	53	60	87	87	87	87	87	87
76	Corporations	No.	3	5	5	5	5	5	6	6	6	6	6	6

3

# Modern Medicine and Ayush included

##Sample Registration System Statistical Reports

###Including route length and running track

\*road length including PWD(road NH, LSGD and other departments).The total road length has decreased in 2023-24 compared to previous years. This change is attributed to the updating of records, as earlier inaccuracies in the asset register have now been corrected using GIS mapping software.

(P)Provisional estimate

(Q)Quick estimate

ha Hectare

Mu Million Unit



# DISTRICTS: AN OVERVIEW

Sl. No.	Items	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	TOTAL
1	Area (sq Km)	2192	2491	2637	1414	2208	4358	3068	3032	4480	3550	2344	2131	2966	1992	38863
2	Forest Cover (sq. Km) *	1317	1334	1949	80	1099	3155	1383	1166	2104	1984	1448	1581	1669	984	21253
3	Population 2011 ( in Lakh)	33.01	26.35	11.97	21.28	19.75	11.1	32.82	31.21	28.11	41.13	30.86	8.17	25.23	13.07	334.06
	Rural	15.3	14.48	10.65	9.79	14.09	10.57	10.48	10.25	21.33	22.96	10.13	7.88	8.82	7.98	174.71
	Male	7.25	6.81	5.00	4.65	6.93	5.27	5.18	4.88	10.31	10.95	4.85	3.86	4.26	3.88	84.08
	Female	8.05	7.67	5.66	5.15	7.16	5.29	5.29	5.36	11.01	12	5.29	4	4.56	4.11	90.6
	Percentage Decadal Growth (2001-2011)	-28.60	-31.70	-4.00	-34.2	-14.8	-1.4	-35.7	-52	-5.7	-29.8	-43	-4.6	-26.3	-17.7	-25.9
	Urban	17.72	11.87	1.32	11.48	5.65	0.52	22.34	20.96	6.77	18.17	20.73	0.32	16.41	5.09	159.35
	Male	8.57	5.66	0.62	5.48	2.76	0.25	11.01	9.92	3.28	8.65	9.86	0.15	7.56	2.41	76.19
	Female	9.15	6.21	0.70	6	2.9	0.26	11.33	11.04	3.49	9.52	10.86	0.16	8.85	2.68	83.16
	Percentage Decadal Growth (2001-2011)	62.30	154.80	6.30	84.80	88.60	-9.60	51.30	149.70	89.80	410.20	88.20	6.60	35.30	117.80	92.80
	Density	1508	1061	452	1504	895	255	1072	1031	627	1157	1316	384	852	657	860
	Fishermen Population, in number	177022	132572	2206	198164	25947	732	141887	78833	2688	97935	115017	238	45978	46149	1065368
	SC population as % of Total Population	11.30	12.46	13.74	9.46	7.79	13.12	8.18	10.39	14.37	7.50	6.45	3.99	3.30	4.08	9.10
	ST population as % of Total Population	0.81	0.41	0.68	0.31	1.11	5.03	0.50	0.30	1.74	0.56	0.49	18.53	1.64	3.74	1.45
4	Literacy Rate (2011)															
	Male	95.06	96.09	97.36	97.36	97.97	94.56	97.36	96.78	93.1	95.76	97.42	92.51	97.19	94.05	96.11
	Female	91.17	92.31	95.83	94.24	96.48	89.45	94.46	93.56	85.79	91.62	97.99	85.7	93.29	86.49	92.07
5	Percentage of Dropouts 2022-23 (latest)															
	Lower Primary	0.02	0.02	0.05	0.05	0.12	0.38	0.38	0.05	0.06	0.05	0.07	0.20	0.04	0.04	0.09
	Upper Primary	0.01	0.01	0.03	0.03	0.06	0.15	0.21	0.04	0.02	0.02	0.02	0.21	0.02	0.05	0.05
	High School	0.02	0.02	0.05	0.03	0.15	0.31	0.15	0.11	0.06	0.03	0.03	0.86	0.07	0.13	0.09
	GDVA 2023-24 (Quick) (Constant Price)															

Sl. No.	Items	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	TOTAL
6	GDVA at Basic Prices (₹ in lakh)	5495068	5339577	1461422	4612284	3831685	1833073	7630108	5876192	3979321	4983653	4747953	933797	3988968	1851207	56564302
	Share in Percentage															
	Primary	6.84	7.87	21.07	4.11	12.29	28.45	6.47	5.24	10.38	9.10	6.46	18.16	7.18	13.57	8.78
	Secondary	18.32	27.47	15.19	39.18	23.86	19.33	28.63	27.62	31.05	19.87	30.92	9.58	33.42	30.18	26.97
	Tertiary	74.84	64.65	63.74	56.70	63.85	52.22	64.91	67.13	58.57	71.02	62.62	72.26	59.40	56.25	64.25
	District Per Capita Income based on GVA at Basic Price ( in Rs)	179231	220354	139995	236305	212921	186407	238986	195125	144010	115288	155738	119128	164601	141130	176072
7	Production of Rice in Kerala ) in Metric Tonnes (2023-24)	3243.37	3726.77	9867.71	130956.51	51704.25	817.67	8973.55	72338.28	182332.52	30341.83	2421.00	19894.50	8646.86	5018.83	530283.64
8	Net Area Irrigated (2023-24) in ha	6967.90	4879.66	6025.03	34490.70	19628.51	47849.27	24739.37	69474.99	85112.62	31932.42	4341.23	15169.94	12833.25	56445.94	419890.83
9	Number of Commercial Banks (March 2023)	787	432	399	397	538	196	1054	782	516	525	494	154	412	231	6917
10	CD Ratio	75.78	66.17	27.30	53.68	54.55	113.59	100.12	53.23	68.78	61.31	80.91	125.38	58.07	84.33	70.32
11	No. of Registered SSI/ MSME 2023-24	10056	8330	3675	7582	6392	3403	10437	9737	9323	10142	9614	2782	7854	4269	103596
12	Length of PWD Roads (km)	2377.04	1924.59	1479.71	1994.11	3040.15	2661.28	2964.56	1934.17	2084.18	2440.47	1999.29	913.97	2314.72	1444.92	29573.16
13	No. of Motor Vehicles	2078067	1364516	650600	1153406	1021707	448348	2280261	1737773	1285677	1865517	1671242	319634	1083517	492377	17408542
14	Tourist Arrivals 2023															
	Foreign (in no.)	148462	4713	941	31403	28458	103644	279904	16204	1069	10398	14710	4429	2431	2291	649057
	Domestic (in No.)	3589932	442231	431878	744352	508899	3633584	4487930	2478573	555593	775754	1324835	1750267	854838	292975	21871641
	<i>*open forest included</i>															

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CHAPTER

01

KERALA ECONOMY



# KERALA ECONOMY

## 1.1 RECENT TRENDS IN MACRO-ECONOMIC AGGREGATES

### **Global Economic Scenario and National Outlook**

The global economy grew at 3.2 per cent in 2023 slightly lower than that in 2022 (3.5 per cent) as per the World Economic Outlook (WEO), October, 2024 of the International Monetary Fund (IMF). The growth of 3.2 per cent in 2023 has been achieved amidst inflationary pressures, rising geopolitical tensions, cross-border restrictions and slower growth in advanced economies (AEs).

The Emerging Market Economies (EMEs) have achieved higher growth in 2023 than projected in 2022. As per the World Economic Outlook (WEO), October, 2024, EME's growth increased from 4.1 per cent in 2022 to 4.4 per cent in 2023. But, Advanced Economies (AEs) growth declined from 2.6 per cent in 2022 to 1.7 per cent in 2023. Both EMEs and AEs will continue to hold stable growth of 4.2 per cent and 1.8 per cent respectively during 2024 and 2025. Almost all major economies have surpassed the pre-pandemic real GDP level in 2023. However, the growth registered across countries has been diverse due the divergence in domestic structural issues, uneven exposure to geopolitical conflicts and the impact of monetary policy tightening.

Global output growth has remained resilient and inflation has continued to moderate. Global growth

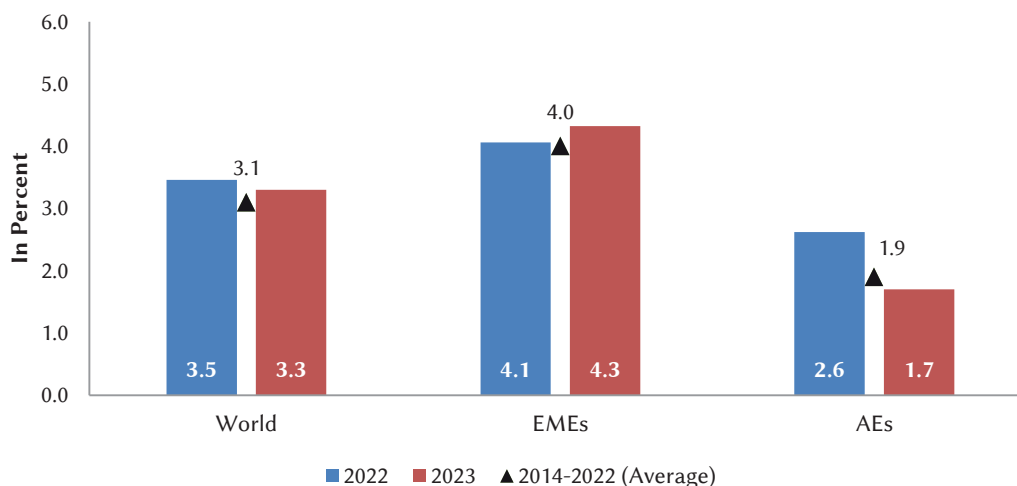
depicts stabilising trend as per the projections of World Bank, IMF and OECD reports as given in **Table 1.1.1** and **Figure 1.1.1**.

### **India Macroeconomic overview**

According to the NSO's provisional estimate, India's real Gross Domestic Product (GDP) is Rs1,73,81,722 crore in 2023-24, registering a growth of 8.2 per cent as against 7.0 per cent recorded in 2022-23. The real Gross Value Added (GVA) grew at 7.2 per cent in 2023-24 as compared to 6.7 per cent in 2022-23. However, as per NSO's First Advance Estimates, India's real GDP has been estimated to grow by 6.4 percent in 2024-25. This show sharp reduction in growth by 1.8 percent point as compared with growth rate of 2023-24. Nominal GDP has grown by 9.7 percent in 2024-25 as compared to 9.6 percent in 2023-24. The Real GVA has registered a decline in growth by 0.8 per cent to 6.4 percent in 2024-25 as compared to 7.2 percent in 2023-24. The decline in growth is primarily attributed to the decrease in investment. Quarterly growth of GDP and GVA in the FY 2024-25 reveals declining trend. The real GDP grew at 6.7 percent in First Quarter (Q1) of 2024-25, which fell down to 5.4 percent in Second Quarter (Q2). Similarly, real GVA registered a growth of 6.8 percent in Q1 which declined by 1.2 percent point to 5.6 percent in Q2. The declining trend



**Figure 1.1.1** Growth of Global Output



Source: World Economic Outlook (WEO), October, 2024, World Economic Outlook (WEO), April, 2022.

**Table 1.1.1.** Growth of GDP, agency wise estimate

Agency / Year	2023	2024*	2025*
World			
World Bank	2.6	2.6	2.7
IMF	3.3	3.2	3.2
OECD	3.1	3.2	3.2
India			
World Bank	8.2	6.6	6.7
IMF	8.2	7.0	6.5
OECD	8.2	6.7	6.7

Source: World Economic Outlook of International Monetary Fund, October 2024, Global Economic Prospects, June 2024 of World Bank, OECD Economic Outlook, Interim Report, September, 2024  
\*-Projections

in quarterly growth is primarily attributed to the reduction in private consumption and gross fixed capital.

The real per capita GDP is Rs 1,24,600 in 2023-24, registering an increase of 7.2 per cent over the previous year. The details of national income estimates are presented in the **Table 1.1.2**. The details of India's GDP, NDP, GNI and NNI at current and constant (2011-12) prices from 2013-14 to 2023-24 are presented in **Appendices 1.1.1, 1.1.2, 1.1.3** and **1.1.4**. The sectoral composition of GVA at constant and current prices presented in **Appendices 1.1.5** and **1.1.6**.

### Gross State Domestic Product and State Income

Kerala is placed among the top ten States in India with high per-capita income and Gross State Domestic Product (GSDP). Kerala economy posted a robust growth in 2023-24 as well. The real GSDP is Rs 6,35,13,653 lakh (QE) in 2023-24, registering a growth of 6.5 in 2023-24 from 4.2 per cent in 2022-23. The real Gross State Value Added (at 2011-12 prices) increased to 7.2 in 2023-24 from 5.3 per cent in 2022-23. GSDP at current price is Rs11,46,10,867 lakh in 2023-24, depicting an increase in growth of 11.9 per cent compared to 10.7 per cent in 2022-23. The per capita GSDP of Kerala increased by 5.5 per cent to Rs1,76,072 in 2023-24 as against national average of Rs1,24,600. The average income per person in Kerala is higher than the national average. Details are given in **Table 1.1.3**.

### Per Capita State Income

Kerala is among the top ten States in India with high per-capita income. Per capita Gross State Domestic Product at constant prices is Rs 1,76,072 in 2023-24, the corresponding all-India average (per capita GDP) is Rs 1,24,600. In other words, average income per person in Kerala is 1.4 times the national average in 2023-24. The per capita GSDP at constant prices of Kerala grew at 5.47 per cent in 2023-24.

Per capita NSDP of Kerala is Rs 1,61,957 at constant prices, and Rs 2,81,001 at current prices in 2023-24 (QE). The per capita NSDP at constant

**Table 1.1.2.** National Income estimates for the periods 2021-22 to 2023-24. (Rs in Crore)

Item	2021-22	2022-23 (1st RE)	2023-24 (PE)	Percentage Change Over Previous Year	
				2022-23	2023-24
<b>Domestic Product</b>					
GVA at Constant Prices	13876840	14804901	15873751	6.7	7.2
GVA at Current Prices	21635584	24659041	26762147	14.0	8.5
Gross Domestic Product (GDP) at Constant Prices	15021846	16071429	17381722	7.0	8.2
Gross Domestic Product (GDP) at Current Prices	23597399	26949646	29535667	14.2	9.6
Net Domestic Product (NDP) at Constant Prices	13066058	13986798	15146589	7.0	8.3
Net Domestic Product (NDP) at Current Prices	20930595	23809748	26127976	13.8	9.7
<b>National Product</b>					
Gross National Income (GNI) at Constant Prices	14827920	15831133	17125892	6.8	8.2
Gross National Income (GNI) at Current Prices	23319590	26579339	29104354	14.0	9.5
Net National Income (NNI) at Constant Prices	12872132	13746502	14890760	6.8	8.3
Net National Income (NNI) at Current Prices	20652786	23439442	25696663	13.5	9.6
<b>Per Capita Incomez</b>					
Per Capita GDP (Rs) at Constant Prices	109762	116216	124600	5.9	7.2
Per Capita GDP (Rs) at Current Prices	172422	194879	211725	13.0	8.6
Per Capita GNI (Rs) at Constant Prices	108345	114478	122766	5.7	7.2
Per Capita GNI (Rs) at Current Prices	170392	192201	208633	12.8	8.5
Per Capita NNI (Rs) at Constant Prices	94054	99404	106744	5.7	7.4
Per Capita NNI (Rs) at Current Prices	150906	169496	184205	12.3	8.7

Source: National Statistical Office, Ministry of Statistics & Programme Implementation, Government of India  
E: Revised Estimate, PE: Provisional Estimate

prices grow at 5.9 per cent and that at current prices grow at 11.2 per cent in 2023-24. **Figure 1.1.2** -show per capita NDP (India) and NSDP (Kerala) at constant price from 2013-14 to 2023-24. Kerala's Per capita NSDP is higher than the per capita NDP.

### Sectoral Composition

The sectoral share reveals the services sector dominate the economy with 64.2 per cent share in GSVA. On the other hand, the Primary and Secondary sector's share in GSVA has been declining over the years. The sectoral share of GSVA across secondary sector reveals, construction continues to occupy the largest share (14.07 per cent) in 2023-24 followed by Manufacturing (11.5 per cent). In the Tertiary sector, 'Trade, repair, hotels & restaurant' has the largest share of 20.02 per cent in GSVA. The other major sub-sectors with higher share in GSVA include, 'Real estate, ownership of dwelling & professional services', and 'Manufacturing',

in 2023-24. The details of sector wise GSVA distribution is presented in the **Table 1.1.4**.

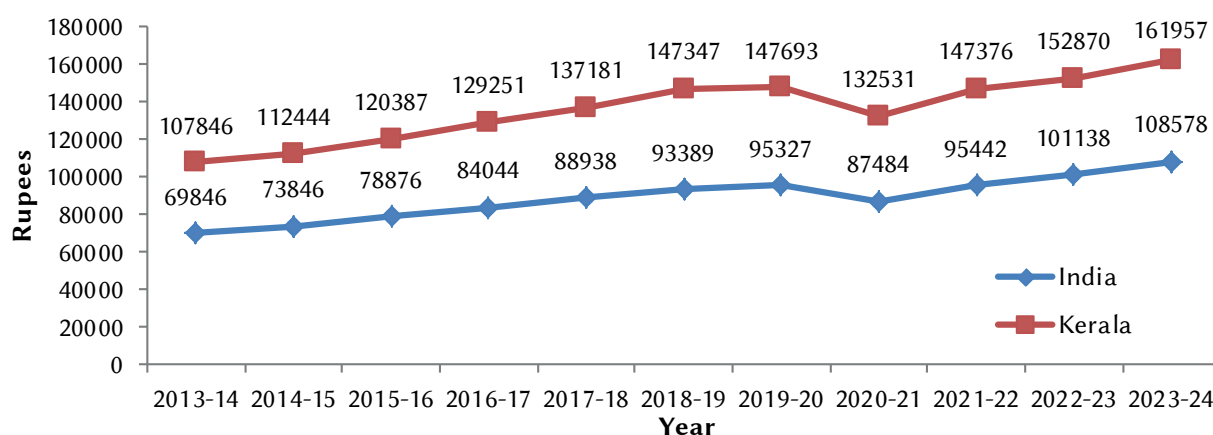
The sectoral composition of GSDP reveals a strong positive growth across sectors in 2023-24 as compared to previous year. Primary sector posted a robust growth of 4.7 per cent in 2023-24 as against 0.94 per cent recorded in 2022-23. The secondary sector grows at 4.1 per cent in 2023-24 as against 3.2 per cent in 2022-23. Services sector achieved strong growth of 8.9 per cent in 2023-24 as compared to 7 per cent growth in 2022-23. Spill overs of proactive policy interventions of the Government contributed to boost growth across sectors. The quick estimates of 2023-24 reveals the service sector continues to drive Kerala economy by contributing 64.3 per cent of GSVA, followed by the Secondary (27 per cent) and Primary (9 per cent) sectors. Sectoral composition of growth (GSVA at constant prices) is given in **Figure 1.1.3**.

**Table 1.1.3** State Income Statistics for Kerala from 2020-21 to 2023-24 (Rs in Lakhs)

Item	2020-21	2021-22	2022-23 (P)	2023-24 (Q)	Percentage Change Over Previous Year		
					2021-22	2022-23 (P)	2023-24 (Q)
<b>Gross State Domestic Product</b>							
a) At Constant (2011-12) prices	51170292	57198296	59623686	63513653	11.78	4.24	6.52
b) At Current prices	77172389	92446542	102360246	114610867	19.79	10.72	11.97
<b>Net State Domestic Product</b>							
a) At Constant (2011-12) prices	46405239	52425887	54598961	58422079	12.97	4.14	7.0
b) At Current prices	68079798	81917594	90240846	101364139	20.32	10.16	12.32
<b>Gross State Value Added (GSVA)</b>							
a) At Constant (2011-12) prices	44498213	50099348	52763002	56564302	12.59	5.32	7.20
b) At Current prices	68579335	82303202	91614842	102604351	20.01	11.31	12.00
<b>Per capita GSDP</b>							
a) At Constant (2011-12) prices	146139	160791	166938	176072	10.03	3.82	5.47
b) At Current Prices	220400	259878	286595	317723	17.91	10.28	10.86
<b>Per capita NSDP</b>							
a) At Constant (2011-12) prices	132531	147376	152870	161957	11.20	3.73	5.94
b) At Current prices	194432	230280	252662	281001	18.43	9.71	11.21

Source: Department of Economics and Statistics, Government of Kerala  
P: Provisional Estimate, Q: Quick Estimate

**Figure 1.1.2** Per capita NSDP and per capita NDP at constant, prices 2011-12



Source: Central Statistics Office, Gol and Department of Economics and Statistics, Government of Kerala

All the three sectors registered higher growth in 2023-24 compared to 2022-23. The details of the sectoral distribution of GSVA in current and constant prices are given in Appendices 1.1.7 and 1.1.8. Annual growth rate of GSDP in current and

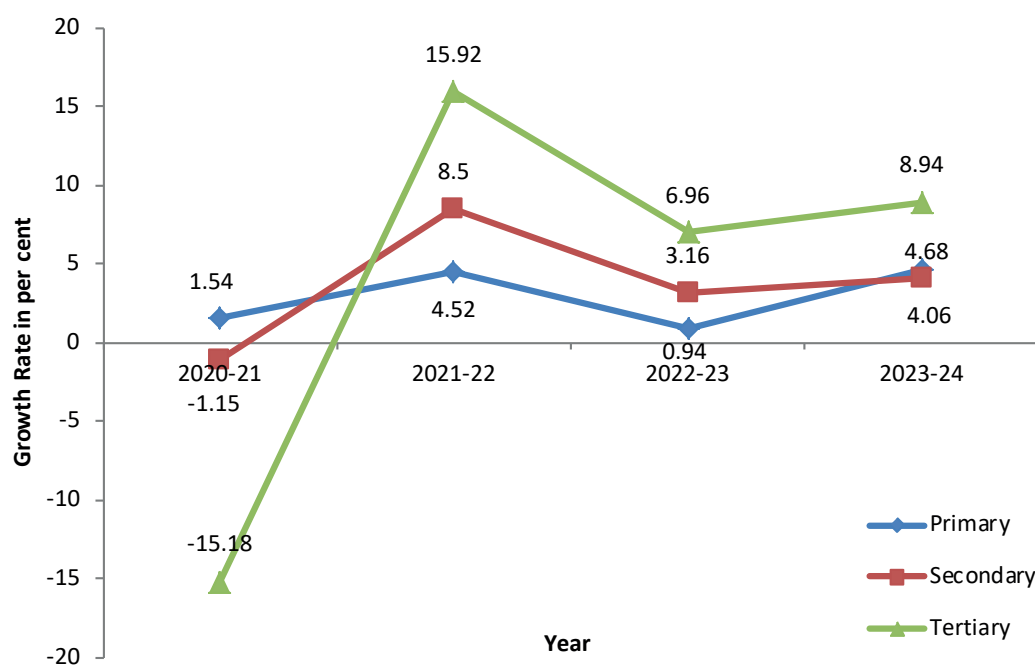
constant prices from 2020-21 is given in Appendix 1.1.9. Details of GSVA and NSVA at constant and current prices from 2013-14 to 2023-24 are given in **Appendices 1.1.10, 1.1.11, 1.1.12 and 1.1.13.**

**Table 1.1.4** Sectoral Distribution of Gross State Value Added (GSVA) at Constant Prices in recent years (Rs in lakh)

Industry of Origin	2020-21	2021-22	2022-23 (P)	2023-24 (Q)
	% share	% share	% share	% share
Agriculture, forestry and fishing	9.64	8.92	8.51	8.30
Mining and quarrying	0.47	0.47	0.49	0.48
<b>Primary</b>	<b>10.11</b>	<b>9.39</b>	<b>9.00</b>	<b>8.78</b>
Manufacturing	13.31	12.37	11.99	11.52
Electricity, gas, water supply & other utility services	1.48	1.55	1.38	1.39
Construction	14.64	14.44	14.42	14.07
<b>Secondary</b>	<b>29.43</b>	<b>28.36</b>	<b>27.78</b>	<b>26.97</b>
Trade, repair, hotels & restaurants	15.47	16.67	18.74	20.02
Transport, storage, communication & services related to broadcasting	6.59	7.53	7.26	6.93
Financial services	6.18	5.69	5.57	5.50
Real estate, ownership of dwelling & professional services	18.46	17.63	17.67	17.80
Public administration	3.21	4.31	3.63	3.44
Other services	10.55	10.43	10.36	10.56
<b>Tertiary</b>	<b>60.46</b>	<b>62.25</b>	<b>63.22</b>	<b>64.25</b>
<b>TOTAL GSVA at basic prices</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Department of Economics and Statistics, Government of Kerala  
P: Provisional, Q: Quick Estimate

**Figure 1.1.3** Growth rate (GSVA at constant prices) of the three basic sectors of the State economy since 2020-21



Source: Department of Economics and Statistics, Government of Kerala

### Sector-wise distribution of Value Added and Employment

The structure of the economy and workforce participation in Kerala is different from that of India. In 2023-24, the primary sector employs 46.3 per cent of the work force in India, whereas it is 27.30 per cent in Kerala. The primary sector employing 46.3 per cent of workforce contributes 16.6 per cent to GVA of India. The secondary sector's share in GVA at the national and State levels is similar at around 27 to 28 per cent. The share of secondary sector in employment is also more or less same at around 24 per cent. The tertiary sector's share in GVA and employment is remarkably higher in Kerala as compared to India. Details are provided in **Table 1.1.5**.

### District-wise GSVa

District-wise distribution of GSVa at current prices reveals Ernakulam has the highest income of Rs 1,35,99,835 lakh in 2023-24 as against Rs 1,22,97,834 lakh in 2022-23, registering a growth of 10.59 per cent followed by Thrissur and Thiruvananthapuram. The highest growth rate in GDVA at current prices was registered in

Malappuram (14.87 per cent). The Gross District Value Added of all the districts is given in **Table 1.1.6**.

### District-wise Per Capita Income (GSVA)

Among districts, Ernakulam has the highest per capita income of Rs 2,38,986 at constant prices in 2023-24 as against Rs 2,28,759 in 2022-23. Malappuram and Wayanad are at the bottom with the lowest per capita income. The per capita income ranks of the districts remain same in 2023-24 like in 2022-23. Seven districts have per capita income lower than the State average. The per capita gross district value added (at constant price) with corresponding rank and growth rate is given in **Table 1.1.7**.

Idukki (7.02 per cent) registered the highest growth of per capita GDVA in 2023-24, whereas Ernakulam District (4.47 per cent) is at the bottom. District-wise and sectoral distribution of GSVa from 2021-22 to 2023-24 at current and constant prices are given in **Appendices 1.1.14, 1.1.15, 1.1.16, 1.1.17, 1.1.18 and 1.1.19**.

**Table 1.1.5.** Shares of different sectors in Gross Value Added (at constant prices) and Employment, Kerala and India, 2023-24

Sectors	Shares in Gross Value Added 2023-24		Shares in employment	
	Kerala (GSVA)	India (GVA)	Kerala	India
Agriculture, livestock, forestry and fishing	8.30	14.52	26.97	46.07
Mining and quarrying	0.48	2.13	0.33	0.23
<b>Primary</b>	<b>8.78</b>	<b>16.65</b>	<b>27.30</b>	<b>46.30</b>
Manufacturing	11.52	17.33	9.94	11.44
Electricity, gas, water supply and other utility services	1.39	2.36	0.84	0.54
Construction	14.07	9.05	13.39	11.98
<b>Secondary</b>	<b>26.97</b>	<b>28.74</b>	<b>24.17</b>	<b>23.96</b>
Trade, repair, hotels and restaurants	20.02		19.46	12.2
Transport, storage, communication and services related to broadcasting	6.93	18.62	8.14	5.6
Financial, real estate and professional services	23.30	23.26	4.4	11.9
Public Administration and other services	14.0	12.74	16.53	
<b>Tertiary</b>	<b>64.25</b>	<b>54.61</b>	<b>48.53</b>	<b>29.73</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Sources: Department of Economics and Statistics (for GSVa of Kerala) and National Accounts Statistics (for GVA of India) and Periodic Labour Force Survey (PLFS) carried out by India's Central Statistical Office, 2023-24 for data on employment.

**Table 1.1.6** Gross District Value Added of districts of Kerala (at current and constant price)

Sl. No	District Name	Gross District Value Added (Rs in Lakh)					
		At Current Prices			At Constant Prices		
		2022-23 (P)	2023-24 (Q)	Growth Rate (%)	2022-23 (P)	2023-24 (Q)	Growth Rate (%)
1	Thiruvananthapuram	9031699	10069749	11.49	5150304	5495068	6.69
2	Kollam	8692114	9755665	12.24	4955504	5339577	7.75
3	Pathanamthitta	2445861	2691377	10.04	1376098	1461422	6.20
4	Alappuzha	7392894	8269206	11.85	4319534	4612284	6.78
5	Kottayam	6038994	6749916	11.77	3566346	3831685	7.44
6	Idukki	3074806	3518906	14.44	1695349	1833073	8.12
7	Ernakulam	12297834	13599835	10.59	7180009	7630108	6.27
8	Thrissur	9483410	10577828	11.54	5507513	5876192	6.69
9	Palakkad	6432101	7240400	12.57	3702198	3979321	7.49
10	Malappuram	8011996	9203449	14.87	4549120	4983653	9.55
11	Kozhikode	7694879	8621938	12.05	4423378	4747953	7.34
12	Wayanad	1629640	1836884	12.72	867918	933797	7.59
13	Kannur	6385578	7115136	11.43	3741260	3988963	6.62
14	Kasaragod	3003037	3354061	11.69	1728470	1851207	7.10
	<b>GSA</b>	<b>91614843</b>	<b>102604351</b>	<b>12.00</b>	<b>52763002</b>	<b>56564302</b>	<b>7.20</b>

Source: Department of Economics and Statistics, (P: Provisional Q: Quick)  
District-wise Per Capita Income (GSA)

**Table 1.1.7** Per Capita Gross District Value Added at constant prices

Sl. No.	District	2022-23 (P) Rs	Rank	2023-24 (Q) Rs	Rank	Growth Rate (%)
1	Thiruvananthapuram	170216	7	179231	7	5.30
2	Kollam	207121	3	220354	3	6.39
3	Pathanamthitta	132884	12	139995	12	5.35
4	Alappuzha	224041	2	236305	2	5.47
5	Kottayam	200526	4	212921	4	6.18
6	Idukki	174187	6	186407	6	7.02
7	Ernakulam	228759	1	238986	1	4.47
8	Thrissur	185919	5	195125	5	4.95
9	Palakkad	136421	10	144010	10	5.56
10	Malappuram	107737	14	115288	14	7.01
11	Kozhikode	147812	9	155738	9	5.36
12	Wayanad	112489	13	119128	13	5.90
13	Kannur	156872	8	164601	8	4.93
14	Kasaragod	134370	11	141130	11	5.03
	<b>State</b>	<b>166938</b>		<b>176072</b>		

Source: Department of Economics and Statistics, Government of Kerala (P: Provisional, Q: Quick)

## INFLATION: RECENT TRENDS

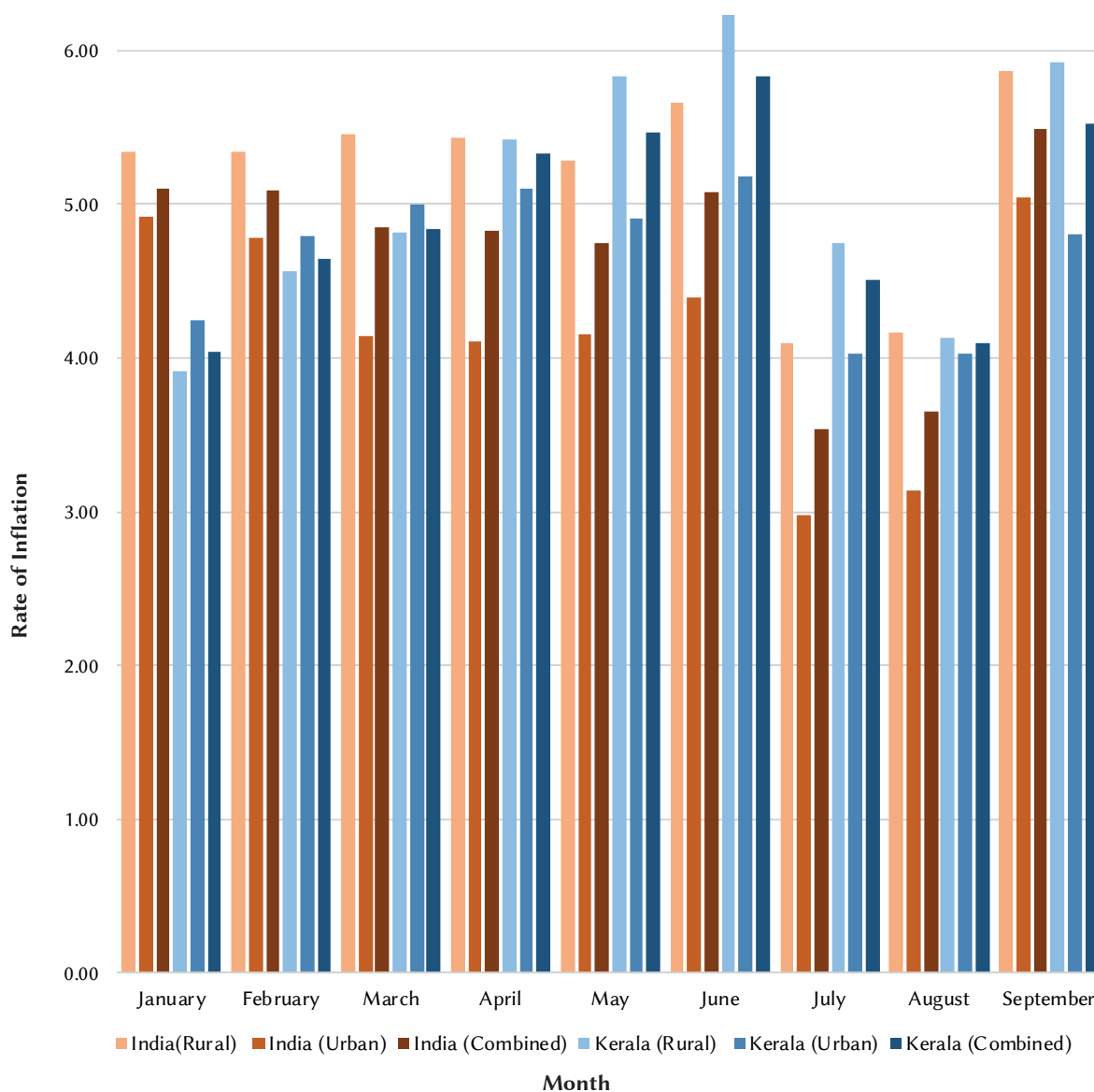
As per the World Economic Outlook, October 2024, global inflation is expected to decline from 6.7% in 2023 to 5.8% in 2024, and further to 4.3% in 2025. The process of disinflation is anticipated to be quicker in advanced economies. Inflation in India is projected to be 4.4 percent in 2024 and 4.1 percent in 2025.

The RBI Monetary Policy Committee's (MPC) bimonthly meeting in October 2024, kept

benchmark repo rate unchanged at 6.5 percent. The benchmark repo rate was raised by 25 basis points to 6.50% in February 2023 meeting. However, the MPC changed the policy stance from 'withdrawal of accommodation' to 'neutral'.

According to RBI's Monetary Policy Report, October 2024, CPI inflation is projected to average 4.5 per cent in 2024-25, with 4.1 per cent in Q2, 4.8 per cent in Q3 and 4.2 per cent in Q4. For 2025-26, assuming a normal monsoon, and no further exogenous or policy shocks, structural model of

**Figure 1.1.4:** Inflation Rates - Current Series (Base 2012) for Kerala and India - General Index (All Groups), January to September 2024.



Source: National Statistical Office, Ministry of Statistics and Programme Implementation, Gov

**Table 1.1.8:** Inflation based on Consumer Price Index (General), September 2024 and August 2024, in per cent - All-India and Kerala

Consumer Price Index (General)	September 2024			August 2024		
	Rural	Urban	Combined	Rural	Urban	Combined
India	5.87	5.05	5.49	4.16	3.14	3.65
Kerala	5.92	4.81	5.52	4.13	4.03	4.10

Source: National Statistical Office, Ministry of Statistics and Programme Implementation, GoI

estimates indicate that inflation will average 4.1 per cent with 4.3 per cent in Q1, 3.7 per cent in Q2, 4.2 per cent in Q3 and 4.1 per cent in Q4.

In India, the CPI-Combined inflation was at 5.49 per cent in September 2024, as per the National Statistical Office (NSO), MoSPI, Government of India. The rate of inflation in rural area (5.87 per cent) was higher than that in urban area (5.05 per cent) in September 2024. In Kerala, inflation based on CPI-Combined stood at 5.52 per cent. In Kerala, the inflation in urban area is lower than the national average (4.81 percent). However, the rural inflation is still at 5.92 percent in Kerala. In Kerala, average inflation in Q3 in 2024-25 is within the range of 4.8 per cent as projected by the Monetary Policy Report. The CPI based inflation levels of India and Kerala for August and September 2024 are given in **Table 1.1.8**. The inflation rates for India and Kerala for the month of January 2024 to September 2024 are given in **Figure 1.1.4**.

### Price Level in Kerala

#### Wholesale Price Index (WPI) for Agricultural Commodities

The Wholesale Price Index (WPI) for agricultural commodities in Kerala reveals that the index for All Crops has risen to 160.18 in 2024 (up to August), up from 151.29 in 2023 (Base year: 2015-16). This hike is mainly due to the rise in prices within the non-food items category. Prices of food crops have risen by 5.88 percent during this period, driven by increases in the prices of pulses, condiments, spices, and fruits and vegetables. Among food crops, cereal prices shown only a marginal increase. In contrast, prices of non-food crops have experienced a more significant rise of 20.83 percent. There has been an increase in prices for beverages, commercial crops, oilseeds, and other non-food items within the non-food crop category. The WPI of agriculture commodities in Kerala from 2021 to 2023 and the average monthly indices up to August 2024 (Base:

#### 2015-16=100) are given in **Appendix 1.1.20**

Month-wise WPI of agricultural commodities in Kerala indicates that the index of All Crops rose to 147.88 in December 2023 from 141.10 in January 2023. Within this, the index of food crops increased to 152.29 in December 2023 from 145.88 in January 2023, while the index of non-food items grew to 137.33 from 129.65 during this period. For the year 2024, the WPI index of All Crops increased to 176.22 in August, 2024 from 151 in January, 2024. Within this, the index of food crops rose to 172.54 in August 2024 from 153.05 in January 2024, and the index of non-food items increased to 185 from 146.10 in the aforementioned period. The month-wise WPI of agricultural commodities in Kerala from January 2023 to December 2023 (Base 2015-16=100) is provided in **Appendix 1.1.21**. The month-wise WPI of agricultural commodities in Kerala from January 2024 to August 2024 (Base 2015-16=100) is included in **Appendix 1.1.21(i)**

#### Consumer Price Index (CPI), Kerala

The annual average CPI (Base year 2011-12) for Kerala rose from 192 in 2022 to 199 in 2023 and in September 2024, the index increased to 207. The percentage variation in 2023 compared to 2022 is 7.35 per cent. Kozhikode (5.73 per cent) recorded the highest inflation rate measured by CPI among the selected centres in 2023, followed by Kasargod (5.61 per cent) and Chalakkudy (5.45 per cent). Punalur reported the lowest inflation rate among the selected centres. The annual average CPI and percentage variation of selected centres from 2010 to 2024 are detailed in **Appendix 1.1.22**. Monthly retail prices of essential commodities from January 2024 to September 2024 are provided in **Appendix 1.1.23**.

#### Parity Index

For the year 2023, the Parity index is estimated at 54, which is lower than the 2022 figure of 55.75. The index saw a slight increase to 54.40 in 2024 (up to May). In 2022, the index of prices paid by farmers



was 17469.42, while the index of prices received by farmers was 9738.83. The corresponding indices for 2023 were 18135.1 and 9794, respectively. Rising farm input costs, transportation expenses, and wages are the primary reasons for this situation. The yearly average prices received and paid by farmers from 2010 to 2024 (up to May) are detailed in **Appendix 1.1.24**.

### **Wages**

The average daily wage rate for skilled workers in the agriculture sector in Kerala has shown consistent increase over the years. The daily wage rates for carpenters rose from Rs 1,015.73 in 2022-23 to Rs 1,082.14 in 2023-24. Similarly, the daily wage rates for masons increased from Rs 1,018.46 in 2022-23 to Rs 1,081.52 in 2023-24. The daily wage rate for a carpenter has risen by 6.54 percent, while that for a mason has increased by 6.19 percent during this period. The average daily wage rate for skilled workers in the agriculture sector from 2010-11 to 2023-24 is detailed in **Appendix 1.1.25**.

The average daily wage rate of male unskilled workers (paddy field workers) in the agricultural sector for 2022-23 was Rs 792.20, while that of female unskilled workers was Rs 612.58. In 2023-24, the wage rate for male workers had increased by 4.67 percent, reaching Rs 829.22. The female wage rate rose at a significantly higher rate of 6.52 percent, reaching Rs 652.50 in 2023-24. The average daily wage rate of unskilled workers in the agriculture sector from 2010-11 to 2023-24 is provided in **Appendix 1.1.26**.

State-wise average daily wage rates in rural India of non-agricultural labourers is given in Chapter 7 of the Economic Review in **Table 7.1.3 (A)**

### **State Interventions.**

Initiation of social auditing for Fair Price Shops, along with an online facility for application submission and the generation of digitalized ration cards, are major measures undertaken in the realm of public distribution. Mobile Ration Shop Scheme is an initiative designed to deliver ration items directly to the residences of tribal families living in isolated hilly areas, protecting them from exploitation. This has been implemented currently in 10 districts, the scheme ensures last-mile connectivity and aligns with the goal of a hunger-free Kerala. Another major initiative launched this year is K-Store, aimed at revamping traditional Fair Price Shops through modern technology and a diversification

of services. This includes supplying subsidized essential commodities, selling products from various PSUs, and delivering information technology-based services.

Centre for Price Research- Kerala was established to analyse price trends across various markets in the State, serving as a tool for planning market intervention operations within the region. Weekly Price Analysis Report is being prepared and published by the centre, incorporating the wholesale and retail prices of 13 essential commodities across more than 70 markets in the state since January 2023.

Direct measures have also been implemented by the State Government to intervene in public markets. Inspections were conducted to verify any arbitrary price increases. To enhance the efficiency of inspections, a mobile app for Fair Price Shops has been introduced, marking the first of its kind in the country, making all inspections swift and transparent. The state has consistently been making efforts to mitigate inflationary pressures through effective market interventions.

## 1.2 DEMOGRAPHIC PROFILE

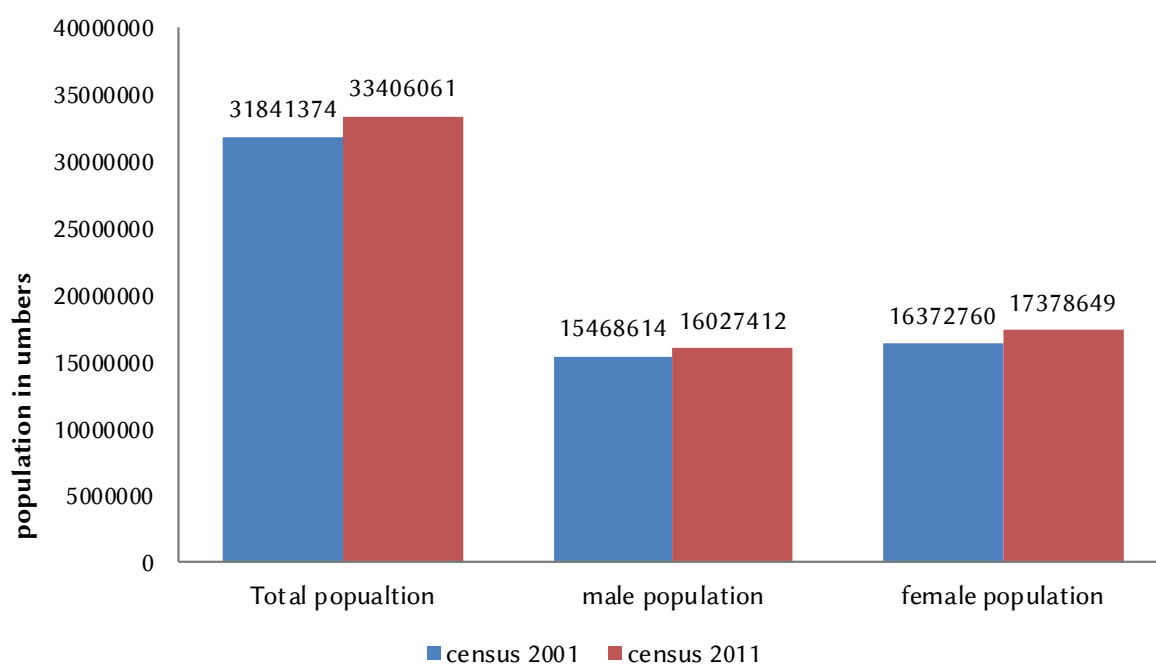
According to the Census of India, the total population of India was 102.86 crore in 2001 and 121.09 crore in 2011. As per the 2011 Census, there were 62.32 crore men and 58.75 crore women in the country in 2011. The population density was 382 persons per square kilometre and sex ratio was 943 women per 1,000 men. The sex ratio in rural and urban areas were 949 and 929 women per 1,000 men, respectively. The child

population in the age group 0-6 was 16.45 crore and the child sex ratio in the age group 0-6 was 918 girls per 1,000 boys.

### Population Trends - Kerala

According to the Census of India, the total population of Kerala was 3.18 crore in 2001 and 3.34 crore in 2011, a change of 4.91 per cent over the decade.

**Figure 1.2.1** Population in Kerala 2001 and 2011



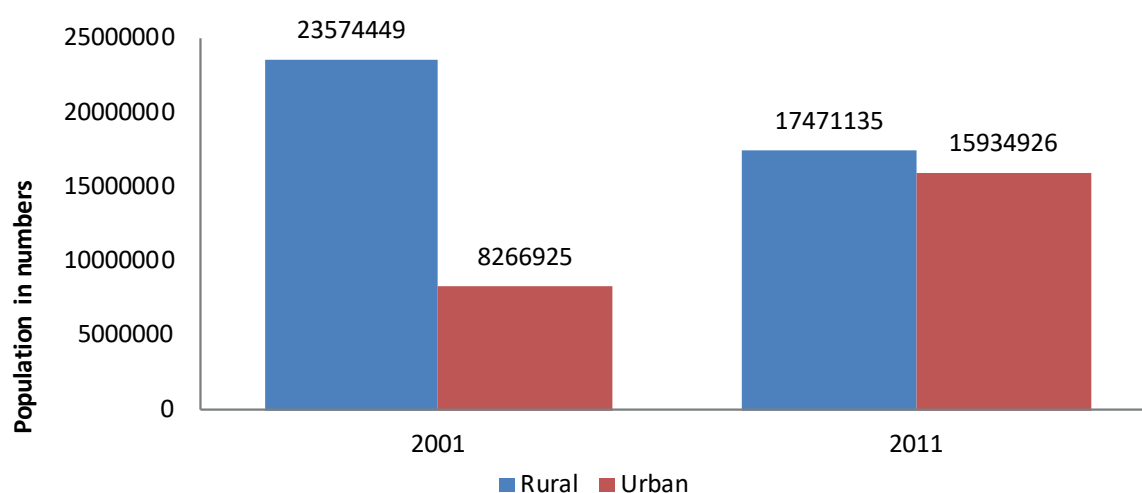
Source: Census 2001 and 2011

**Table 1.2.1** Rural-Urban Composition of Kerala's population, Census 2001 & 2011

	2001			2011		
	Total	Rural	Urban	Total	Rural	Urban
India	1,02,86,10,378	74,24,90,639	28,61,19,689	1,21,08,54,977	83,37,48,852	37,71,06,125
Kerala	3,18,41,374	2,35,74,449	82,66,925	3,34,06,061	174,71,135	159,34,926

Source: Census 2001 & 2011, censusindia.gov.in/census website/data

**Figure 1.2.2** Rural –Urban Population in Kerala



Source: Census 2001 and 2011

### Population Projection up to 2036

The total population is projected to increase from 121.09 crore in 2011 to 151.83 crore in 2036, an increase of 25 per cent over the 2011 Census. Similarly, the population of Kerala is expected to increase from 3.34 crores to 3.69 crores in 2036, an increase of 10.6 per cent over the 2011 Census. (Table 1.2.2)

### Population Growth

Kerala, with a population growth rate of 4.9 per cent from 2001 to 2011, has the lowest decadal growth rate among Indian States. Among the districts, Malappuram has the highest decadal growth rate with 13.4 per cent and Pathanamthitta the lowest with -3 per cent. Six southern districts (Idukki, Kottayam, Alappuzha, Kollam, Pathanamthitta and Thiruvananthapuram) registered a lower growth of population than the districts in northern Kerala. (Appendix 1.2.1)

### Density of Population

According to the 2011 Census, Kerala's population density is 860 persons per square kilometre, more than twice the all-India level (382). Thiruvananthapuram is the most densely populated district (1,508) and Idukki is the least densely populated (255). Population density has increased in all the districts except in Pathanamthitta and Idukki in 2011, compared to 2001. (Appendix 1.2.1)

### Birth Rate

The crude birth rate is the number of live births per 1000 occurring among the population of a given geographical area in a given year. According to the Annual Vital Statistics Report of the Government of India, the crude birth rate was 15.7 for the year 2010 which declined to 12.7 in 2020 and further to 11.9 in 2021. Details are in Appendix 1.2.3

**Table 1.2.2** Total Projected Population -India and Kerala (in 1000's)

Sl.No.	Year	Category	India	Kerala
1	2011	Person	1210855	33406
		Male	623271	16027
		Female	587585	17379
2	2016	Person	1290235	34578
		Male	663346	16594
		Female	626889	17984
3	2021	Person	1361343	35489
		Male	698959	17043
		Female	662384	18447
4	2026	Person	1423435	36207
		Male	729604	17395
		Female	693831	18812
5	2031	Person	1475519	36695
		Male	754893	17638
		Female	720626	19057
6	2036	Person	1518288	36949
		Male	775702	17775
		Female	742586	19174

Source:Census,2011 [https://nhm.gov.in/New\\_Updates\\_2018/Report\\_Population\\_Projection\\_2019.pdf](https://nhm.gov.in/New_Updates_2018/Report_Population_Projection_2019.pdf)

### Mortality Rate

The crude death rate is the number of deaths per 1000 among the population of a given geographical area in a given year. According to the Annual Vital Statistics Report, the crude death rate was 6.9 in 2010 and 9.6 in 2021. The Infant Mortality Rate (IMR) is the number of deaths under one year of age occurring among 1000 live births in a given geographical area in a given year. Kerala's IMR has been brought down from 7.4 in 2010 to 5.1 in 2021. Maternal Mortality Rate (MMR) is the number of maternal deaths per 1,00,000 live births due to pregnancy or the termination of pregnancy. MMR is used to represent the risk associated with pregnancy among women. Kerala's MMR has reduced from 30 in 2010 to 19 in 2021. (Appendix 1.2.3)

### Causes of Mortality in Kerala

Table 1.2.3 gives the details of the number of deaths caused by diseases/habits in 2021. The total number of deaths in Kerala was 1.53 lakh-58.5 per cent were men and 41.5 per cent women. In general, the birth and death rates in Kerala have been declining over the years, but the high mortality level reported in 2021 was mainly due to Covid-19. The leading causes of mortality are in the Table 1.2.3

### Literacy

The effective literacy rate in Kerala was 91 per cent in 2001 and 94 per cent in 2011. In 2011, 96.1 percent of men and 92.1 per cent of women in Kerala were literate. The corresponding ratios at the all-India level were 82.1 and 65.5 per cent, respectively. Among the districts in Kerala, Kottayam had the highest literacy level (97.2 per cent), followed by Pathanamthitta with 96.5 percent. (Appendix 1.2.1)

### Sex Ratio

According to the 2011 Census, women outnumber men in all the districts of Kerala. The sex ratio of Kerala is 1,084 as per Census, 2011. Kerala's sex ratio has been increasing over the years from 1,032 in 1981 to 1,036 in 1991, and further to 1,058 in 2001. Kerala is the only State in India which has historically had the sex ratio above unity. The corresponding all-India was 943. Kerala has the salient feature of having a positive sex ratio (above unity) across districts. Kannur has the highest sex ratio in Kerala (1,136), followed by Pathanamthitta (1,132). Idukki has the lowest sex ratio (1,006). (Appendix 1.2.2)

### Child Sex Ratio (0-6 Years)

According to the 2011 Census, the child sex ratio (number of girls per 1000 boys in age group 0-6 years) in Kerala was 964. This was 960 in 2001. Among Kerala's districts, Pathanamthitta has the highest child sex ratio (976), followed by Kollam (973) and Kannur (971). Thrissur has the lowest ratio (950). The highest decadal increase is reported in Kollam (13), followed by Kozhikode (10). Thrissur (-8), Idukki (-5), and Alappuzha (-5) have had negative decadal change in child sex ratio. (Appendix 1.2.2)

### Age Group Distribution

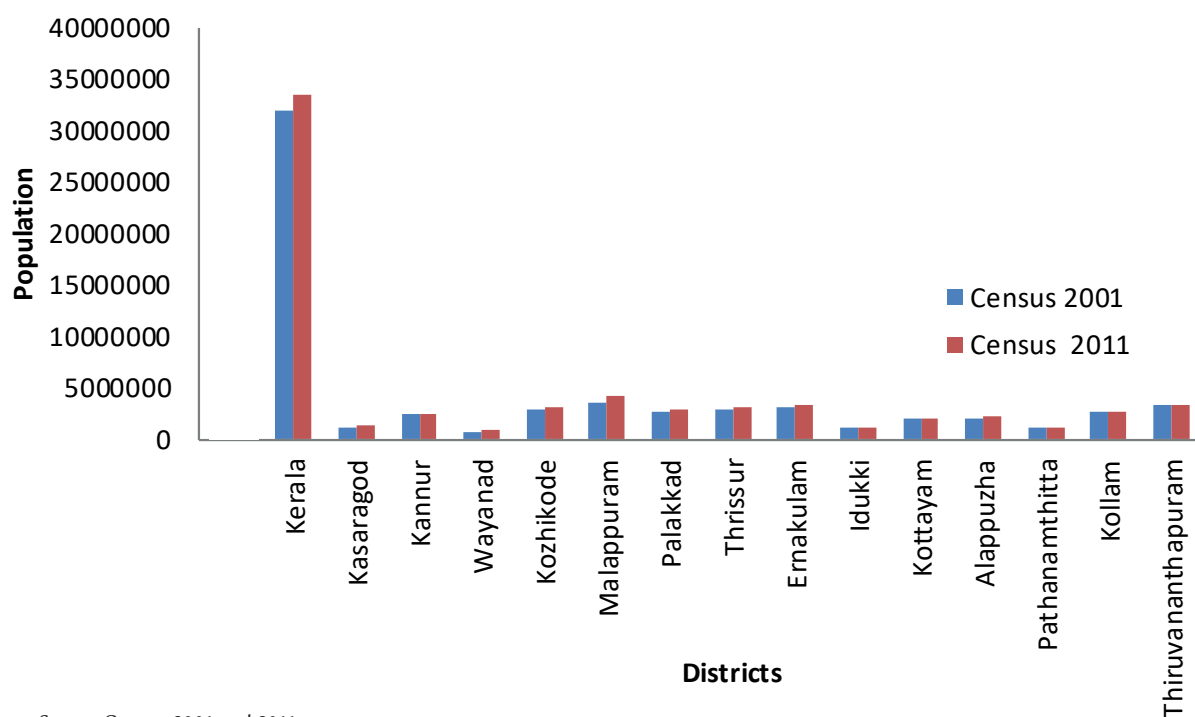
Kerala's demographic transition over the preceding fifty years is important. The proportion of the population in the age group 0-14 years has declined

**Table 1.2.3** Number of deaths by Diseases/Habits

Sl.No.	Diseases/Habits causing death	Numbers				
		Male	Female	Sex not reported	Total	%
1	Tuberculosis	294	99		393	0.25
2	Whooping cough	22	30		52	0.03
3	Cancer	12778	9212		21990	14.37
4	Diabetes	1768	2133		3901	2.55
5	Heart attack/heart diseases	43948	28696		72644	47.5
6	Pneumonia	2747	1890		4637	3.03
7	Asthma	12528	12871		25399	16.6
8	Jaundice	253	145		398	0.26
9	Liver diseases	2899	1295		4194	2.74
10	Ulcer	191	132		323	0.21
11	Paralysis	3482	3347		6829	4.46
12	Accidents (Traffic Vehicles)	2058	311	1	2370	1.54
13	Suicide	5075	1275	2	6352	4.15
14	Blood pressure	1476	1975		3451	2.25
GRAND TOTAL		89519 (58.53%)	63411 (41.46%)	3 (0.0019%)	152933	

Source: Vital Statistics Report, 2021

**Figure 1.2.3** District wise population of Kerala 2001 and 2011



Source: Census 2001 and 2011

from 43 per cent in 1961 to 23.4 per cent in 2011. Due to the increasing life expectancy and better health facilities, the proportion of elderly (60 years and above) has increased from 5 per cent in 1961 to 12.7 per cent in 2011. At the national-level, 29.5 per cent of the population falls in the 0-14 year age group, 62.5 per cent in the 15-59 year age group, and 8.0 per cent in the 60+ age group (Census 2011). The proportion of the working age population (15-59) to the total population will decrease in the near future due to the declining proportion of the 0-14 age group in the total population. On the other hand, the increasing proportion of the elderly (60 and above) in the total population would place more social obligations on the Government.

### District-wise Age Group Distribution

In Kerala, 63.9 per cent of the total population is in the working age group of 15-59, followed by 23.4 per cent in 0-14 age group, and 12.55 percent in the 60 and above age group. Among the districts, Idukki has the highest percentage of working population (66 per cent), while Malappuram has the lowest (61.4 per cent). In

the age group of 60 and above, Pathanamthitta has the highest percentage (17.9 per cent), while Malappuram has the lowest (8.4 per cent). At the same time, Malappuram has the highest proportion of the population in the 0-14 group (30.2 per cent), while Pathanamthitta has the lowest (19.4 per cent) The details are in (Table 1.2.4)

### Kerala's Working Population - Census 2011

According to the Census 2011, of the total working population of the State, main workers came to a total of 97.90 lakhs (27.9 per cent). and 18.28 lakhs marginal workers(14.35 per cent). And in addition 11.17 lakh persons were seeking or available for work (8.76 per cent). The details are in (Table 1.2.4A)

### Challenges ahead

Several issues affect Kerala's demographic performance. These include the high population density, aging of the population, low fertility rate and increasing urbanisation. They are manifested in environmental degradation, strain on resources, increasing unemployment, out migration, and demographic imbalances. The Government of

**Table 1.2.4** District-wise Distribution of the Population in Different Age Groups-2011

S l . No.	District	Numbers in Different Age Group in total District population			Percentage of Different Age Group in Total District population		
		0-14	15-59	60+	0-14	15-59	60+
1	Kasaragod	3,42,696	8,35,111	1,29,568	26.2	63.9	9.9
2	Kannur	5,94,411	16,06,593	3,21,999	23.6	63.7	12.8
3	Wayanad	2,12,246	5,26,414	78,760	26.0	64.4	9.6
4	Kozhikode	7,49,692	19,72,762	3,63,839	24.3	63.9	11.8
5	Malappuram	12,41,491	25,26,407	3,45,022	30.2	61.4	8.4
6	Palakkad	6,78,192	17,95,096	3,36,646	24.1	63.9	12.0
7	Thrissur	6,88,592	20,01,050	4,31,558	22.1	64.1	13.8
8	Ernakulam	6,93,215	21,35,689	4,53,484	21.1	65.1	13.8
9	Idukki	2,47,338	7,32,193	1,29,443	22.3	66.0	11.7
10	Kottayam	4,13,849	12,47,065	3,13,637	21.0	63.2	15.9
11	Alappuzha	4,46,279	13,57,100	3,24,410	21.0	63.8	15.2
12	Pathanamthitta	2,32,670	7,50,202	2,14,540	19.4	62.7	17.9
13	Kollam	5,83,023	17,00,534	3,51,818	22.1	64.5	13.3
14	Thiruvananthapuram	7,07,280	21,60,992	4,33,155	21.4	65.5	13.1
	All Kerala	78,30,974	2,13,47,208	419,33,93 #	23.4	63.9	12.6

Source: *censusindia.gov.in*, Census 2011, # excluding 'age not stated' population which is 34486

**Table 1.2.4A** Main workers, Marginal workers, Non-workers and those marginal workers, non-workers seeking/available for work classified by age and sex

Sl.No	Population Category	Total Population	Main Workers		Marginal Workers		Non-workers	
			Working Population	Worked for less than 3 months	Marginal workers- Worked for 3-6 months	Seeking/ available for work	Total	Seeking/ available for work
1	Male	160,27,412	7179828	210044	1061697	637148	7575843	3921212
2	Female	173,78,649	2149919	251069	766506	479523	14211155	1157115
	Total	33,40,6061	9329747	461113	1828203	1116671	21786998	2764097

Source: Office of the Registrar General & Census Commissioner, India, Ministry of Home Affairs, Government of India, <https://censusindia.gov.in/nada/index.php/catalog/12629>, Ref. No. ORGI Census 2011 Tables.

Kerala has been implementing various policies and initiatives to build a healthy demographic profile of the State. These multi-dimensional interventions focus on sustainable development, family planning and reproductive health, education and skill development, infrastructure development, environmental conservation, social welfare programs and job creation.

### Urbanisation

Globally, urbanisation has emerged as a significant trend over recent decades, with the United Nations projecting continued urban growth. Projections by the UN shows that, the world's population living in urban areas will potentially reach 68 per cent by 2050. Growth in the urban population is driven by an overall population increase and an upward shift in the percentage of people living in urban areas. Together, these two factors are projected to add 2.5 billion to the world's urban population by 2050, with almost 90 per cent of this growth happening in Asia and Africa. China, India and Nigeria will account for 35 per cent of the nearly 2.5 billion urban population increase by 2050. India will contribute most to the urban increment, adding 416 million urban dwellers, almost doubling the size of its urban population between 2018 and 2050.

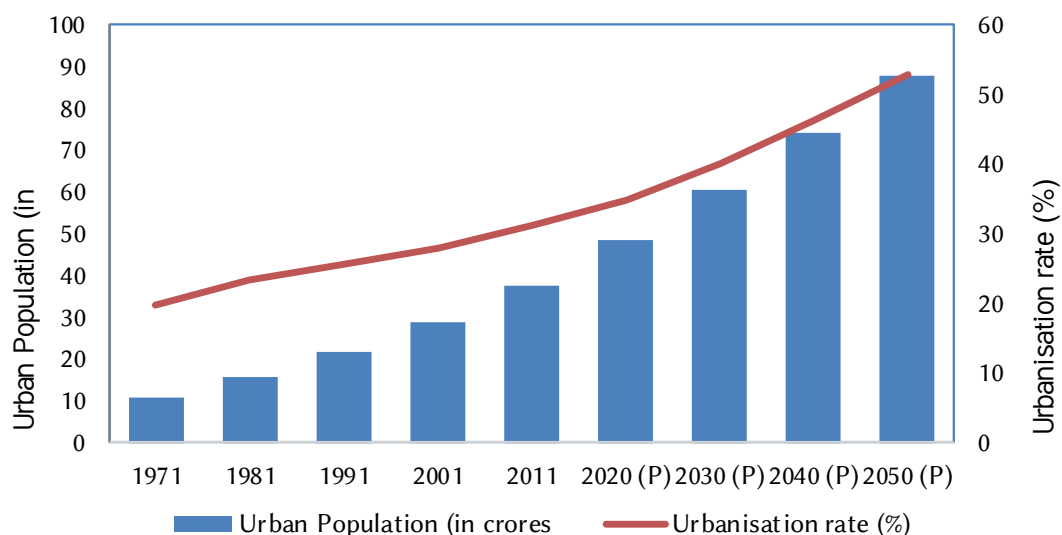
In India, urbanisation is defined in two ways: administratively, and based on census. According to the administrative definition, an area qualifies as urban if it falls under the jurisdiction of an urban local self-government (LSG). States also hold the authority to categorise areas as urban if they meet population size, population density, and economic activity thresholds. India's ongoing urbanisation

reflects notable shifts in its demographic and societal patterns. As per the Census definition, there are 7,933 urban settlements (comprising statutory and census towns) with a total urban population of 377.1 million (Census 2011). This ranks India as the world's second-largest urban system. As per World Urbanisation Prospects 2018 (Revised), by 2030, India's urban population will rise to 607 million and by 2050 to 876 million. Projections show that by 2050, the urbanisation rate will be 53 per cent (**Figure 1.2.4**).

On the other hand, Kerala shows a distinctive trajectory of urbanisation within India. In 1901, the combined population of Travancore, Cochin, and Malabar stood at 6.4 million, with a predominant proportion, 92.9 per cent, living in rural areas. Less than 10 per cent lived in urban regions. The degree of urbanisation was recorded to be 15.11 per cent in 1961, the first Census after the State's formation. Over the past century, the share of rural population has gradually declined, reaching 74 per cent by 2001.

The period from 2001 to 2011 saw a significant acceleration in urban growth, with the 2011 Census indicating that 47.7 per cent of Kerala's population resided in urban areas—nearly half of the State's total population. Projections show that by 2036, around 96 per cent of Kerala's population may reside in urban areas, reflecting rapid urbanisation (**Table 1.2.5**). The growth of urban agglomerations in Kerala over the years is also remarkable. In 1981, there were only nine urban agglomerations in the State, but by 2011, this number increased to 19.

**Figure 1.2.4** Trend of Urbanisation in India



Source: Census of India (1971 to 2011), UN World Urbanisation Prospects, 2018 (Years 2020 to 2050)

**Table 1.2.5** Urbanisation in Kerala 1901-2036

Year	Urban Population in lakhs	Degree of urbanisation
1901	4.5	7.1
1911	5.3	7.3
1921	6.8	8.7
1931	9	9.6
1941	12	10.8
1951	18.3	13.5
1961	25.5	15.1
1971	34.7	16.2
1981	47.7	18.8
1991	76.8	26.4
2001	82.7	26
2011	159.3	47.7
Projected figures		
2016	206.0	59.6
2021	252	71.0
2026	294.6	81.4
2031	330.5	90.0
2036	356.0	96.4

Source: Census Reports from 1901-2011 and Projected figures of 2016- 2036 from Report of the technical group on population projections, 2020 National Commission on Population Ministry of Health & Family Welfare.

Kerala is regarded as the fastest urbanising State. Among the districts, Ernakulam has the highest proportion of urban population to the total population (68.1 per cent), and Wayanad (3.8 per cent) has the lowest. The increasing urbanisation in Kerala is evident in the number of census towns in the Census 2011. A census town is defined as an area which is not statutorily notified as a town but has attained urban characteristics, viz. population which exceeds 5,000, population density of at least 400 persons per sq. km and a minimum of 75 per cent of male working population employed outside the agricultural sector. In the 2001 Census, there were 99 census towns and 60 statutory towns in Kerala. As per Census 2011, there are 461 census towns and 59 statutory towns. This shows a 366 per cent growth in the number of census towns. Wayanad and Idukki districts had no census towns in 2011, but had one statutory town each.

This classification of census towns has reduced rural population growth to negative. Furthermore, the decadal population growth rate of the cities in both the 2001 and 2011 Censuses is estimated to be 3.9 per cent, lower than that of the State's average of 4.9 per cent decadal population growth rate. This disproves the possibility of large migration to towns as the reason for urban population growth, as in other parts of the country. Instead, the growth in urban population could be attributed mainly to the increase in census towns. Rural areas acquire urban character through increased population density and changes in the people's livelihood.



Thrissur District, with 135 towns (statutory + census), has the highest number of towns in the State and accounts for more than 25 per cent of total cities in the State. Around 60 per cent of towns are in Thrissur, Kannur, Ernakulam, and Kozhikode districts. The urban population has crossed one million each in eight districts. Among these, Ernakulam is closely followed by Thrissur, Kozhikode, and Malappuram. The total metropolitan population of these four districts together constitutes more than 50 per cent of the urban population in the State. Decadal urban population growth from 2001-2011 was positive in all districts except Idukki.

Malappuram District shows the highest urban population growth, followed by Kollam, Thrissur, and Kasaragod as per Census 2011. Along with Malappuram and Palakkad which accounts for 25 per cent of Kerala's rural population, Kasaragod, Kottayam, Pathanamthitta, Kollam, Idukki and Wayanad are the other districts where the rural population outnumbers the urban population. In Idukki and Wayanad, more than 95 per cent of the population is rural.

Kerala's urban growth patterns, the evolving needs and aspirations of its expanding urban population, and the State's focus on improving urban amenities offer opportunities and pose challenges. Urban areas are crucial hubs for human and economic development, but sustainable urban expansion is essential for managing the complexities associated with rapid urbanisation. To realise the full potential of urbanisation while preserving Kerala's unique cultural and natural heritage, the State must continue to prioritise investments in infrastructure, environmental conservation, and social inclusion, fostering a truly inclusive urban society.

A notable development in this direction is the establishment of an Urban Commission to prepare the Urban Policy for the State. In tandem, initiatives aimed at empowering urban local self-governments (LSGs) and focusing on critical urban concerns have shown positive outcomes. For instance, the Government's *Malinya Mukta Keralam* campaign has driven substantial improvements in waste management infrastructure and institutional setups across urban centres. Urban LSGs have also actively ensured state-of-the-art civic amenities, as envisioned under the 14th Five-Year Plan. The Ayyankali Urban Employment Guarantee Programme, a unique

initiative to employ the urban poor, stands out as an innovative measure. Kerala has focused on urban issues by significantly strengthening urban local governments. The State has effectively integrated various centrally sponsored urban development schemes with the initiatives of urban local governments.

## 1.3 INDICATORS OF POVERTY

According to the 2022 World Bank report titled “Poverty and Shared Prosperity-Correcting Course”, in 2020 alone, the number of people living below the extreme poverty line around the world rose by over 70 million, of which 56 million were in India. The incidence of poverty in India had decreased to 29.5 per cent in 2011-12 from 54.9 per cent in 1973-74 (Planning Commission, GoI, 2014). The last official poverty threshold of the Government of India is the 2009 Tendulkar committee estimate. As per this, a person living on Rs 33 or less per day in urban areas, and Rs 27 or less per day in rural areas is considered poor. Adjusted for purchasing power parity rates, it falls closer to the World Bank's extreme poverty measure of \$2.15 per person per day (previously \$1.90).

However, the Tendulkar estimate has been considered low for a growing economy like India. The Government then formed an expert group led by Dr C Rangarajan to relook at the estimation method. Subsequently, in 2014, the Rangarajan Committee suggested a slightly higher monthly threshold of Rs 47 per day for urban areas and Rs 33 per day for rural areas. This was not accepted, and the Tendulkar poverty line adopted in 2009 continues to be used. However, the lack of data in the succeeding decade (the 2017-18 NSS round was not released by GoI due to concerns about data quality) had raised serious questions on the levels of poverty in the country, particularly on the grounds of the substantial impact of the Covid-19 pandemic on poverty world over.

The Ministry of Statistics and Programme Implementation (MoSPI) has released the Household Consumption Expenditure Survey (HCES) in 2022-23. This data indicates that the income levels of urban and rural households have risen since the last survey, with rural households showing a sharper growth in spending. The data also indicates the wide gap between the rich and the poor. According to HCES data, the average monthly per capita consumption expenditure (MPCE) of both urban and rural households doubled in the 11 years, with both spending less on food items. The MPCE for rural households (without considering imputed values of items received free of cost through various social welfare programmes) rose to Rs 3,773 in HCES 2022-23 from Rs 1,430 in 2011-12. Similarly, the MPCE for urban households increased to Rs 6,459 in 2022-23 from Rs 2,630 in the previous round. The latest consumption expenditure survey further confirms the changing expenditure patterns of households, reinforcing the need to move away from the existing extreme poverty line of \$2.15 per person per day to the lower-middle income poverty line of \$3.65.

Kerala has the highest Monthly Per Capita Consumption Expenditure (MPCE) in rural areas (Rs 5,924), and fourth highest in urban areas (Rs 7,078), among the States. Kerala also has the lowest urban-rural difference in average MPCE (19 per cent). In rural areas, the share of food in total consumption expenditure is the lowest in Kerala (36 per cent). In urban areas, Kerala has recorded the second-lowest, indicating that food is not the

primary item of spending. The share of expenditure of non-food items in total non-food expenditure in 2022-23 was mostly on conveyance and durable goods.

### **Poverty in Kerala**

Kerala has followed a development path quite different from that of other Indian States, especially in addressing poverty and related issues. Radical policy decisions to implement land reform, universal education and health care, democratic decentralisation, extensive social security schemes, robust public distribution system, women empowerment programmes such as Kudumbashree, and several similar interventions have significantly reduced poverty in rural and urban Kerala. According to official figures, the absolute poverty ratio in Kerala has sharply reduced over the last forty years. Poverty in Kerala reduced from 59.8 per cent in 1973-74 to 11.3 per cent in 2011-12, while the all-India figures for the corresponding period showed a comparatively lower decline.

The time series data gap for the last decade notwithstanding, Kerala has emerged as the State with the least multidimensional poverty across India, according to NITI Aayog's first Multidimensional Poverty Index (MPI) report (2021). By order of the incidence of least poverty, Kerala (0.71 per cent) is followed by Goa (3.76 per cent), Sikkim (3.82 per cent), Tamil Nadu (4.89 per cent), and Punjab (5.59 per cent). Kerala registered low counts on almost all the parameters of deprivation including child and adolescent mortality (0.19%), maternal health (1.73 %), years of schooling (1.78 %), school attendance (0.3%), and sanitation (1.86%). Very few households were found to be deprived of nutrition, cooking fuel, sanitation, drinking water, electricity, housing, assets, and bank accounts. Among Districts, Kottayam was the best performer, with no one identified as multi-dimensionally poor (0 per cent). Wayanad with 3.48 per cent has the highest percentage of multidimensional poverty.

Now, as per the latest report of NITI Ayog (National Multi-dimensional Poverty Index-A Progressive Review 2023), the number of multi-dimensionally poor in Kerala has reduced even further from 0.71 per cent to 0.55 per cent during the period 2015-16 to 2019-21. The unwavering commitment of the State towards social and economic upliftment of the poor is evident in the low MPI of the State.

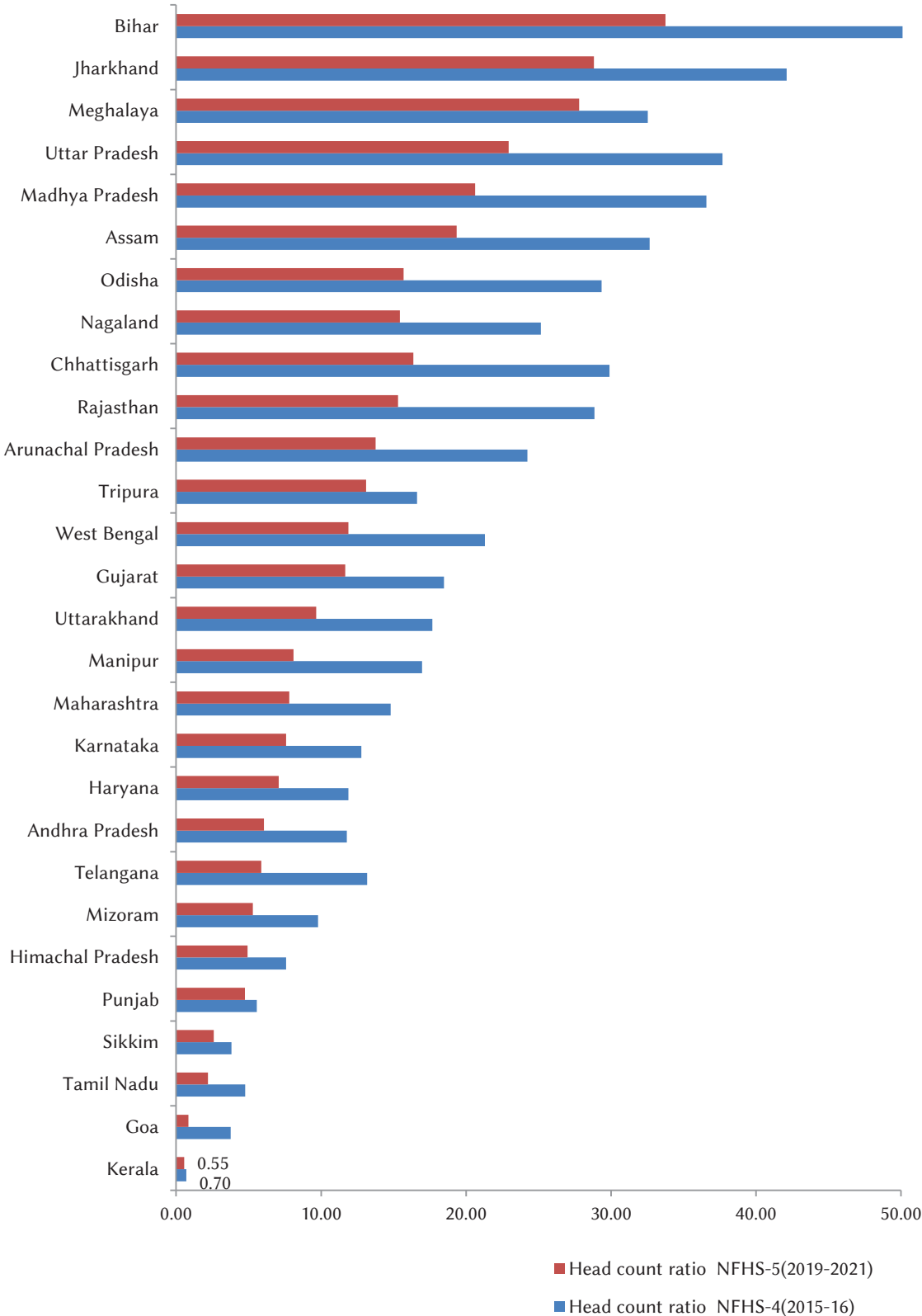
Though Kerala is better off than most other States in India with regards to average poverty estimates, there are still several isolated pockets of deprivation in the State. Poverty in Kerala is mainly seen among marginalised social categories and groups such as SC, ST, fisherfolk, potters, and artisans. This has warranted focused interventions by the Government through various schemes. Different schemes and programmes have been formulated and implemented under the supervision of Local Self Governments (LSGs) and State departments like the SC Development, ST Development, and Fisheries, among others, to address the issues of deprivation and severe poverty among marginalised communities. However, the eradication of extreme poverty in households requires a comprehensive approach, integrating the efforts of all the development agencies and focusing on the specific causes of poverty. With this goal in mind, the Government of Kerala established a massive programme to end extreme poverty through targeted interventions, to be carried out the departments and LSGs.

### **Extreme Poverty Eradication Programme**

Kerala initiated this unique drive to eradicate extreme poverty with a State-wide survey to identify extremely poor households based on four key deprivation categories- lack of food, income, health, and shelter. The Commissionerate of Rural Development was the nodal department that conducted the survey. The survey targeted households not previously covered under the Ashraya programme, the State's flagship programme for identifying the destitute, which had 1.57 lakh beneficiaries.

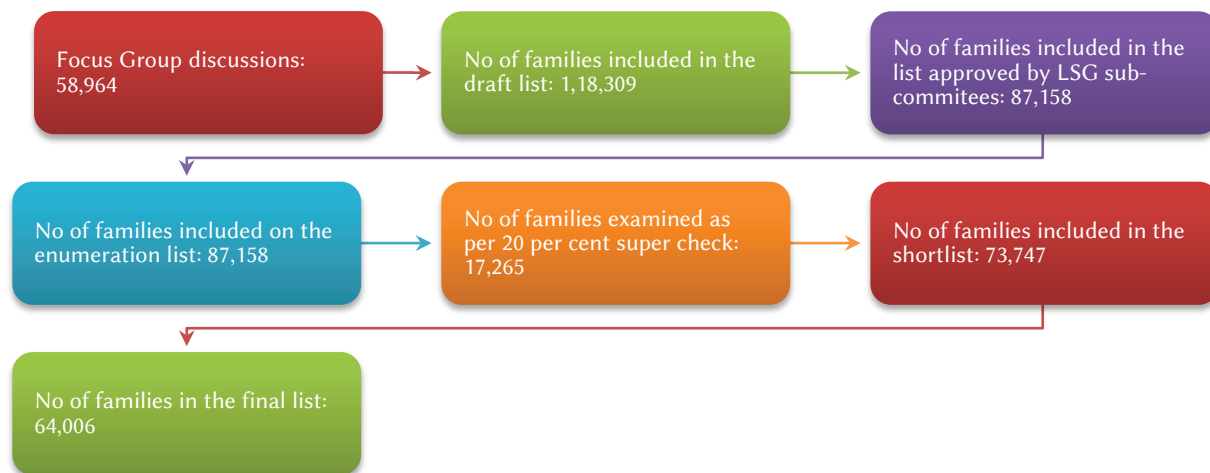
The Extreme Poverty Identification Process (EPIP) began with the nomination of 1,18,309 poor households through an intensive participatory nomination process from Wards / Divisions, from which 87,158 were shortlisted as recommended by the LSG sub-committees formed for this purpose. This data was recorded in an MIS. Subsequently, these 87,158 households were interviewed face-to-face using a specially developed mobile application. A 20 per cent sample was subjected to a super-check, and a priority list of 73,747 households was prepared. Grama Sabhas further scrutinised this priority list for another round of elimination of ineligible households, and the final list of 64,006 extremely poor households (1,03,099 individuals) was drawn up (**Figure 1.3.2**).

**Figure 1.3.1** Performance of states in reducing multi-dimensional poverty in 2021 and 2023



Source : National Multi-Dimensional Poverty Index-A Progressive Review 2023, NITI Ayog

**Figure 1.3.2** Different stages of identifying extreme poverty

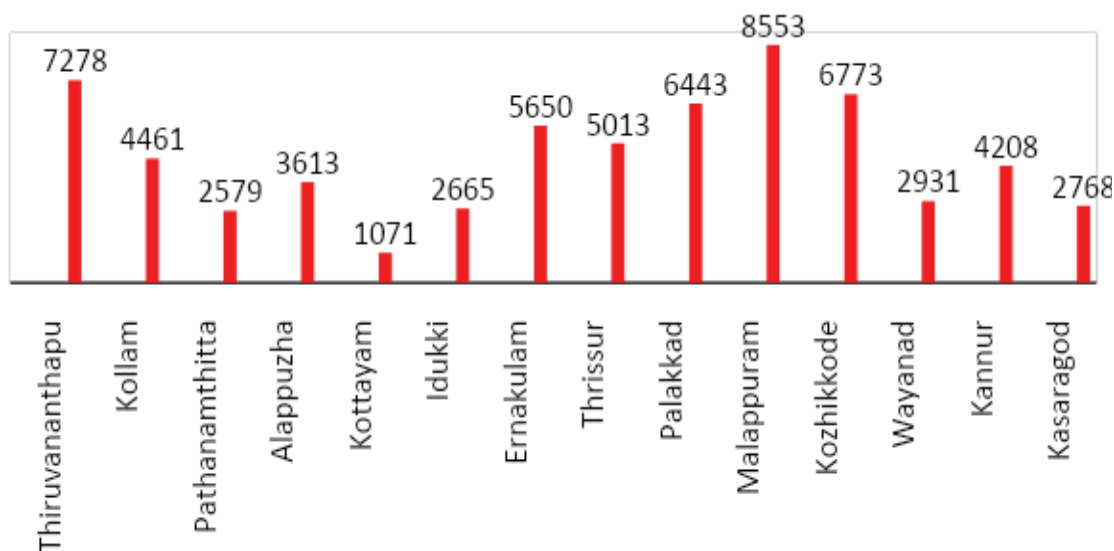


Out of the 64,006 identified families, 75 per cent belonged to the general category, 20 per cent to Scheduled Caste, and 5 per cent to Scheduled Tribe categories. However, a small number of respondents were unsure of their group. Additionally, the survey data revealed that a greater proportion of the extremely poor were concentrated in rural regions, with 81 per cent living in Grama Panchayats, 15 per cent in Municipalities, and 4 per cent in Municipal Corporations. District-wise analysis showed that Malappuram district, with 8,553 families, topped

the list, accounting for 13.4 per cent of the extremely poor in the State. This was followed by Thiruvananthapuram, which had 11.4 percent of the extremely poor households. Kottayam had the least number of extremely poor in the State (1,071 families) (See **Figure1.3.3**)

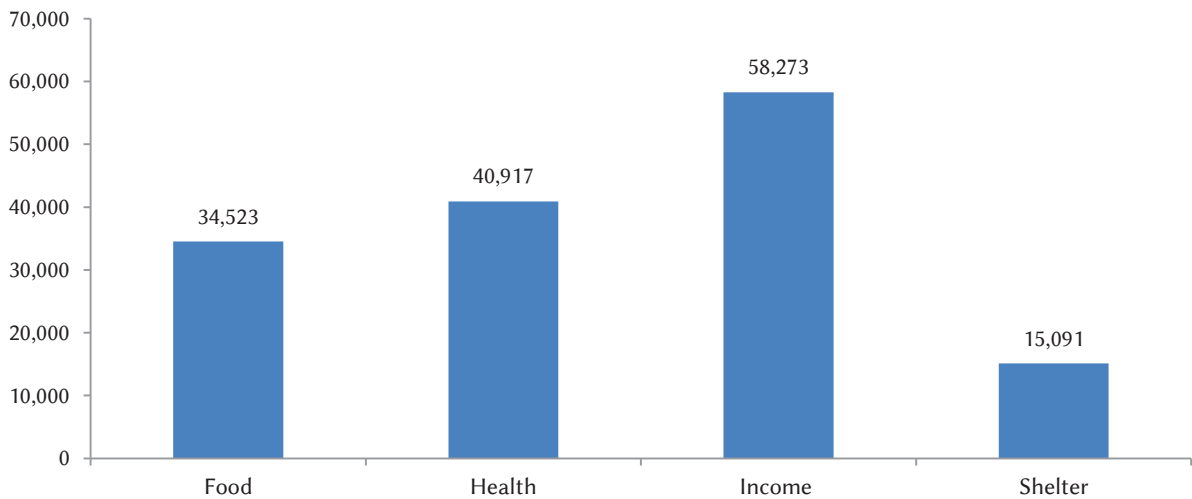
As previously mentioned, EPIP identified the extremely poor in the State based on four major deprivation categories- food, health, income and shelter. Out of the total households identified, 58,273 families encountered income deprivation,

**Figure:1.3.3** District wise break up of number of extreme poor families identified in the State.



Source: EPIP cell, Rural Development Department

**Figure 1.3.4** Disaggregated list of Deprivation categories



Source: EPIP cell, Rural Development Dept

40,917 families had health-related issues, 34,523 families were deprived of food, and 15,091 did not have shelter. It is to be noted that there are overlaps between these categories, and one person could experience deprivation of multiple components. **(Figure 1.3.4)**

The next step in this programme was to prepare an Extreme Poverty Sub Plan, comprising of the interventions required to address different types of deprivation. The programme is implemented and monitored by LSGs with the support of the State Poverty Eradication Mission, i. e Kudumbashree. Each LSG develops an Extreme Poverty Sub-Plan, assisted by Kudumbashree. Each Sub-Plan is a collection of Micro-Plans, comprising of projects to address deprivation factors in each household. These are prepared after collecting micro-level details of the families and the details collected previously in the EPIP survey. The projects are scrutinised as per existing guidelines and approved by the District Planning Committee. The numerous interventions indicated in the Micro-Plan are aggregated by sector at the LSG-level. The concerned Working Group formulates development projects, which the related implementing officer executes

The contents of the plan are divided into three sections:

1. Immediate care plan
2. Intermediate Plan
3. Long-term comprehensive plan

The services to be provided on an immediate basis are grouped under an immediate care plan. The services or schemes that can be provided within 3 months to 2 years are included under the intermediate plan. In cases where immediate or intermediate intervention is inadequate, the LSG prepares a long-term comprehensive plan.

A total of 77,557 immediate projects, 36,433 intermediate projects and 30,696 long-term projects have been formulated as part of the Micro-Plans, across the LSGs. Households needing services that can be dispensed immediately, like entitlements and identity cards, food, medical care, etc, are prioritised. Other important needs follow this.

The implementation of Micro-Plans focusing on food, shelter, health care, rehabilitation, and income generation has commenced at the local-level. These Micro-Plans have been prepared by pooling funds from sources including LSGs, different departments, and CSR. In addition, a gap fund of Rs 50 crore was allotted by the Government to LSGs to meet additional expenditure to implement the projects.

### **Accomplishments of the Extreme Poverty Eradication Programme**

The extreme Poverty Eradication Project (EPEP) has been hailed as one of the most innovative interventions in the country to eradicate extreme poverty. This programme ensures coordination among development departments to collectively

address all the factors that contribute to the deprivation of families that have been identified as extremely poor. As the first phase concludes, the programme has made remarkable accomplishments. Avakasham athivegam campaign: This campaign was launched to address the short-term and long-term needs of the extremely poor, particularly to provide documents of identity and entitlements to the extremely poor households. This was done as many of the identified household members were found to lack fundamental civic documents that allow access to essential services such as ration cards, election identity cards, Aadhar cards, MGNREGS job cards, social security pensions, etc. The campaign focused on providing these documents to the identified individuals.

### **Support extended to the extremely poor by various departments**

Although the first year of implementation focused mainly on providing food and health assistance, which are primary requirements for an extremely poor family, the convergence and cooperation of all the line departments have proven pivotal in the project's first year.

The Health Department ensured that all needy individuals received free treatment, medicines, and follow-up care. Home visits, special medical camps, and doorstep services through Vathilpadi Sevanam became lifelines for those in need. The department also extended support by providing health insurance cards, disability certificates, and ambulance services. Recognising the need for more convenient access to medication, discussions were initiated with the Health Department to provide doorstep delivery of medicines to all individuals under the EPEP schemes. It was an important step towards easing the burden on families and ensuring that vital medication reached those who needed it most without the added challenges of monthly hospital visits.

The Civil Supplies Department distributed ration cards to 5,132 families on a war footing. Additionally, their innovative program Oppam gained popularity in Thrissur district and was replicated by LSGs throughout the State. Through Oppam, food items and kits were delivered to the doorsteps of the extremely poor, facilitated by supportive autorickshaw drivers. Additionally, the LSGD Principal Directorate has been actively engaged in discussions at the Government-level regarding the distribution of food kits to all EPEP

families in need of food support. This initiative aims to provide essential food items to those who require assistance, excluding those who specifically request cooked food delivered, through LSG Vathilpadi Sevanam volunteers. The department is actively exploring innovative ways to ensure that food security is effectively addressed for the extreme poor, taking into account their specific requirements and preferences.

As part of EPEP, the Department of Education has ensured access to education and further education opportunities to those identified as having education deprivation. In collaboration with local institutions, material such as books, school bags, pens, pencils, and uniforms were provided to 1,362 children from the identified extremely poor families. Counselling and vocational training programs were also conducted. A list of 136 students who passed SSLC in 2023-24 was handed over to the Education Department, who ensured they were admitted to schools nearby. This was done again for 554 students who passed SSLC in 2024-25.

A list of 94 students has been handed over to the Higher Education department to explore the possibility of providing them with scholarships/stipends and other educational benefits to support their higher education. A list of 1,544 school-going students is being submitted to the General Education department, for similar support. The Transport department has supported the project by granting free travel for education to students from extremely poor families. Travel passes have been issued to 1,340 students.

A list of 437 orphan students has been handed over to the Women and Child Development department and the Kerala Social Security Mission (KSSM) to access assistance under their departmental schemes. Accordingly, 322 students have been registered in the Snehapoorvam scheme of the KSSM for scholarships/stipends and other educational benefits.

The Kudumbashree State Mission was crucial in ensuring food distribution through Janakeeya hotels. Cooked meals were provided to families lacking cooking facilities, while food kits were distributed to those who could prepare them. Kudumbashree volunteers, in partnership with various organisations, distribute the food kits. They also launched the Ujjevanam project to handhold

**BOX 1.3. 1** The Government declares that 47.89 per cent of the extremely poor have been lifted out of poverty

As per the latest status report released by LSGD, 47.89 per cent of the extremely poor households identified have come out of extreme poverty. This was declared based on the decisions taken by the respective LSG committees to provide them with all the necessary support to lift them from extreme poverty, marking the completion of the first phase of the Extreme Poverty Eradication Project.

This has been the result of the efforts taken by the LSGs to provide necessities to poor families. Food kits for 15,276 families and cooked food for 5,336 families are being distributed through community kitchens and Janakeeya hotels of the Kudumbashree Mission. Treatment and medication have been ensured for 21,027 families, with frequent medical check-ups by medical staff through bi-monthly house visits. Palliative care is being given to 4,977 individuals, health care support equipment is given to 384 patients, and nine individuals have been assisted with organ transplantation. In addition, 693 individuals have been shifted to shelter homes, including 333 from single-member families and 360 from other families. As part of the interventions to provide income to poor households, 841 families with no income source were assisted with income generation activities.

Kuttiyattur Gram panchayath in Thaliparambu constituency in Kannur district had identified 16 families with extreme poverty. They were able to provide necessary services to address the distress of all 16 families and uplift them from extreme poverty, thereby becoming the first Gram Panchayat in the State to eradicate extreme poverty totally.

Motivated immensely by these achievements, the Government has embarked on an ambitious journey to eradicate extreme poverty from the state by November 1, 2025.

Achievement of Extreme Poverty Reduction Programme as on 31.10.2023

District	Number of extremely poor families identified	Number of families uplifted from extreme Poverty as of 31.10.2023	Percentage of achievement
Alappuzha	3,613	1,859	51.45
Ernakulam	5,650	2,653	46.96
Idukki	2,665	1,115	41.84
Kannur	4,208	2,617	62.19
Kasargod	2,768	1,218	44.00
Kollam	4,461	1,809	40.55
Kottayam	1,071	556	51.91
Kozhikode	6,773	3,171	46.82
Malappuram	8,553	4,166	48.71
Palakkad	6,443	2,845	44.16
Pathanamthitta	2,579	984	38.15
Thiruvananthapuram	7,278	3,761	51.68
Thrissur	5,013	2,707	54.00
Wayanad	2,931	1,197	40.84
<b>Total</b>	<b>64,006</b>	<b>30,658</b>	<b>47.90</b>

Source : Status Report on Extreme Poverty, LSGD



6,649 extremely poor families facing vulnerability due to lack of income through a 100-day long campaign. A team headed by the Community Development Society visits each extremely poor family, identifies their income needs, and prepares customised projects to uplift them through income-generating activities. Skill-based training is also provided to the needy.

The Composite Regional Centre For Skill Development, Rehabilitation and Empowerment of Persons with Disabilities (CRC), a Central Government institution based in Kozhikode, came forward to provide supportive equipment to people with disabilities. Accordingly, a list of 569 persons with disabilities from extremely poor families has been handed over to the firm, and steps have been taken to provide the necessary equipment.

Several other departments have also joined forces to extend support. The Revenue Department swiftly distributed election identification cards, while Akshaya Centers diligently worked to provide Aadhaar cards. The Department of Women and Child Development prioritised providing nutritious food to mothers and children facing malnutrition. The Co-operative Department initiated measures to provide grants and loans through societies and banks to support the extremely poor. Departments such as Scheduled Castes and Scheduled Tribe, Fisheries, Water Authority, and Electricity collaborated to bring their expertise and resources to the project.

#### **Additional support from the Government**

The MicroPlans have been prepared using the resources of Local Self Governments. However, to bridge the gap, the Government allotted Rs 50 Crores as the first allotment during 2023-24, which was earmarked as follows:

- For assisting with high-cost healthcare:Rs 45 lakh
- Share given to Kudumbashree for Ujjevanam: Rs 16.4 crore
- Share given to LIFE Mission for providing shelter:Rs 33.1 crore

Four extremely poor patients who underwent surgeries have been assisted with Rs 5.8 lakh.

## 1.4 ROLE OF FINANCIAL INSTITUTIONS IN DEVELOPMENT INITIATIVES

Financial Institutions (FIs) and Banks have a vital role in fostering economic growth and development by offering capital and financial services that empower businesses and individuals to thrive. FIs facilitates monetary transactions, lending, investment, and risk management. FIs act as an intermediary between savers and borrowers, mobilize savings, and channelise them into productive investments, thereby fostering economic growth and financial stability. Banks are the instruments of financial inclusion through which delivery of banking services to the masses including privileged and disadvantaged at an affordable manner is ensured.

### **Spread of Banking – All India and State level**

According to RBI Quarterly Statistics, 137 scheduled commercial banks (SCBs) are operating in India through a network of 1, 59, 130 branches as on March 2024. Out of this, 55,049 branches are in rural area, 44,900 are in semi-urban area, 28,995 are in urban area and the remaining 30,186 are in the Metropolitan cities. Uttar Pradesh has the largest number of branches (18,418) followed by Maharashtra (13,929) and Tamil Nadu (12,478). Kerala has 6, 917 scheduled commercial bank branches constituting about 4.4 per cent of the total bank branches in India. Kerala has the largest number of banks branches in the semi urban area (4993). Total number of bank branches in Kerala registered an increase of 2.9 per cent in March 2024 over the same period last year. Major State wise distribution of Scheduled Commercial bank branches as on March 2024 as per RBI data is given in **Appendix 1.4.1**.

According to the State Level Bankers' Committee (SLBC) data, Kerala has a total of 7,921 bank branches as on March 2024, including commercial banks, regional rural banks, small finance banks and co-operative banks. Of which, about 10.7 per cent branches are in rural area, 66.7 per cent are in semi urban area and 22.6 per cent are in urban area. Kerala has a total of 6,612 scheduled commercial bank branches (which includes only public sector commercial banks, private sector commercial banks and regional rural banks) in March 2024, as against 6,469 bank branches in March 2023, registering an increase of 143 branches in March 2024 over same period last year. The total number of branches of Kerala Gramin Bank is 634 as on March 2024 which is same as that of previous year. There are 331 Small Finance Banks. The number of Co-Operative banks in Kerala as on March 2024 is 978 and it was 998 in 2023. The group-wise branch network in Kerala as on March 2024 according to SLBC Report is shown in the **Table 1.4.1**.

### **Deposits**

According to RBI data, the total deposits in India shows an increase of 13.39 per cent in March 2024 as compared same period of last year. As on March 2024, total deposits in the Scheduled Commercial banks in India is Rs 2, 12, 53,358 crore as against Rs 1, 87, 42, 311 crore in March 2023. In Kerala, there is an increase of 10.97 per cent in the total bank deposits in March 2024 as compared to March 2023. The share of deposits in scheduled commercial banks in Kerala to total deposits in the country as on March 2024 is 3.78 per cent.

**Table 1.4.1** Banking Group-wise Branch Network in Kerala, 2024

Sl. No.	Banking Group	Number of Branches			
		Rural	Semi-urban	Urban	Total
1	Public Sector Commercial Banks	142	2346	821	3309
2	Regional Rural Bank - Kerala Gramin Bank	53	542	39	634
3	Private Sector Commercial Banks	133	1894	642	2669
4	Small Finance Banks	44	245	42	331
5	Co-Operative Banks*	478	254	246	978
	Total	850	5281	1790	7921

\*includes branches under Kerala Bank

Source: State Level Bankers' Committee Report, Kerala, March 2024

Maharashtra has the highest share of deposits (21.96 per cent) in India. Major State wise deposits in scheduled commercial banks from March 2020 to March 2024 is given in **Appendix 1.4.2**. In metropolitan areas, the growth rate of aggregate deposits increased from 10.89 per cent in March 2023 to 14.6 per cent in March 2024 and in rural areas it shows an increase from 9.13 per cent in March 2023 to 12.58 per cent in March 2024. In urban areas, the growth rate of deposits increased from 10.4 per cent in March 2023 to 11.3 per cent in March 2024 and in semi-urban areas increased from 8.0 per cent in March 2023 to 12.8 per cent in March 2024. In Public Sector banks, the growth rate of aggregate deposits increased to 9.4 per cent in March 2024 from 8.1 per cent in March 2023; in private sector banks increased from 14.8 per cent in March 2023 to 20.1 per cent in March 2024; while in Small Finance Banks, the aggregate deposits decreased to 31.3 per cent in March 2024 from 33.9 per cent in March 2023, as per RBI report. Regional Rural Banks also shows a decrease from 9.3 per cent in 2023 to 7.5 per cent in 2024.

The total bank deposits (including deposits of Commercial Banks, Regional Rural Banks and Small Finance Banks) in Kerala as on March 2024 is Rs 7,96,982.29 crore as against Rs 7,19,377 crore in March 2023 as per the SLBC data. The annual growth rate of total deposits in Kerala increased from 7.98 per cent in March 2023 to 10.78 per cent in March 2024 as per the SLBC report. The growth of bank deposits in Kerala for the period from 2005-2024 is given in **Appendix 1.4.3**.

#### Domestic deposits and NRI deposits

The total bank deposit in Kerala comprises Rs 5,25,723.32 crore as domestic deposits (66 per cent

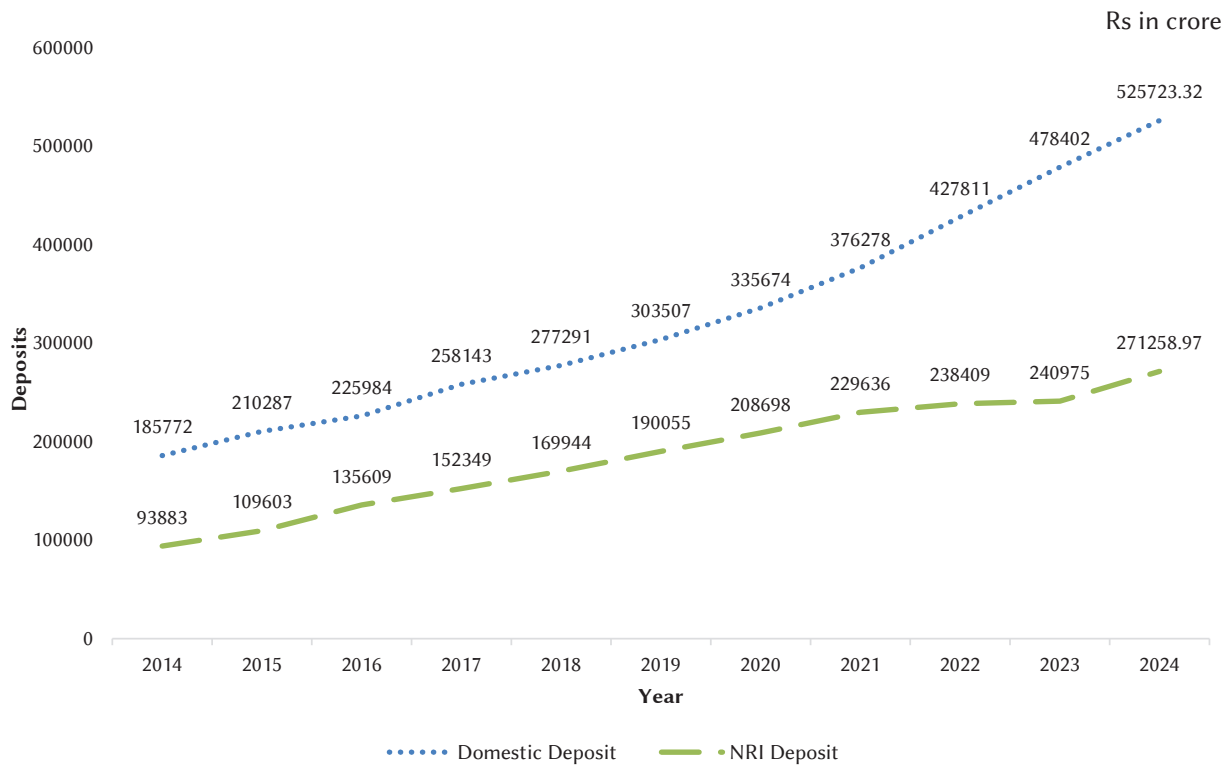
of total deposits) and Rs 2,71,258.97 crore (34 per cent) as NRI deposits in March 2024 whereas it was Rs 4,78,402 crore and Rs 2,40,975 crore respectively in March 2023 as per the SLBC data. The annual growth rate of total domestic deposit in March 2024 is 9.89 per cent which is lower than that in the previous year. The total NRI deposits in the State in March 2024 showed an increase of 12.57 per cent over previous period. The growth of bank deposits in Kerala (domestic and NRI) from 2014-2024 is shown in **Figure 1.4.1**.

According to SLBC data, total NRI deposit of public sector banks as on March 2024 is Rs 1,15,892.5 crore which is 42.7 per cent of total NRI deposits. Whereas the private sector banks have NRI deposits of Rs 1,49,417 crore i.e., 55 per cent of total NRI deposits. In the previous year it was 43.3 per cent and 54.7 per cent respectively. The Small Finance Banks received Rs 4,120.9 crore as NRI deposits in March 2024 which is 1.5 per cent of the total NRI deposits. Similarly, RRBs received Rs1,828.6 crore as NRI deposit. In co-operative sector, banks doesn't have NRI deposits. The details of NRI deposits and CD ratio of major banks in Kerala as on March 2024 are given in **Appendix 1.4.4**.

#### Advances

According to SLBC data, in March 2024, Rs 6,30,559 crore was disbursed as advances in the State by commercial banks and co-operative banks as compared to Rs 5,47,988 crore in March 2023, registering an increase of about 15.1 per cent compared to the same period previous year. All Commercial banks including public sector commercial banks, private sector commercial banks, RRBs and Small Finance Banks (SFBs) together disbursed Rs 5,77,092.3 crore as advances

**Figure 1.4.1** Growth of Bank Deposit in Kerala (Domestic & NRI) from 2014-2024

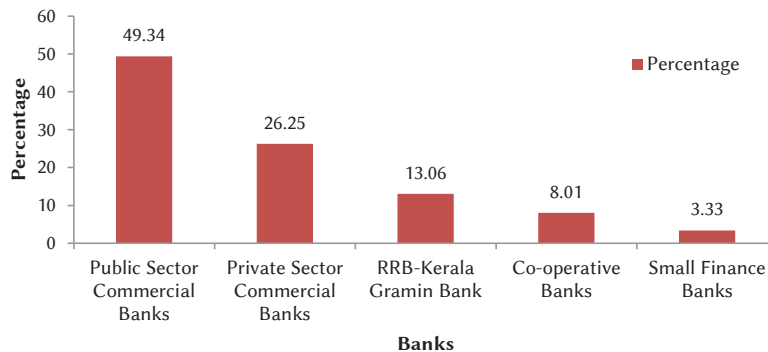


Source: State Level Bankers' Committee Report, Kerala March 2024

at the end of March 2024 as against Rs 4,93,157 crore at the end of March 2023. Out of this, the advances of public sector commercial banks, private sector commercial banks, RRBs and Small Finance Banks were Rs 3,06,317 crore, Rs 2,38,892.3 crore, Rs 24,388.9 crore, and Rs 7,494.2 crore respectively. There is an increase of 11.9 per cent in Priority Sector Advance (PSA) as compared to previous year. Public Sector Commercial Banks disbursed 49.3 per cent of

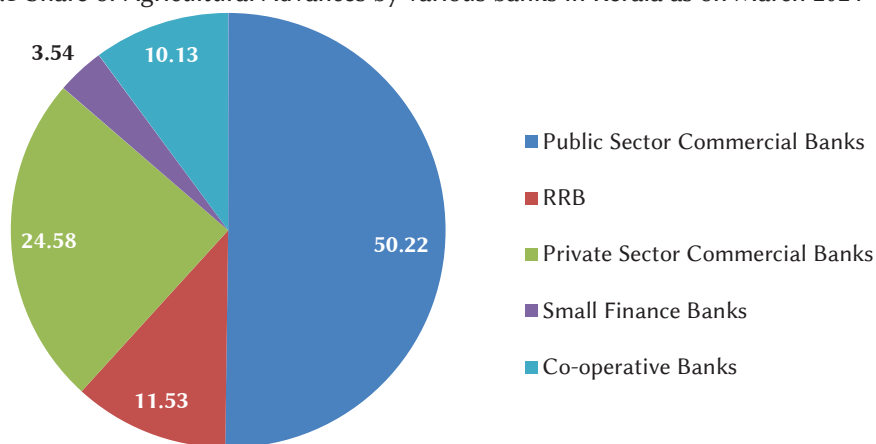
their advances to primary sector, which is lower than that of previous year (50.5 per cent) and Co-operative banks disbursed about 8 per cent of their advances to primary sector. In the previous year it was 7.7 per cent. Kerala Gramin Bank has a share of 13.1 per cent in primary sector disbursement. Share of primary sector disbursement is shown in **Figure 1.4.2**. The advances financed by scheduled commercial banks in major States as per RBI report are given in **Appendix 1.4.5**.

**Figure 1.4.2** Share of Primary sector disbursement as on March 2024



Source: SLBC Report, March 2024

**Figure 1.4.3** Share of Agricultural Advances by various banks in Kerala as on March 2024



Source: SLBC Report, March 2024

### Advances for Agricultural Purpose

Total agricultural advances through commercial banks, RRBs, SFBs and co-operative banks increased to Rs 1, 46, 183.46 crore in March 2024 from Rs 1, 22, 031 crore in March 2023, registered a growth of 19.79 per cent over the same period last year. The share of agricultural advance to total advances is 23.18 per cent in March 2024. Share of agricultural advances of various banks as on March 2024 is shown in **Figure 1.4.3**.

### Advances to SCs/STs and Weaker Sections

As on March 2024, an amount of Rs 2580.6 crore and Rs 727.9 crore were disbursed to persons belonging to Scheduled Castes (SC) and Scheduled Tribes (ST) respectively in the State by various banks as against Rs 2, 275.3 crore and Rs 500.7 crore in March 2023. The SLBC report shows that advances provided by banks increased by 13.4 per cent in SC sector and 45.4 per cent in ST sector as compared to previous year. Amount disbursed to weaker sections in the State shows an increase of 30.6 per cent as compared to previous year. The total amount disbursed to weaker sections in March 2024 is Rs 1,59, 901.5 crore and in the previous year it was Rs 1,22, 421 crore. The group-wise advances given by banks to SCs and STs are given in **Table 1.4.2**.

### Housing loans

According to SLBC data, the banks in Kerala including commercial and co-operative banks sanctioned Rs 43,043 crore as housing loan to 6,44,726 beneficiaries as on March 2024 as against Rs 43,790.1 crore to 5,83,577

beneficiaries in March 2023. This shows a decrease of 1.7 per cent in the total housing loan sanctioned compared to March 2023. Public sector banks disbursed Rs 24,014.9 crore to 2,77,748 beneficiaries, RRBs disbursed Rs 3,520.1 crore to 65,091 beneficiaries, private sector commercial banks disbursed Rs 6,761.96 crore to 98,793 beneficiaries, small finance banks disbursed Rs 224.2 crore to 6,657 beneficiaries and co-operative banks disbursed Rs 8,521.8 crore to 1,96,437 beneficiaries during the review period. Public sector commercial banks constitute major share of housing loans (55.8 per cent) followed by co-operative banks (19.8 per cent).

### Educational Loan

In Kerala, Rs 14,922.9 crore was sanctioned as educational loan for 2, 89, 055 students as on March 2024 as per SLBC data. The total amount sanctioned registered an increase of 15.7 per cent and the number of students increased by 1.5 per cent compared to previous year. The public sector commercial banks disbursed 88.3 per cent of the total educational loan i.e., Rs 13,176.7 crore to 2,46,282 students. RRBs disbursed Rs 432.3 crore to 14,550 students and private sector commercial banks disbursed Rs 1,198.8 crore to 25,895 students. The SFBs disbursed Rs 2.11 crore to 631 students. Co-operative banks disbursed Rs 113.1 crore to 1,697 students in March 2024.

### Financial Assistance to Women Beneficiaries

According to SLBC data, Rs 1,36,263.01 crore was sanctioned to 83,28,668 women beneficiaries as financial assistance as on March 2024. The total amount sanctioned registered an increase

**Table 1.4.2** Details of SC/ST Advances by various banks, Kerala, as on March 2024, in Rs crore

S.No.	Banks	SC Advances 2023		ST Advances 2023		SC Advances 2024		ST Advances 2024		Percentage change in SC	Percentage change in ST
		Number	Amount	Number	Amount	Number	Amount	Number	Amount		
1	Public Sector Commercial Banks	53508	1099.28	10960	229.53	71585	1259.99	22461	392.59	14.62	71.04
2	RRBs	55716	449.38	13343	81.45	63253	529.07	15095	97.05	17.73	19.15
3	Private Sector Commercial Banks	157121	443.04	35536	84.97	163333	510.70	39950	99.00	15.27	16.51
4	Small Finance Banks	39020	149.42	17167	64.50	49340	194.87	24317	87.02	30.42	34.91
5	Co-Operative Banks	71887	134.14	24759	40.26	4526	85.95	6111	52.27	-35.93	29.83
	Total banking sector	377252	2275.26	101765	500.71	352037	2580.60	107934	727.94	13.42	45.38

Source: State Level Bankers' Committee Report, Kerala, March 2024

of 8.8 per cent and the number of beneficiaries increased by 11.4 per cent compared to previous year. In 2023-24, the Public sector banks have disbursed Rs 72,484.6 crore to 37,53,858 beneficiaries, RRBs disbursed Rs 10,094.6 crore to 8,03,594 beneficiaries, private sector commercial banks disbursed Rs 35,341.9 crore to 19,71,166 beneficiaries, small finance banks disbursed Rs 5,054 crore to 12,39,652 beneficiaries and co-operative banks disbursed Rs 13,287.8 crore to 5,60,398 beneficiaries.

### Credit-Deposit Ratio

The quarterly statistics of RBI reveals that the Credit-Deposit (CD) ratio of Scheduled Commercial Banks in India increased from 75.4 per cent in March 2023 to 79 per cent at the end of March 2024. Andhra Pradesh topped among the states with the highest CD ratio for the third consecutive year. Andhra Pradesh has the highest CD ratio of 153.5 per cent in March 2024 followed by Tamil Nadu (112.83 per cent).

The CD ratio of scheduled commercial banks in Kerala as on March 2024 is 70.3 per cent.

The total deposits in scheduled commercial banks in Kerala increased by 11 per cent i.e., Rs 8,03,411 crore as on March 2024 from Rs 7,24,013 crore in March 2023. Total credit also increased by 18.6 per cent i.e., Rs 5, 64, 934 crore as on March 2024 from Rs 4, 76,455 crore in 2023 (**Appendix 1.4.6**). As per SLBC data, the overall CD ratio of all banks in Kerala including co-operative banks, as on March 2024 is 73.21 per cent.

The CD ratio of public sector banks in India increased to 71.7 per cent in March 2024 from 69.4 per cent in March 2023. Among Public Sector banks, Andhra Pradesh has the highest CD ratio (159.7 per cent) in March 2024 followed by Telangana (114.9 per cent) and Tamil Nadu (112.4 per cent). The CD Ratio of public sector banks in Kerala increased from 72 per cent as on March 2023 to 76.2 per cent in March 2024. (**Appendix 1.4.7**). Among the public sector banks in Kerala, State Bank of India has the major share of deposits in March 2024 (57.4 per cent), however, its CD ratio is 57.1 per cent as per SLBC data.

### District-wise Analysis of Banking Statistics

District-wise analysis of RBI statistics showed that Ernakulum has the highest number of Scheduled Commercial Banks branches, i.e. 1054 in March 2024 (1030 branches in March 2023) followed Thiruvananthapuram (787 branches) and Thrissur (782 branches). Wayanad, which has the lowest number of branches, however showed an increase from 148 in March 2023 to 154 in March,2024. (Appendix 1.4.8). District-wise distribution of deposits and credit of scheduled commercial banks in Kerala as on March 2024 is shown in Figure 1.4.4.

### Co-operative banking sector in Kerala

According to SLBC report, Kerala has a total of 978 co-operative bank branches as on March 2024, constitute about 12.4 per cent of the total bank branches in the State. Of which, 478 are in rural area, 254 are in semi-urban area and 246 are in urban area.

The total deposits of commercial banks, RRBs, SFBs and co-operative banks as on March 2024

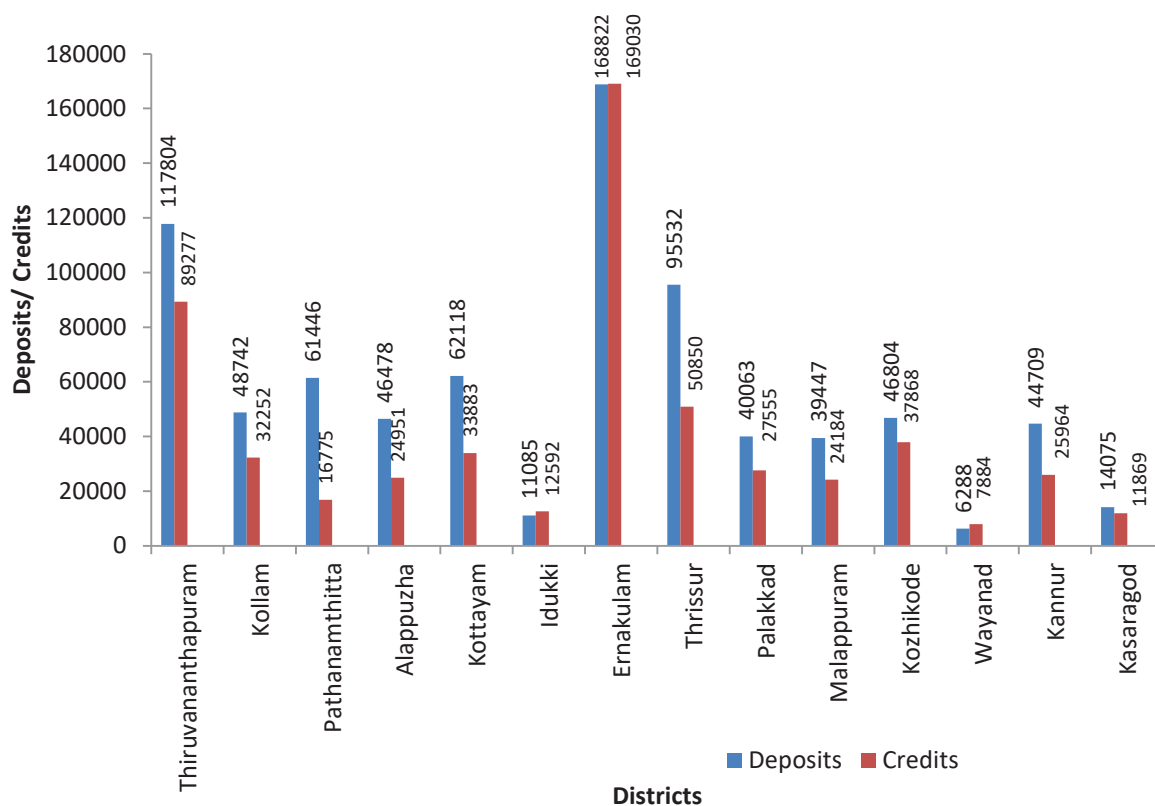
is Rs 8,61,295.02 crore, of which 7.5 per cent is from co-operative sector. The share of co-operative banks in the total business (deposits and advances together) is 7.9 per cent. The total advances from both commercial banks and co-operatives in Kerala is Rs 6,30,559.1 crore in March 2024, of which, the share of cooperatives is Rs 53,466.8 crore. The total agricultural advances from commercial and co-operative banks in Kerala as on March 2024 is Rs 1,46,183.5 crore and the share of co-operatives is Rs 14,804.4 crore. The per cent share of co-operatives in the agricultural advances increased to 10.1 per cent in March 2024 from 9.4 per cent in March 2023. Co-operative banks provided 59 per cent of their advances to the priority sector and 11.1 per cent to the MSME sector in 2023-24. The performance of Co-operatives in the banking sector is shown in Table 1.4.3.

### Non-Banking Financial Institutions

#### Kerala State Financial Enterprises (KSFE)

Kerala State Financial Enterprises (KSFE), which was incorporated in 1969, is a fully owned

**Figure 1.4.4** District-wise Distribution of Deposits and Credit of Scheduled Commercial Banks in Kerala as on March 2024



Source: RBI -Quarterly statistics on Deposits and Credit of Scheduled Commercial Banks, March 2024

**Table 1.4.3** Performance of Co-operative Sector, in Kerala, March 2024, Rs in crore

Sl. No.	Parameter	As on March 2024			
		Co-operative Sector	Commercial Banks+ RRBs+ SFBs	Total banking sector	% of cooperative sector to total banking sector
1	Branches	978	6943	7921	12.35
2	Total Deposits	64312.73	796982.29	861295.02	7.47
3	Total Advances	53466.79	577092.34	630559.13	8.48
4	Total Business	117779.52	1374074.63	1491854.15	7.89
5	Priority sector advances	31568.76	257426.85	288995.61	10.92
6	% Priority sector advances	59.04	44.61	45.83	-
7	Agriculture Advances	14804.36	131379.11	146183.46	10.13
8	% Agriculture Advances	27.68	22.76	23.18	-
9	MSME Advances	5931.58	80210.28	86141.86	6.88
10	% MSME Advances	11.09	13.89	13.66	-
11	CD Ratio	83.14	72.41	73.21	-

Source: State Level Bankers' Committee, Kerala 2024

Government Miscellaneous Non-Banking Finance Company (MNBC). The major business segments of KSFE are chitty, loans and advances and deposits. The aggregate turnover as on March 2024 is Rs 81,571 crore. The business transaction of KSFE in 2023-24 is shown in **Table 1.4.4**

#### **Kerala Financial Corporation (KFC)**

Kerala Financial Corporation (KFC) incorporated under the State Financial Corporations Act of 1951, plays an important role in the development and industrialisation of Kerala by providing financial assistance to micro, small and medium enterprises in the manufacturing and service sector. Net profit of KFC has increased from Rs 50.19 crore in 2022-23 to Rs 74 crore in 2023-24.

One of the initiatives of KFC is the 'Scale up Loan scheme for Mission 1000 Initiative of the State Government'. It envisages to formulate a special loan scheme to support MSMEs identified by the industries department under the MSME Scale up Mission (Mission 1000) aiming at scaling up of 1000 MSMEs in to business with an average annual turnover of Rs 100 crore in four years. Further details on KFC are covered in the industry section.

**Table 1.4.4** Business transactions of KSFE in 2023-24

Sl.No	Particulars	Amount (Rs crore)
1	Chitty (yearly sala)	40,783
2	Advances (o/s)	13,490
3	Deposits (o/s)	25,306
	Aggregate Turnover	81,571

Source : KSFE Limited





## 1.5 STATE FINANCE

Kerala economy posted a strong growth in recent years amidst of several national and international negative shocks. Though, Kerala economy is resilient as the growth surpassed the pre-pandemic level real GSDP in 2022 itself. The economic resilience that Kerala has achieved is because of the concrete State interventions through robust fiscal consolidation by means of revenue augmentation and expenditure rationalization without compromising its commitments to people's welfare.

Changes that have taken place in the national and international economic landscape has impacted Kerala's economy as well. Series of unprecedented events including demonetization in 2016-17, roll out of GST in 2017-18, Cyclone Ockhi and unprecedented floods in 2018-19, natural disasters and floods in 2019-20, COVID-19 in 2020-21, spillovers of the pandemic in 2021-22, the Union Government's restrictions on State borrowing limit from 2022-23 with retrospective effect, Russia-Ukraine War and Middle East conflicts etc. have adversely affected State's capacity to mobilize resources. Amidst of these challenges, through improved tax collection and expenditure rationalization, Kerala sustained its growth without adversely affecting its welfare and development activities.

The Government revenue including ability to borrow determine the fiscal capacity of the Government to support the economy. The State's own income has increased, however Central transfers have declined compared to the previous year. Because of the prudent fiscal consolidation efforts, fiscal indicators performed well. As a result, fiscal deficit to GSDP ratio has maintained at FRBM threshold level, which was 2.5 per cent in 2022-23 and 2.99 per cent in 2023-24. On the expenditure side, there is an additional expenditure

of Rs 1,560.53 crore on planned activities, whereas non plan expenditure declined by Rs 792.72 crore in 2023-24 as compared with last year. In the total revenue expenditure, Plan expenditure increased by Rs 1,262.08 crore and Non Plan expenditure declined by Rs 586.68 crore. On revenue side, because of the robust revenue augmentation measures, the State own tax revenue has increased by Rs 2,360.85 crore and non-tax revenue increased by Rs 1228 crore in 2023-24. The major challenge that the State confronted during the fiscal year 2023-24 was the sharp decline in grant in aid from union government, which decreased by Rs 15309.60 crore (56 per cent). To uphold Kerala's unique model, the State has to maintain a sufficient resource base on the one hand and a sensible distribution of resources on the other end to guarantee a welfare State and to build physical infrastructure.

The Union Government's recent policy initiatives have adversely affected the state's resources. Cessation of the GST compensation in June, 2022 by the Union Government led to a decline in the State's revenue. The annual loss resulting from the termination of GST compensation is around Rs 12,000 Crore. Kerala's tax sharing entitlement has been steadily declining. The 15th Finance Commission reduced the amount of horizontal devolution to 1.92 per cent of the divisible pool, down from 3.06 per cent for the 11th FC and 2.5 per cent for the 14th FC. Without consulting the States, the Union Government increased Cess and Surcharges and such additional levies are not shared with the States. The rising share of surcharges and cesses have resulted in shrinkage of taxes in the divisible pool.

The ceiling placed on the State's borrowing by the Union Government is quite unwarranted, even

though the State is capable of keeping the Debt to GDP ratio sustainable. The strategy of reducing the borrowing space of States has been in place since 2017. The Union Government reduced the stipulated borrowing space of the State by including borrowings from Public Sector entities and the Public Account within the State's borrowing limit. The Union Government considers the surplus in the Public Account, attributed to employees' provident fund contribution, treasury savings deposits from the public and the civil deposit from government departments to undertake public works, as a mode to reduce the State's borrowing.

The period for Revenue Deficit Grants recommended by the 15th Finance Commission was ended in 2023-24. The changes brought by the Union Government into the structure of Centrally Sponsored Schemes have created an additional burden to the States. At present, the Centrally Sponsored Schemes are being implemented in two categories, namely 'Core of the Core' and 'Core' schemes. The number of schemes in the first category which receives 90 per cent central share is decreasing over the years. The lion's share of projects is in the second category. The State has to bear 40 per cent of the expenditure in these schemes and the burden is huge on the State. The State has also had to bear 25 per cent of the land to be acquired for the projects directly carried out by the Centre in the development of national highways. Unlike other States, the density of population and urbanization is high in Kerala, so a large quantum of amount has to be found for this purpose. Despite these circumstances, the State is moving forward with the task of promoting sustainable economic growth in the economy.

Despite the catastrophe brought on by floods, the COVID – 19 pandemic, and the exceptional loss of revenue, the State Government has not shied away from its development and welfare duties. According to NITI Aayog's Sustainable Development Goals – India Index, the State has made the most progress towards the UN Sustainable Development Goals. This shows that money set aside for important social services like health and education is being used efficiently. The work done by the government in the health sector has been praised all over the world. The government's quick and scientific response to crises like COVID – 19, Nipah virus and Wayanad disaster have saved tens of thousands of lives.

The State provides Social Security Pension to more than 62 lakh people at Rs 1600/- per month. It includes about 11 lakh members of welfare fund

boards. When the whole country was in the grip of price hike, Kerala was able to contain it because of the strong public distribution system in the State. The national highway development works in the State are progressing with expected completion by 2025. Some exceptional prestigious ongoing programmes runs by the Government consist of LIFE Mission, K – FON Project, Smart Classrooms, Land for All, Petro Chemical Park at Kochi, Kochi – Bangalore Industrial Corridor, Gift City, Oncology Pharma Park at Alappuzha, Spices Park at Thodupuzha, International Exhibition cum Convention centre at Kakkanad, KINFRA Industrial Park at Mattannoor, MEDS Park at Thiruvanthapuram, Wyanad Coffee Park, Global Ayurveda Village at Varkala, etc. Many Primary Health Centers have been upgraded to Family Health Centers with improved facilities. Despite in the fiscal imbroglio, it is noteworthy to point out that the government has taken over public sector institutions like BHEL – EML and Hindustan News Print Ltd. etc. which were in losses.

The Government of Kerala has accelerated investments in infrastructure for ensuring sustainable growth in the economy. Some major infrastructure initiatives of the Government include the Kannur Airport, GAIL Pipeline, Vizhinjam International Container Transshipment Terminal, Sree Narayana Open University, First Digital University at Thiruvananthapuram, First Super Fab Lab at Kochi, First Graphene Centre at Kochi, First Digital Science Park at Thiruvananthapuram, Re-start of Kerala Paper Products Ltd., Chellanam Sea Wall Project, LPG Terminal at Cheru Vypin, Industrial Park at Puzhakkal Thrissur, New Terminal at CIAL, Integrated Water Transport System Kochi (Water Metro), Kochi Metro Rail Phase – II. The efforts to stimulate economic growth in the State through Government spending has to be aligned with the efforts to mobilize more State Own Tax Revenue and Non – Tax Revenue for fiscal sustainability.

### **Major Deficit Indicators**

Revenue Deficit for 2023-24 is 1.58 per cent of GSDP as against 0.90 per cent in 2022-23. According to Budget Estimates of 2024-25, Revenue Deficit is estimated to be 2.12 per cent of GSDP. Fiscal deficit to GSDP proportion, which was 2.50 per cent in 2022-23 has marginally increased to 2.99 per cent in 2023-24 and estimated to be 3.40 per cent in 2024-25. Major deficit indicators for the period from 2012-13 to 2023-24 are shown in **Table 1.5.1**.

**Table 1.5.1** Major deficit indicators from 2012-13 to 2023-24, Rs in crore

Year	Revenue Deficit		Fiscal Deficit		Primary Deficit	
	Amount	% to GSDP	Amount	% to GSDP	Amount	% to GSDP
2012-13	9351.45	2.27	15002.47	3.639	7797.66	1.89
2013-14	11308.6	2.43	16944.13	3.644	8678.74	1.87
2014-15	13796	2.69	18641.72	3.637	8872.13	1.73
2015-16	9656.81	1.73	17818.46	3.194	6707.61	1.20
2016-17	15484.59	2.44	26448.35	4.17	14331.85	2.26
2017-18	16928.21	2.41	26837.41	3.83	11717.48	1.67
2018-19	17461.92	2.22	26958.30	3.42	10210.39	1.30
2019-20	14495.25	1.78	23837.48	2.93	4622.78	0.57
2020-21*	20063.51	2.60	35203.69	4.56	14228.33	1.84
2021-22*	20799.96	2.23	37306.47	3.99	14003.65	1.50
2022-23	9226.29	0.90	25554.54	2.50	378.18	0.04
2023-24	18140.19	1.58	34257.78	2.99	7271.56	0.63
2024-25 BE	27846.05	2.12	44528.96	3.40	15834.72	1.21

Source: Finance Department, Government of Kerala

Note \* The loan received in lieu of GST compensation of Rs.5766 crore and 8739.31 crore in 2020-21 and 2021-22 respectively is reckoned as Revenue Grant for the calculation of Fiscal indicators.

## Receipts

The State Government's receipts are divided into revenue receipts and capital receipts. The revenue receipts comprise of State's own tax and non-tax revenues, share of Central tax transfers and grants-in-aid from Government of India, whereas capital receipts consist of debt receipts from internal resources and loans and advances from Government of India, disinvestment receipts, recoveries of loans and advances and net accretions under public account.

## Revenue Receipts

The revenue receipts of the State increased from Rs 57,950.47 crore in 2014-15 to Rs 1,24,486.15 crore in 2023-24, recording a CAGR of 8.14 per cent. However, the revenue receipt as compare with 2022-23 has declined by Rs 8,238.50 crore in 2023-24. This was due to the sharp decline of grant in aid from Government of India amounting to Rs 15,309.60 crore in 2023-24.

The largest component of revenue receipts of the State is State's Own Tax Revenue (SOTR). In 2023-24, contribution from SOTR was Rs 74329.01 crore (59.71 per cent). The contribution of State's Own Non-Tax revenue was Rs 16345.96 crore (13.13 per cent). The share of central taxes and grants was Rs 33811.18 crore (27.16 per cent). Of the central taxes and grants, the share of central taxes was Rs 21742.92 crore and Grants in aid received from the

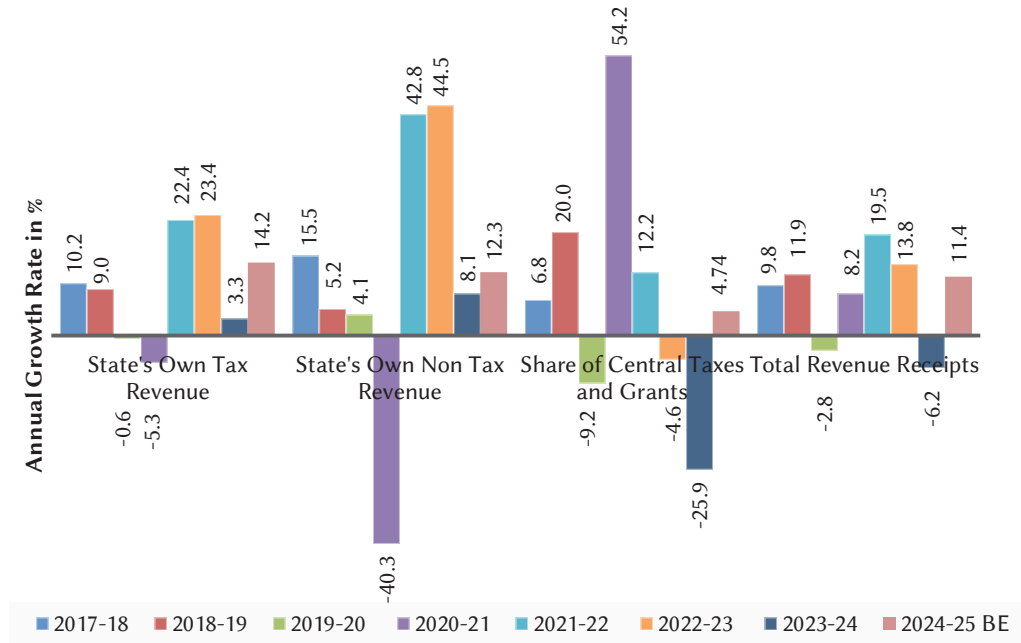
Centre was Rs 12,068.26 crore against Rs 27,377.86 crore in 2022-23. From the Grant in aid received from the Government of India, an amount of Rs 7,245.69 crore was the Finance Commission Award. The source-wise annual growth of revenue receipts of the State is given in **Figure 1.5.1**. Details of revenue receipts of the State are given in the **Appendix 1.5.1**.

In 2014-15, the proportion of central assistance to the total revenue receipts was 26.63 per cent. The hike in the central share in total revenue receipts after 2014-15 is attributed to the change in procedure of routing central share in centrally sponsored schemes (CSS) through the State Budgets instead of directly funding the implementing agencies. After reaching a high of 43.67 per cent in 2020-21 the share of central assistance in total revenue receipts declined to 34.39 per cent and 27.16 per cent in 2022-23 and 2023-24 respectively and it is expected to decline to 25.54 per cent in 2024-25. The loss is due to the stoppage of GST Compensation and tapering off of revenue deficit grants which would further aggravate the fiscal position of the State in the ensuing years. The trend of State revenue receipts from different sources are given in the **Figure 1.5.2**.

### (i) State's Own Tax Revenue

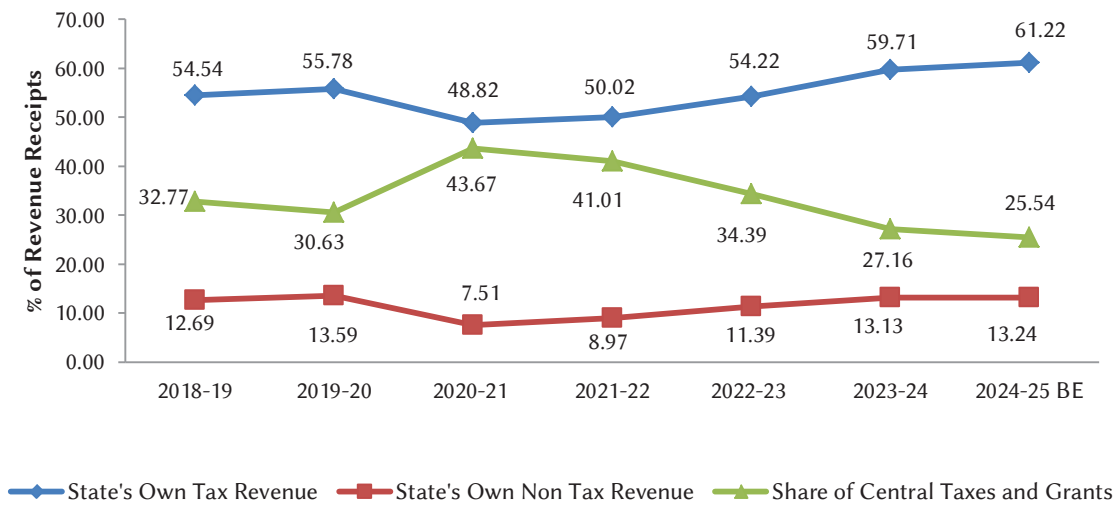
The main components of SOTR are State Goods and Services Tax, Sales Tax on petroleum and alcoholic liquor for human consumption, Stamps

**Figure.1.5.1** Source-wise annual growth of revenue receipts of the State, in per cent



Source: Finance Department, Government of Kerala

**Figure 1.5.2** Share of Different Sources in State's Revenue Receipts, in per cent

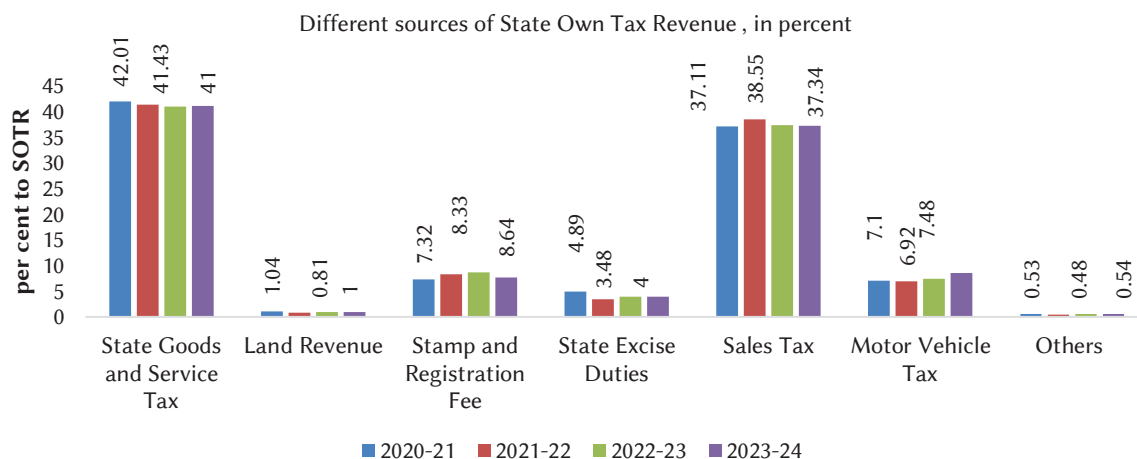


Source: Finance Department, Government of Kerala

and Registration fees, State Excise Duties, Motor Vehicle Tax and Land Revenue. In 2022-23, SOTR was 54.54 per cent of total revenue. It has increased to 59.71 per cent in 2023-24 and the Budget Estimate for 2024-25 was 61.22 per cent. Details of State Own Tax Revenue are given in **(Appendix 1.5.2)**.

The receipt from State's Own Tax Revenue in 2023-24 was Rs 74,329.01 crore against Rs 71,968.16 crore in 2022-23. State Goods and Services Tax constituted the major share of State's Own Tax resource. In 2023-24 receipts from State Goods and services tax (Rs 30,563.60 crore) contributed 41.12 per cent of the total SOTR, followed by 37.25 per cent from Sales

**Figure 1.5.3** Source-wise State own tax revenue in 2020-21 & 2021-22



Source: Finance Department, Government of Kerala

Tax (Rs 27,690.43 crore), 8.53 per cent from Taxes on Vehicles ((Rs 6,340.46 crore), 7.66 per cent from Stamp duties and registration fees (Rs 5,694.88 crore), 3.96 per cent from State Excise Duties (Rs 2,944.02 crore), and 0.96 per cent from Land Revenue (Rs 711.71 crore) and 0.52 per cent from others ((Rs 383.91 crore). **Figure 1.5.3** shows the source-wise State own tax revenue in 2020-21 to 2022-23.

### (ii) State's Own Non-Tax Revenue

Gross receipts under State Lotteries are the major source of Non-Tax revenue of the State. Other main sources of State's Own Non-Tax Revenue (SONTR) are interest receipts and dividends, sale proceeds of forest produce and receipts in the form of fees and fines from various social developmental services. In 2023-24, Rs 16,345.96 crore was realised as SONTR recording a growth rate of 8.12 per cent over 2022-23 (Rs 15117.96 crore). In 2023-24, receipts from State Lotteries were Rs 12,530.91 crore showing an annual increase of 5.36 per cent, compared to 2022-23 (Rs 11892.88 crore). This constitutes 76.66 per cent of the total non-tax revenue of the State. This was followed by receipts of Rs 1,478.23 crore from Social Developmental Services (9.04 per cent), Rs 418.03 crore from contribution on account of interest receipts and dividends (2.56 per cent), Rs 262.43 crore from the sale proceeds of forest produces (1.61 per cent) and Rs 1,656.36 crore (10.13 per cent) from others. Details of State own non-tax revenue is given in **Appendix 1.5.3**.

### (iii) Central Resource Transfers

Two major components of central devolution are share of taxes and grants as recommended by the Finance

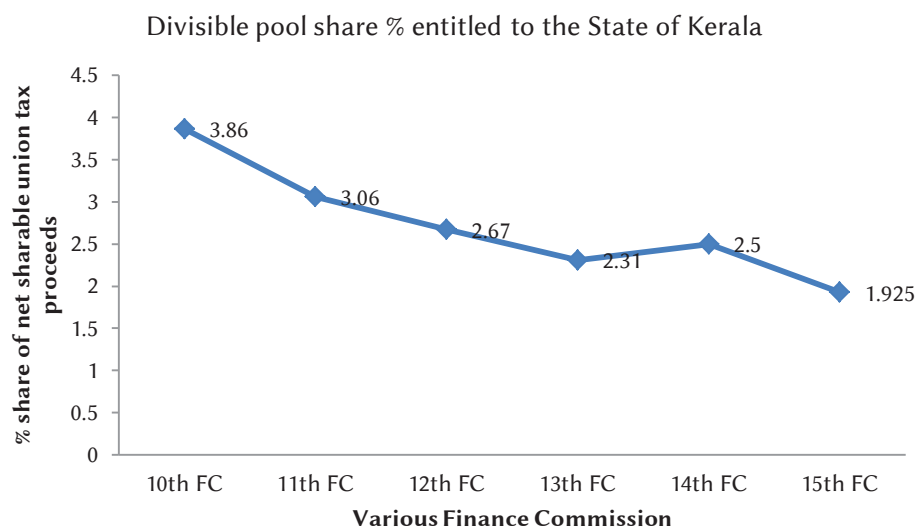
Commissions and grants disbursed by the Union Government. Within Central Devolution, Tax is to be devolved based on the formula recommended by the Finance Commission (FC) as mandated in Article 270 of the Constitution. The FC also recommends grants-in-aid under Article 275 of the constitution to bridge post tax devolution revenue deficits. Moreover, the FC also recommends the devolution of sector specific grants. The tax devolution and revenue deficit grants are the untied part of Central resource transfer. The other components like central share in CSS are tied grants over which the State has no flexibility in spending.

As per the recommendations of the 15th Finance Commission, the share of the States in the net tax proceeds of Union Government is 41 per cent. Kerala was entitled to 2.5 per cent of net sharable union tax proceeds in the 14<sup>th</sup> FC period. Due to the change in the criteria for horizontal devolution, the net proceeds of tax for a single year entitled to the State of Kerala is reduced to 1.925 per cent in the 15<sup>th</sup> FC. **Figure 1.5.4** shows the trend of net shareable tax proceeds based on different Finance Commissions.

The criteria used by the 13<sup>th</sup>, 14<sup>th</sup>, and 15<sup>th</sup> Commissions to determine each State's share in Central taxes, and the weight assigned to each criterion are given in the **Table 1.5.2**.

In 2023-24, the total central transfers to the State was Rs 33,811.18 crore against Rs 45,638.54 crore in 2022-23. In this period, the share of central taxes was Rs 21,742.92 crore against Rs 18,260.68 crore in 2022-23 registering growth rate of 19.07 per cent

**Figure 1.5.4** Trend of net shareable tax proceeds to Kerala by different Finance Commissions



Source: Various Finance Commission Reports, Gol

**Table 1.5.2** Criteria for horizontal devolution of tax resources by Centre to States in the 13<sup>th</sup>, 14<sup>th</sup>, and 15<sup>th</sup> Finance Commission Reports in per cent

Criteria	13th FC	14th FC	15th FC
Population (1971)	25	17.5	-
Population (2011)	-	10	15
Income distance	47.5	50	45
Area	10	15	15
Forest cover	-	7.5	-
Forest and ecology	-	-	10
Demographic performance	-	-	12.5
Tax and Fiscal effort	-	-	2.5
Fiscal Discipline	17.5	-	-

Source: Various Finance Commission Reports, Gol

over the previous year. In 2023-24 the State received Rs 12,068.26 crore as Grant in aid from the centre which shows a negative growth rate of 55.92 per cent compared to that in 2022-23 (Rs 27,377.86 crore). Out of the total grant in aid received for the year 2023-24, an amount of Rs 737.88 crore was from the compensation for loss of revenue arising out of the implementation of the GST. Details of central transfers are given in the **Table 1.5.3**.

### Expenditure

Expenditure of State includes three components viz. revenue expenditure, capital expenditure and expenditure on loan disbursements. The total expenditure in nominal terms increased from Rs 76,744.12 crore in 2014-15 to Rs 1,59,506.24 crore in 2023-24, recording a CAGR of 7.81 per cent. During the period 2022-23 to 2023-24, the Plan expenditure of the government was increased by Rs 1,560.53 crore and the Non-Plan expenditure reduced by Rs 792.72 crore. Out of the total expenditure in 2023-24, Non-Plan and Plan expenditure stood at Rs 1,25,195.73 crore (78.49 per cent) against Rs 1,25,988.45 crore in 2022-23 and Rs 34,310.51 crore (21.51 per cent) against Rs 32,749.98 crore respectively.

### Revenue Expenditure

Revenue expenditure involves both development and non-development expenditure. Development expenditure includes expenditure on Education, Health, Agriculture and Animal Husbandry, Industries, Labour and Employment. Non-development expenditure comprises interest payment, pension payment, debt charges, administrative services and others. Details of revenue expenditure are given in the **Table 1.5.4**.

The operational and maintenance cost for the completed projects and programmes are also classified under the revenue account. Grants provided by

**Table 1.5.3** Central Transfer, Rs in crore

Year	Share in central tax and duties		Grant in aid and other receipts from centre for Plan and Non Plan		Total transfer	
	Amount	Annual Growth Rate in %	Amount	Annual Growth Rate	Amount	Annual Growth Rate in %
2012-13	6840.65	14.19	3021.53	-18.54	9862.18	1.68
2013-14	7468.68	9.18	4138.21	36.96	11606.9	17.69
2014-15	7926.29	6.13	7507.99	81.43	15434.3	32.98
2015-16	12690.7	60.11	8921.35	18.82	21612	40.03
2016-17	15225	19.97	8510.35	-4.61	23735.4	9.82
2017-18	16833.1	10.56	8527.84	0.21	25360.9	6.85
2018-19	19038.2	13.10	11389	33.55	30427.1	19.98
2019-20	16401.1	-13.85	11235.3	-1.35	27636.3	-9.17
2020-21	11560.4	-29.51	31068.28	176.52	42628.68	54.25
2021-22	17820.09	54.15	30017.12	-3.38	47837.21	12.22
2022-23	18260.68	2.47	27377.86	-8.79	45638.54	-4.60
2023-24	21742.92	19.07	12068.26	-55.92	33811.18	-25.92

Source: Finance Department, Government of Kerala

**Table 1.5.4** Trend in Revenue Expenditure, Rs in crore

	Total Revenue Expenditure		Development Expenditure		Non-Development Expenditure	
	Amount	Annual Growth Rate	Amount	% of total revenue exp.	Amount	% of total revenue exp.
2012-13	53488.74	16.17	29889.0	55.88	23599.7	44.12
2013-14	60485.50	13.08	32921.1	54.43	27564.4	45.57
2014-15	71746.43	18.62	39182.2	54.61	32564.2	45.39
2015-16	78689.47	9.68	41762.7	53.07	36926.8	46.93
2016-17	91096.31	15.77	48602.6	53.35	42493.7	46.65
2017-18	99948.35	9.72	52979.5	53.01	46968.8	46.99
2018-19	110316.39	10.37	56788.0	51.48	53528.4	48.52
2019-20	104719.92	-5.07	47550.2	45.41	57169.7	54.59
2020-21	123446.33	17.88	71224.0	57.70	52222.3	42.30
2021-22	146179.51	18.42	74026.85	50.64	72152.66	49.36
2022-23	141950.94	-2.89	70133.18	49.41	71817.75	50.59
2023-24	142626.34	0.48	62657.34	43.93	79969.00	56.07
2024-25 BE	166501.21	16.74	81985.79	49.24	84515.42	50.76

Note: From 2006-07 onwards, assistance to LSG is being classified under "Grant in Aid and Contributions", Developmental Expenditure of the devolutions to LSGs is also reckoned.

the State to meet salaries and pension liabilities of employees in the Universities and State autonomous bodies and also the pension liabilities of employees of Panchayat Raj Institutions are classified as revenue

expenditure. Major portion of revenue expenditure devolved to the Local Self Government Institutions is utilised for the creation of capital assets at the local government level.



Revenue expenditure increased nominally to Rs 1,42,626.34 crore in 2023-24 as against Rs 1,41,950.94 crore in 2022-23. Of the total revenue expenditure of 2023-24, plan expenditure was Rs 18,620.61 crore and non-plan expenditure was Rs 1,24,005.73 crore. During this period, the plan expenditure out of revenue expenditure increased by Rs 6,75.4 crore and the non-plan expenditure decreased by Rs 5,86.68 crore respectively. Similarly, the ratio of revenue expenditure to GSDP decreased to 12.44 per cent in 2023-24 compared to 13.87 per cent in the previous year.

In 2023-24, the share of committed expenditure in revenue expenditure marginally decreased to 71.26 per cent compared to the previous year level of 71.54 per cent. Expenditure on committed expenditure comprises liabilities on salaries, pension, interest payments, subsidies and devolution to the LSGIs. In 2022-23, salary and pension as per cent of total revenue expenditure is 45 per cent in 2022-23 and 2023-24. Interest payment as per cent of total revenue expenditure was 18.92 per cent in 2023-24 compared to 17.74 per cent in 2022-23. Details of Revenue expenditure are given in the **Appendix 1.5.4** and **Appendix 1.5.5**

### Capital Expenditure

As most of State expenditure on Human Capital is categorised as revenue expenditure, the outlay in

capital expenditure has always been small. Still, the Government of Kerala is committed to infrastructural development in the State and has initiated innovative financing models to support major infrastructural projects for the sustainable development of the State economy. These models have already begun to show positive results by attracting long term investment in capital projects. Details of capital expenditure and total expenditure are given in the **Appendix 1.5.6**.

The share of government spending on capital projects in various sectors has increased in recent years. The capital expenditure of the State in 2023-24 was Rs 16,880.17 crore. Public Works continued to remain the major segment of capital outlay with 16.70 per cent of the total capital outlay in 2023-24 followed by, Agriculture and allied activities (2.75 per cent), Industries and Labour (4.03 per cent), and Irrigation (2.51 per cent). The trend in capital outlay is given in **Appendix 1.5.7**.

### Debt Profile

Debt outstanding of the State comprises of (i) internal debt including market loan and loans from financial institutions, (ii) loans and advances from the Union Government, and (iii) liabilities on account of Small Savings, Provident Fund Deposits, etc. Outstanding public debt of the State at the end of 2023-24 was Rs 2,67,989.99 crore. The Public Debt-GSDP ratio stood at 23.25 per cent and 23.38 per cent in 2022-23 and 2023-24 respectively. The State could almost

**Table 1.5.5** Trend in Capital Outlay, in Rs crore

Year	Irrigation	Agriculture and Allied Services	Industries, Labour and Employment	Public Works	Others	Total
2012-13	340.6	192.11	273.95	2142.92	1653.71	4603.29
2013-14	342.39	210.62	342.24	1549.43	1849.65	4294.33
2014-15	270.24	355.9	260.22	1578.94	1789.29	4254.59
2015-16	526.23	473.08	334.94	2924.26	3241.53	7500.04
2016-17	674.83	555.62	516.79	3001.88	5376.83	10125.95
2017-18	544.4877	629.83	548.06	2595.57	4430.92	8748.87
2018-19	271.777	543.95	276.74	2000.48	4337.58	7430.54
2019-20	282.83	340.37	254.01	2435.51	5142.08	8454.8
2020-21	302.14	464.87	486.1	2881.18	8755.36	12889.65
2021-22	440.64	478.89	541.36	3467.16	9263.67	14191.73
2022-23	402.68	761.81	529.25	2712.25	9590.56	13996.56
2023-24	341.05	372.82	547.89	2268.43	10054.27	13584.45
2024-25 BE	577.48	407.52	819.19	3080.17	10778.86	15663.22

Source: Finance Department, Government of Kerala

maintain the Public Debt GSDP ratio steadily in recent years. The total outstanding liabilities of the State were 35.38 per cent in 2022-23. It is decreased to 34.20 per cent in 2023-24.

The share of internal debt in the public debt of the State was 95.96 per cent in 2023-24. Outstanding internal debt increased to Rs 2,57,157.92 crore in 2023-24 from Rs 2,27,137 crore in 2022-23. The growth rate of outstanding internal debt in 2023-24 was 13.22 per cent. The outstanding liabilities under loans and advances from the Centre marginally decreased to Rs 10,832.07 crore in 2023-24 from Rs 10,863.90 crore in 2022-23. The share of the Central loan in the public debt of the State was only 4.04 per cent in 2023-24.

The outstanding liabilities under small savings, provident fund etc. at the end of 2023-24 were Rs 1,23,944.24 crore compared to Rs 1,24,190.92 crore in 2022-23. The gross and net retention of debt in 2023-24 was Rs 29,742.34 crore and Rs 2,793.33 crore respectively.

Kerala strive for long-term, sustainable stability while putting a particular emphasis on boosting revenue from both tax and non-tax sources. This entails streamlining expenditures, guaranteeing reasonable central revenues, and maximizing the efficiency of growing state-owned resources. Kerala must employ resilient and creative financial measures to overcome these obstacles. The achievement of the state's development objectives and economic recovery will be largely dependent on efficient resource management.



## 1.6 ANNUAL PLAN 2024-25

The Annual Plan 2024-25 aimed to further improve Kerala's base of social investment with special focus on health, school education and housing. The Annual Plan prioritizes social welfare, gender justice, and sustainable growth along with emphasis on development of industry, agriculture, tourism and modern services to boost production, productivity and overall development.

**Table 1.6.1** Sector-wise Outlay in Annual Plan 2023-24 & 2024-25 Rs crore

Sector-wise Outlay in Annual Plans 2023-24 and 2024-25								
Rs in crore								
Sl. No.	Sector/ Sub Sector	2023-24			2024-25			Per cent increase/ decrease in Aggregate Plan 2024-25 over 2023-24
		State Plan Outlay	Central Assistance	Aggregate Plan	State Plan Outlay	Central Assistance	Aggregate Plan	
1	2	3	4	5	6	7	8	9
I	Agriculture and Allied Activities	1739.67	290.40	2030.07	1698.30	227.98	1926.28	-5.39
II	Rural Development	2149.03	4515.29	6664.32	2157.90	5032.22	7190.12	7.31
III	Co-operation	140.50	34.91	175.41	134.42	34.91	169.33	-3.59
IV	Irrigation and Flood Control	514.85	10.60	525.45	588.85	7.00	595.85	11.82
V	Energy	1158.09	0.00	1158.09	1150.76	0.00	1150.76	-0.64
VI	Industry and Minerals	1806.66	12.00	1818.66	1729.13	12.00	1741.13	-4.45
VII	Transport and Communication	2442.89	0.00	2442.89	2327.46	0.00	2327.46	-4.96
VIII	Science, Technology & Environment	248.15	1.40	249.55	235.55	0.90	236.45	-5.54
IX	Social Services	9974.81	3227.82	13202.63	9844.47	3076.53	12921.00	-2.18
X	General Economic Services	874.09	128.97	1003.06	828.21	96.89	925.10	-8.43
XI	General Services	158.43	37.80	196.23	142.95	28.48	171.43	-14.47
	Total (I To XI)	21207.17	8259.19	29466.36	20838	8516.91	29354.91	-0.38
XII	LSGD	8258.00	0.00	8258.00	8532.00	0.00	8532.00	3.21
XIII	RKI	904.83	0.00	904.83	1000.00	0.00	1000.00	9.52
	Grand Total	30370.00	8259.19	38629.19	30370.00	8516.91	38886.91	0.66

Efforts have been made in the higher education system, so as to prepare Kerala's youth for the most relevant skilled employment opportunities in the modern economy. The Government has formulated schemes with a long-term perspective on development. It aims to develop Kerala as a knowledge society with emphasis on welfare, development and employment opportunities. The Government has adopted the vision of mobilising the people as a whole for development activities. The Annual Plan 2024-25 underlines our continued commitment to socially impactful schemes aimed at people's welfare and economic growth.

The aggregate Plan outlay of Annual Plan 2024-25 was Rs 38,886.91 crore which includes State Plan of Rs 30,370 crore and central assistance of Rs 8516.91 crore. The outlay earmarked for the LSGIs in 2023-24 was Rs 8,532 crore, which was 28.09 per cent of the total State plan outlay. This

included the amount of Rs 180 crore earmarked for the Externally Aided Project "Kerala Solid Waste Management Project" to the Municipalities and Municipal Corporations.

An amount of Rs 2979.4 crore was allocated to Scheduled Caste Sub Plan (SCSP) and Rs 859.5 Crore to Tribal Sub Plan (TSP). A total of Rs 4661.51 crore (21.35 per cent of the State Plan Outlay) has exclusively been earmarked for girls/women which included Rs 6.21 crore for the Transgender community. The total allocation of resources intended for benefiting children was Rs 1686.85 crore (7.72 per cent). The sector wise outlays earmarked in the Annual Plans 2023-24 and 2024-25 are given in **Table 1.6.1**.

The sector wise expenditure incurred during Annual Plan 2023-24 are given in **Table 1.6.2**.

**Table 1.6.2** Sector wise expenditure incurred during the Annual Plan 2023-24 (Rs in crore)

Sl. No.	Sector/ Sub Sector	2023-24		
		State Plan Outlay	Expenditure (Plan Space - Treasury)	% of Expenditure
1	2	3	4	
I	Agriculture and Allied Activities	1739.67	1088.09	62.55
II	Rural Development	2149.03	1209.44	56.28
III	Co-operation	140.50	17.37	12.36
IV	Irrigation and Flood Control	514.85	289.68	56.27
V	Energy	1158.09	100.21	8.65
VI	Industry and Minerals	1806.66	914.54	50.62
VII	Transport and Communication	2442.89	2999.64	122.79
VIII	Science, Technology & Environment	248.15	109.43	44.10
IX	Social Services	9974.81	8848.82	88.71
X	General Economic Services	874.09	374.88	42.89
XI	General Services	158.43	444.53	280.58
	Total (I To XI)	21207.17	16396.64	77.32
XII	LSGD	8258.00	6994.61	84.70
XIII	RKI	904.83	1408.35	155.65
	Grand Total	30370.00	24799.60	81.66

CHAPTER

02

A NEW ENVIRONMENT FOR  
INDUSTRY  
IN KERALA AND A  
BREAKTHROUGH IN THE  
MSME SECTOR



# A NEW ENVIRONMENT FOR INDUSTRY IN KERALA AND A BREAKTHROUGH IN THE MSME SECTOR

## **Introduction**

A key achievement of the present Government of Kerala is the change it has brought about in the industrial landscape of the State. The main features of the new growth story in Kerala's industrial sector include the emergence of a large number of MSMEs and new industries in modern sectors, expansion of industrial infrastructure, significant increase in value addition from industry, improvement in the performance of Public Sector Undertakings (PSUs), increase in major investments in the industries sector in the State, and modernisation in the traditional sectors.

The old perception that Kerala is not a suitable industrial investment destination is now decidedly a thing of the past. The leadership and pro-active role of the State Government has been the key factor in this transformation. The Government has instilled a sense of confidence in investors and has ignited a spirit of entrepreneurship among the masses in the State. Kerala has clear and specific advantages in knowledge-based industries compared to the rest of the country. The State has consciously strategised its efforts to tap its advantages and potential in this regard. The 13th and 14th Five-Year Plans have been important milestones in Kerala's industrial strategy.

## **14th Five-Year Plan and the planned development of the industry**

The Government of India has discontinued the practice of formulating Five-Year Plans in 2014.

However, as a State which has reaped the benefits of participative and planned development, the Government of Kerala is continuing with the practice of the planned model of development including Five-Year Plans and Annual Plans.

The State has committed itself to a programme of industrial development involving the private, cooperative and public sectors in the 14th FYP. It was proposed that the State adopt effective measures to ensure that Kerala becomes an investor-cum-industry friendly destination. Industrial development was proposed to be promoted taking into account the resource base, and the distinct advantages and limitations of the State. Technology upgradation, multi-sectoral integration and coordination were accorded high priority. Key objectives were laid down in nine areas including investment facilitation, industrial promotion, employment generation, education-research-industry continuum, role of local governments, promoting entrepreneurship, building resilient industries, increasing the share of industry, and data management. The Plan proposed industrial development taking into account the resource base, distinct advantages, and special geographical features of the State.

## **The strategy for the 14th Five-Year Plan (FYP)**

The strategy to develop industries under the 14th Five-Year Plan includes components such as strengthening the existing industrial base, improving the resilience of industries,



protecting employment, special focus on MSME development, promoting sustainability and scaling up of units, linking local units to national and global markets, developing industrial parks with modern facilities, exploring new models for development of industrial infrastructure, creating land banks for industries, and technology modernisation of PSUs. Special focus has been given to developing infrastructure for the Information Technology (IT) industry and IT-enabled service (ITES) sector. Increasing efforts to be vital parts of national and global value chains, and the promotion of greater value addition in the plantation sector are also part of the strategy. Modernisation, product diversification, and effective marketing and distribution strategy are the three basic pillars for the development of traditional industries in the 14th Five-Year Plan. Special emphasis is placed on supporting and ensuring the welfare of workers engaged in the traditional industries.

#### **The 14th Five-Year Plan - consolidation and leap forward from 13th Five-Year Plan**

The 14th Plan also seeks to consolidate and take forward the achievements of the 13th Five-Year Plan. The 13th Five-Year Plan for Kerala for the period 2017-2022 laid out a strategy to achieve a significant leap in industrial production in the State through enterprises in the private, co-operative, and public sectors. The State envisaged establishing a modern industrial sector by taking advantage of the distinctive characteristics of the State. A turn around in the performance of the manufacturing sector was central to the revival of Kerala's economy from 2016 onwards. The share of manufacturing in total Gross State Value Added (GSVA) of Kerala was only 9.8 per cent in 2014-15, but rose to 12.4 per cent by 2021-22 (Constant Price). Major highlights of the improved performance of Kerala's manufacturing sector from 2016-17 onwards include a revival in the performance of State PSUs (mainly in the chemicals and electrical machinery sectors) and a continuing vigour in the growth of micro, small and medium enterprises (MSMEs) in the State.

The establishment of mega food parks, cluster-based ventures, and cold storages across different regions of Kerala in the 13th Plan period helped the promotion of agro-based and food processing industries in the State. The State initiated the development of industrial parks specifically for

the growth of petrochemicals, pharmaceutical manufacturing, and life sciences. There was particular attention on the growth of defence electronics and light engineering. Logistics and port-based industries have been another area offering big opportunities for the State. Some of the significant achievements during the 13th FYP are as follows –

- Kerala State Industrial Development Corporation (KSIDC), the premier industrial promotion agency of the State Government initiated the establishment of Life Sciences Park in 206 acres of land at Thonnakkal, Thiruvananthapuram and also devised a Rs 260 crore project for the Medical Devices Park in collaboration with Sree Chitra Tirunal Institute for Medical Sciences and Technology. With a specific focus on the seafood processing sector, KSIDC established a food park at the Industrial Growth Centre (IGC) Pallippuram, Cherthala.
- Kerala Industrial Infrastructure Development Corporation (KINFRA) set up industrial parks in multiple locations. Few significant projects include India's first international apparel park at Thiruvananthapuram, export promotion industrial park at Ernakulam, infotainment park and Film and Video Park at Thiruvananthapuram, and Food Processing Industrial Park at Malappuram.
- The overall performance of PSUs has improved. Turnover and operating profits have registered an increase of 32.41 per cent and 105.68 per cent respectively in 2021-22, as compared to 2017-18. Kerala Minerals and Metals Ltd (KMML), KELTRON, Travancore Titanium Products Limited (TTPL), Travancore Cochin Chemicals Limited (TCCL), and KELTRON Component Complex have registered record performance.
- The Industrial and Commercial Policy 2018, the Kerala Micro, Small, and Medium Enterprises Facilitation Act 2019, and the Kerala Industrial Single Window Clearance Boards and Industrial Township Area Development (Amendment) Rules, 2021 were introduced. Kerala become the first State to adopt the 'Responsible Investment, Responsible Industry' programme as part of an industrial growth strategy.
- A total of 69,814 MSMEs were established with a total investment of Rs 6,667.15 crore, generating 2,47,601 jobs. Under the Entrepreneurship Support Scheme (ESS), the

department's flagship program, 5,305 MSME units received a total subsidy of Rs 27,394.2 lakh. *Vyavasaya Bhadratha*, a special package was implemented to provide relief and financial assistance to MSMEs in the wake of COVID-19.

- A comprehensive revival package was implemented to modernise the coir sector viz "Second Reorganisation of Coir Industry". With the introduction of over 25,000 good quality electronic ratts, and 1,000 Automated Spinning Mills (ASMs) in over 100 societies, yarn production increased from 7,880 tonnes in 2016 to 25,000 in 2021. Through the operation of new de-fibering units, husk utilisation in the State has risen from 12.5 per cent to 14.8 per cent.
- Cashew farming area expanded to 98,821 hectares in 2019-20, with major improvements beginning in 2015-16. With a focus on the expansion of agriculture, the Kerala State Agency for the expansion of Cashew Cultivation (KSACC) has established model cashew farms and gardens, as well as distributed cashew grafts.

### Manufacturing in southern States – a comparison

A comparison of the manufacturing sector in India and the southern States provides some interesting insights. Among the south Indian States, the size of the manufacturing sector is highest in Tamil Nadu and lowest in Kerala, in absolute numbers. The share of manufacturing in Gross Value Added (GVA) at the all India level is around 17 per cent, while the share of manufacturing in

Gross State Value Added (GSVA) in Tamil Nadu is much higher (about 24 per cent). The share of manufacturing in GSVA in the other southern States is lower than the all-India level. The share is lowest in Telangana and Kerala. While the growth rate of manufacturing has been negative for India and Telangana for the year 2022-23, it has been positive for the other States. While the growth rate of manufacturing has been between 2 to 4 per cent for Kerala, Karnataka and Andhra Pradesh, it has been a high of more than 9 per cent in Tamil Nadu. Details are provided in **Table 2.1**.

### Manufacturing in Kerala

There has been an increase in the size of Kerala's manufacturing sector in value terms, in recent years. The growth rate of the manufacturing sector (at Constant Prices) was a commendable 3.98 per cent in 2020-21, despite the Covid-19 pandemic. Growth rate increased to 4.58 per cent in 2021-22. The growth rate in 2023-24 is 3 per cent.

The share of manufacturing in Kerala's GSVA (at Constant Prices) increased from 9.8 per cent in 2014-15 to 11.5 in 2023-24. It had peaked to a high of 13.3 per cent in 2020-21. In comparison, the manufacturing sector accounted for 17.3 per cent of India's GVA (at Constant 2011-12 Prices) in 2023-24 (Provisional Estimates).

### Employment in Manufacturing

The structure of the economy and employment in Kerala is different than of India as a whole.

**Table 2.1** Comparison of Manufacturing across select administrative units (2022-23) (at Constant Prices)

Administrative Unit	Manufacturing GVA / GSVA (Rs in crore)	Total GVA / GSVA	Share of Manufacturing in total GVA / GSVA (in per cent)	Growth rate of Manufacturing GVA / GSVA in 2022-23 (in per cent)
India	25,04,663.00	1,48,04,901.00	16.91	-2.2
Kerala	63,239.00	5,27,630.00	11.98	2.08
Tamil Nadu	3,16,235.14	12,93,787.34	24.44	9.29
Karnataka	1,90,154.05	11,88,887.13	15.99	2.05
Andhra Pradesh	1,07,067.82	6,96,099.05	15.38	3.61
Telangana	79,119.24	6,58,296.34	12.02	-5.54

Source : 1) National Statistical Office, Ministry Of Statistics and Programme Implementation, Government of India for data on India 2) Department of Economics and Statistics, Government of Kerala for data on Kerala and 3) Ministry Of Statistics and Programme Implementation, Government of India for data on states of Tamil Nadu, Karnataka, Andhra Pradesh and Telangana.

**Table 2.2** Shares of different sectors in Gross Value Added (at constant prices) and Employment, Kerala and India, 2023-24

Sectors	Shares in Gross Value Added 2023-24		Shares in employment	
	Kerala (GSVA)	India (GVA)	Kerala	India
Agriculture, livestock, forestry and fishing	8.30	14.5	26.97	46.1
Mining and quarrying	0.48	2.1	0.33	0.2
Primary	8.78	16.6	27.30	46.3
Manufacturing	11.52	17.3	9.94	11.4
Electricity, gas, water supply and other utility services	1.39	2.4	0.84	0.5
Construction	14.07	9.0	13.39	12.0
Secondary	26.97	28.7	24.17	23.9
Trade, repair, hotels and restaurants	20.02	18.6	19.46	12.2
Transport, storage, communication and services related to broadcasting	6.93		8.14	5.6
Financial, real estate and professional services	23.30	23.3	4.4	11.9
Public Administration and other services	14.0	12.7	16.53	
Tertiary	64.25	54.6	48.53	29.7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Sources: Department of Economics and Statistics (for GSVA of Kerala) and National Accounts Statistics (for GVA of India) and Periodic Labour Force Survey (PLFS) carried out by India's Central Statistical Office, 2023-24 for data on employment.

The share of the secondary sector in GVA at the national and State levels is more or less same, at around 27 to 29 per cent. The share of the secondary sector in employment is also more or less same at around 24 per cent. However, the share of the manufacturing is higher in India's GVA. The share of manufacturing sector in total employment in Kerala is 9.94 per cent. The share of manufacturing in total employment in India is higher, at 11.4 per cent. Details are provided in **Table 2.2**.

According to data from the Annual Survey of Industries 2019-20, Kerala's share in Gross Value Added by India's factory sector has increased from 1.2 per cent in 2014-15 to 1.59 per cent in 2019-20. The share was 1.7 per cent in 2017-18.

The factory sector is almost identical to the organised manufacturing sector in Kerala. The factory sector comprises of factories that employ more than 10 workers and operate with the aid of electric power, and factories that employ more than 20 workers without the aid of electric power.

Workers in traditional industries, importantly coir, cashew and handloom, form a substantial share

of Kerala's manufacturing workforce. Factories belonging to the categories of "Food products and beverages", "Rubber and plastic products", and "Chemical products and pharmaceuticals" had the largest share of employment in Kerala's factory sector. Factories in the category "Refined petroleum products" contributed the most to value addition in Kerala's factory sector. Other significant contributions came from units in the categories "Food products and beverages", "Rubber and plastic products", and "Chemical products and pharmaceuticals". Employment in Kerala's factory sector accounted for 2.08 per cent of India's factory sector employment. Similarly output from Kerala's factory sector accounted for 2.43 per cent of India's factory sector output. A comparison of the factory sector in India and Kerala, based on major types of industries for 2019-20 is provided in **Table 2.3**.

A unique feature of the industrial policy and strategy adopted in Kerala is the emphasis on an "entrepreneurial" mode of value addition and value generation. This means that the emphasis has not only been on manufacturing but also on units engaged in industrial services and other

**Table 2.3** Comparison of the factory sector in India and Kerala, based on major types of industries, 2019-20

Industries	Kerala's total factory sector		Shares in Kerala's total factory sector		India's total factory sector		Shares in India's factory sector	
	Employment (No's)	Total Output (Rs. Lakh)	Employment (%)	Value added (%)	Employment (No's)	Total Output (Rs. Lakh)	Employment (%)	Total Output (%)
1	2	3	4	5	6	7	8	9
Food Products and beverages (10, 11)	102306	3474733	29.53	15.88	20,32,625	13,36,01,635	12.23	14.87
Tobacco products (12)	13274	13736	3.83	0.06	4,47,064	42,42,699	2.69	0.47
Textiles (13)	22045	383538	6.36	1.75	16,29,101	3,97,44,643	9.80	4.42
Garments (14)	14147	132621	4.08	0.61	12,60,628	1,60,36,338	7.58	1.79
Footwear (15)	6187	179591	1.79	0.82	4,26,093	66,87,321	2.56	0.74
Wood and wood products (16)	9636	304084	2.78	1.39	95,269	28,38,114	0.57	0.32
Paper and paper products (17)	4378	93201	1.26	0.43	3,23,629	1,36,94,335	1.95	1.52
Printing and reproduction of recorded media (18)	6798	208957	1.96	0.95	1,53,914	42,49,223	0.93	0.47
Refined petroleum products (19)	7546	6939832	2.18	31.71	1,55,030	10,87,57,631	0.93	12.11
Chemical products and pharmaceuticals (20, 21)	26621	1136891	7.68	5.20	17,39,707	11,41,75,367	10.46	12.71
Rubber and plastics products (22)	29428	1213150	8.49	5.54	8,43,562	3,35,21,363	5.07	3.73
Other non-metallic mineral products (23)	20831	579232	6.01	2.65	10,54,127	3,26,24,987	6.34	3.63
Basic metals (24)	5592	390761	1.61	1.79	12,04,877	11,94,79,836	7.25	13.30
Fabricated metal products (25)	6020	172594	1.74	0.79	7,05,038	2,31,39,983	4.24	2.58
Electronic, computer and optical Products (26)	9918	280044	2.86	1.28	2,83,470	2,15,27,624	1.71	2.40
Electrical Equipment (27)	6051	163590	1.75	0.75	6,35,006	3,19,29,192	3.82	3.55
Machinery and equipment (28)	3704	88358	1.07	0.40	9,35,811	3,92,31,342	5.63	4.37
Motor vehicles (29)	529	5661	0.15	0.03	10,82,076	6,28,42,564	6.51	7.00
Other transport equipment (ships and boats (30)	7415	402707	2.14	1.84	4,21,386	2,34,11,876	2.53	2.61
Furniture, jewellery, medical and dental instruments, toys (31, 32)	10581	4873945	3.05	22.27	5,22,830	2,50,39,572	3.14	2.79
Repair and installation of machinery and equipment (33)	3094	59135	0.89	0.27	34,384	14,31,684	0.21	0.16
Waste Collection, treatment and disposal activities; materials recovery (38)	55	5597	0.02	0.03	21,124	11,08,912	0.13	0.12
Publishing activities (58)	2484	69968	0.72	0.32	23,431	6,82,544	0.14	0.08
Others	27809	709936	8.03	3.24	5,94,109	3,83,31,344	3.57	4.27
All Industries	3,46,449	2,18,81,862	100.00	100.00	1,66,24,291	89,83,30,129	100.00	100.00

Note: Figures in brackets refer to the divisions (in two digits) to which each of these industries belong according to National Industrial Classification (NIC)-2008

Source: Annual Survey of Industries India 2019-20, Ministry of Statistics and Programme Implementation (MOSPI), Government of India and Annual Survey of Industries Kerala 2019-20, Directorate of Economics and Statistics (DES), Government of Kerala

“trade”. Under the system of accounting under the National Accounts Statistics, value addition and contributions of service and trade are accounted under the tertiary sector, and not in the secondary sector. This has meant that Kerala’s efforts, success, and contributions in terms of entrepreneurship-led economic growth has always been under represented when the general (national) yardstick is to measure industrialisation in terms of only manufacturing. In short, the success of Kerala’s economic growth strategy is visible not only in terms of its contribution to manufacturing (in the secondary sector) but also in the tertiary sector.

### **Industrial development strategy in Kerala – tailoring to conditions in the State**

The unique conditions in Kerala do not favour the development of large-scale, resource-oriented, or basic industries. However, they offer possibilities in developing various kinds of MSMEs in various sectors. Taking this into consideration, over the years, the Government of Kerala has developed strategies, policies and schemes targeting the development of MSMEs. This strategy also placed significance on conserving and strengthening PSUs in the State. Another important part of the strategy has been the unwavering support to sustain workers in traditional industries and efforts to ensure their sustainability (via modernisation, product diversification, new product development and marketing). The State has also promoted enterprises based on its specific strengths in areas such as education, health, human resources and human development. Some of the flagship programmes of the Directorate of Industries and Commerce include the Year of Enterprises, Private-Campus-Cooperative Industrial Estates, Mission 1000 Scale up, Raising and Accelerating MSME Performance (RAMP), Kerala Brand and the Entrepreneur Support Scheme (ESS). The Year of Enterprises (YoE) programme undertaken in campaign mode since 2022-23, is a major step forward seeking to reap long-lasting gains from reforms, and changes in policies and schemes.

### **The Year of Enterprises (YoE) Campaign 1.0, 2.0 and 3.0**

One of the highlights of Kerala’s progress in the 14th Plan period has been the revolution in MSMEs. The Government of Kerala had started the ‘Year of Entrepreneurship’ in 2022-23 to start one lakh micro small and medium enterprises (MSME) in the State within the year.

This is known as ‘Year of Enterprises 1.0’. The project achieved its target within 245 days. In the subsequent years, the Government rolled out the ‘Year of Enterprises 2.0’ (2023-24) and ‘Year of Enterprises 3.0’ (2024-25). While the establishment of new units has remained the focal point under the campaign, focus has also been provided for sustainability and scaling up of units. Some of the key systems that were established as part of this initiative include the following

- Appointment of professionally qualified interns and setting up Enterprises Help Desks at all local bodies,
- Setting up MSME Clinics at all Districts,
- Establishing Taluk level Enterprise Facilitation Centres with the services of professional resource persons,
- Constituting committees at State, District and local body level for monitoring the activities under the initiative.
- To ensure adequate access to affordable finance to enterprises, a new subsidy scheme was introduced to provide enterprise loans at 4 per cent interest through interest subvention,
- To ensure adequate availability of industrial land and infrastructure, Private Industrial Estate Scheme was introduced to grant developer permit to private entities.
- A robust and dynamic online portal was developed to offer Industries Department’s services.
- Continuous campaigns, from general orientation training to potential entrepreneurs, loans, license, subsidy mela for entrepreneurs, and marketing festivals for providing marketing avenues to newly formed enterprises were conducted at all local bodies.
- Emphasis on sustainability of enterprises to ensure that at least 70 per cent of the new MSMEs formed in the State operate successfully.
- Measures to ensure 5 per cent growth rate in the turnover of new MSMEs.

The campaign has reignited the spirit of entrepreneurship in the State. The ‘Year of Enterprises (YoE)’ campaign was recognised as the best practices model at the National Conference on Micro Small and Medium Enterprises 2023. Kerala’s Year of Enterprises initiative has also received the “Innovation in Public Administration” award from the American Society for Public Administration (ASPA), marking the first time in the society’s 87 year history that an Indian

### Box 2.1 Mission-1000 Scale Up

The Mission 1000 initiative by the Department of Industries is aimed at scaling up 1000 Micro, Small, and Medium Enterprises (MSMEs) in the State into businesses with an average annual turnover of Rs. 100 crore within four years. MSMEs will be selected through an objective and transparent process. This initiative provides a unique opportunity for MSMEs in Kerala to upscale their businesses and reach new heights of success. The transparent selection process, along with various incentives, will create an environment of growth and development for the selected units.

For being eligible for applying to the Mission 1000 scheme, the MSMEs shall satisfy the following pre-requisite criteria:

- MSME should be registered in Kerala with valid UDYAM registration.
- MSME unit must be in operation for at least three years as of March 31, 2023.
- MSME must be engaged in manufacturing or service activities (units engaged in trade activities are not eligible).

Selected units will be provided with various incentives to encourage their growth, such as:

1. Capital Investment Subsidy up to 40% (maximum Rs. 2 crore).
2. Interest subvention for working capital loans up to 50 per cent of the interest rate (limited to Rs. 1 crore).
3. Financial assistance for preparation of DPR for scale (up to Rs. 1 lakh per Enterprise).
4. One-to-one handholding by assigning an officer from the Industries Department to each selected enterprise to assist them in their various scaling-up related activities.

An online application portal was launched to facilitate the application process, and as of October 2024, 790 applications have been submitted through the portal. Out of these, 360 applications were placed before the State Level Approval Committee (SLAC), and 213 applications have been approved, demonstrating the initiative's commitment to supporting MSMEs in their growth journey.

Source: Directorate of Industries and Commerce, Kerala

**Table 2.4** Achievements under the Year of Enterprises Campaign

	Total no. of Units	Total Investment (Rs. in crore)	Total jobs created
Year of Enterprises 1.0	1,39,839	8,421.64	3,00,049
Year of Enterprises 2.0	1,03,595	7,048.65	2,18,178
Year of Enterprises 3.0 (as of 25.11.2024)	86,875	5,671.46	1,82,036
<b>Total</b>	<b>3,30,309</b>	<b>21,141.75</b>	<b>7,00,263</b>

Source : Directorate of Industries and Commerce, Kerala

project has been recognised. The resounding success of the campaign is evident from the fact that till November 2024, under the campaign a total of 3,30,309 units have been established in the State. It has led to investment of Rs 21,141.75 crore and has created employment opportunities for 7,00,263 persons. Details are provided in **Table 2.4**.

#### Units formed under Year of Enterprises Campaign

The units formed as part of the Year of Enterprises (YoE) campaign can be classified as belonging to manufacturing, service or trade sectors. As a whole, the largest number of units was established in trade sector, followed

by services sector. However, the number of units in services sector was more than those in trade sector in the years 2023-24 and 2024-25 (till November 2024). Details are provided in **Table 2.5**.

#### Manufacturing under the Year of Enterprises campaign

A total of 46,224 units were started in manufacturing sector with an investment of Rs 4,429.55 crore. It generated employment for 1,24,982 persons. Year-wise details are provided in **Figure 2.1**

**Table 2.5** Units formed under Year of Enterprises Campaign

	Manufacturing	Service	Trade	Total
Year of Enterprises 1.0	21,989	53,300	64,550	1,39,839
Year of Enterprises 2.0	14,035	45,691	43,869	1,03,595
Year of Enterprises 3.0 (as of 25.11.2024)	10,200	38,686	37,989	86,875
<b>Total</b>	<b>46,224</b>	<b>1,37,677</b>	<b>1,46,408</b>	<b>3,30,309</b>

Source : Directorate of Industries and Commerce, Kerala

### Services and the Year of Enterprises Campaign

A total of 1,37,677 units were started in Services with an investment of Rs 7,892.03 crore. It generated employment for 3,00,250 persons. Year-wise details are provided in **Figure 2.2**.

### Trade and the Year of Enterprises Campaign

A total of 1,46,408 units were started in Trade with an investment of Rs 8,820.17 crore. It generated employment for 2,75,031 persons. Year-wise details are provided in **Figure 2.3**.

### Major investments under the Year of Enterprises campaign

A quick look at some of the major investments under the YoE scheme is provided in **Table 2.6**.

### Year of Enterprises and social categories

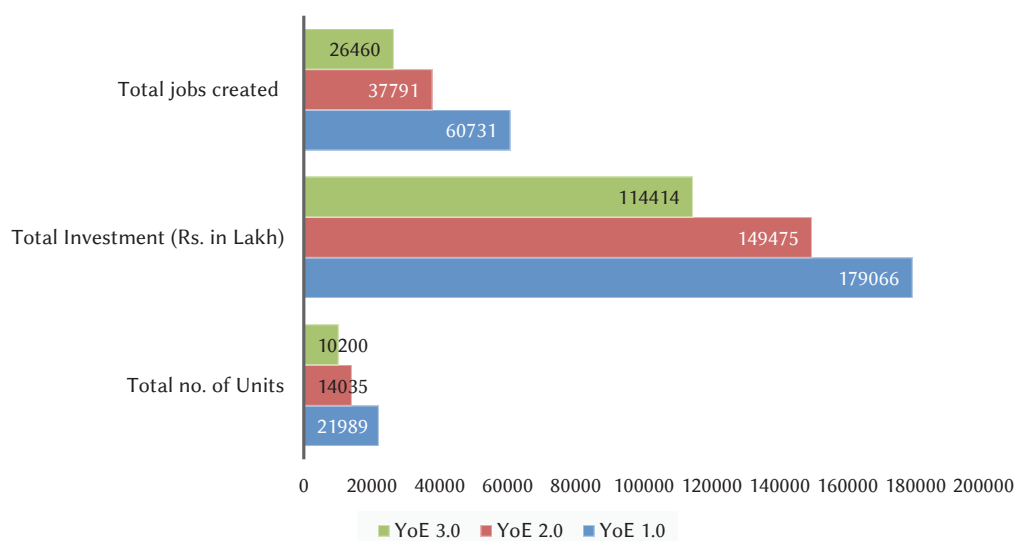
Analysis of the number of units in terms of social

categories offers some significant insights. The share of General category in total enterprises is around 29 percent. The rest of the categories including Other Backward Classes (OBCs), Minorities, Scheduled Castes (SCs) and Scheduled Tribes (STs) together constitute around 71 per cent of total units. The largest number of units has been started by entrepreneurs in the OBC category (around 60 per cent). This is proof of the participative nature of the Year of Enterprises campaign undertaken by Government of Kerala. Details are provided in **Figure 2.4**.

### Top sub-sectors under Year of Enterprises campaign

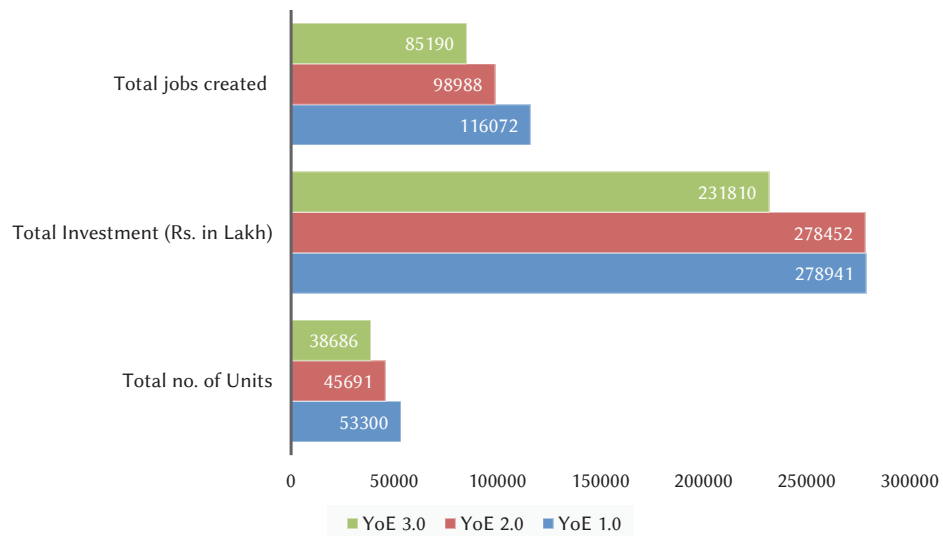
Units in manufacturing, service and trade are classified into 21 sub-sectors. Top 5 sub-sectors (in terms of number of units started since 2022-23) in each of the 3 categories is shown in **Table 2.7**.

**Figure 2.1** Manufacturing Units under Year of Enterprises Campaign



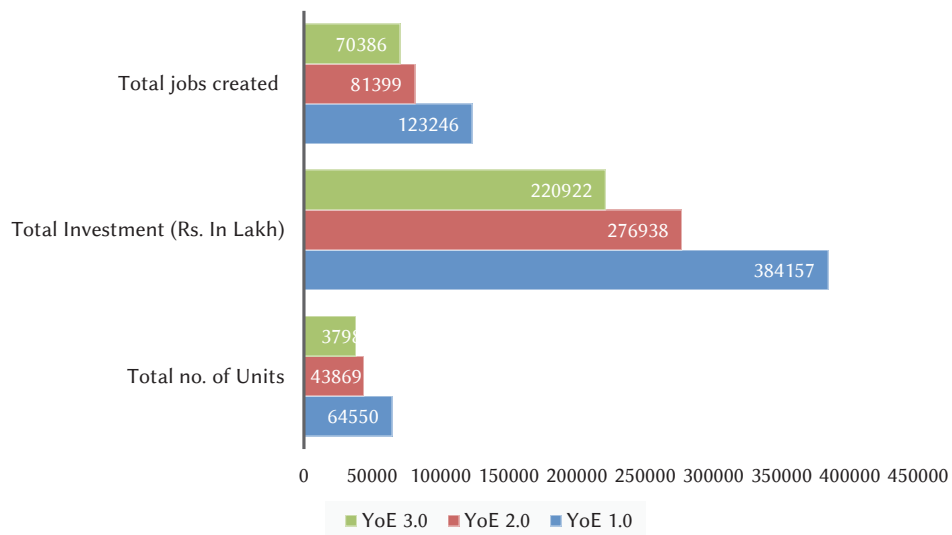
Source : Directorate of Industries and Commerce, Kerala

**Figure 2.2** Service Units under Year of Enterprises Campaign



Source : Directorate of Industries and Commerce, Kerala

**Figure 2.3** Trade Units under Year of Enterprises Campaign



Source : Directorate of Industries and Commerce, Kerala

**Table 2.6.** Major investments under Year of Enterprises Campaign

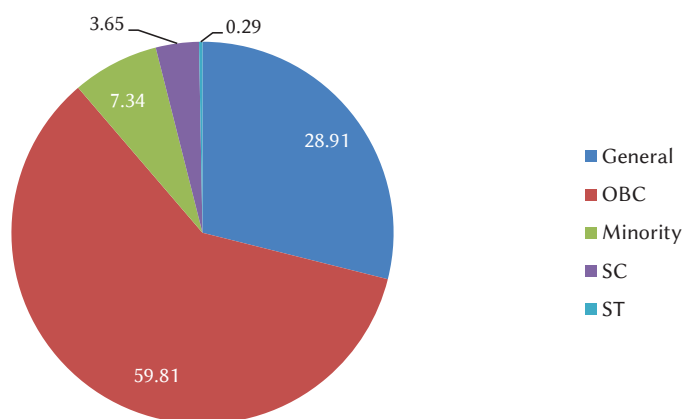
SI No	Enterprise Name	Location	Total Employment	Category	Sector
1	Naila chips	Kannur, Pariyaram	55	Manufacturing	Wood Products
2	Craze Biscuits	Kozhikode, Pangad	40	Manufacturing	Agro food, Beverage, Meat/ Fish Product and Processing
3	Amylose Natural Foods	Ernakulam, Vengoor	98	Manufacturing	Agro food, Beverage, Meat/ Fish Product and Processing
4	Palladium convention centre	Kasaragod, Kanjangad	6	Service	Other service Activities



5	Supreme decor	Kasaragod, Puthige	50	Manufacturing	Other manufacturing activities
6	Lords 83	Wayanad, Meenangadi	40	Service	Agro food, Beverage, Meat/ Fish Product and Processing
7	Liberty Med Supplies Pvt Ltd	Kottayam, Ramapuram	115	Manufacturing	Rubber Products
8	Wedsindia	Kollam, Karunagappally	320	Trade	Garments and Textiles, Tailoring, Boutique, Apparel Designing, Ornaments
9	Jayanthi SMT Tea	Palakkad, Elappully	40	Manufacturing	Agro food, Beverage, Meat/ Fish Product and Processing
10	Mountain Pass Residency	Malappuram, Vazhikadavu	10	Trade	Building Materials, Construction, Architecture, Structural Designing
11	Brahmins Food Industries Pvt Ltd	Ernakulam, Paingattur	20	Manufacturing	Agro food, Beverage, Meat/ Fish Product and Processing
12	Multi-level car parking	Thrissur, Guruvayoor	15	Service	Other service Activities
13	Asiatic Polymer Industries	Ernakulam, puthencruz	20	Manufacturing	Chemical Products
14	Kalyan Silks	Kollam, Corporation limit	300	Trade	Garments and Textiles, Tailoring, Boutique, Apparel Designing, Ornaments
15	Saransh distributors	Ernakulam, Edakkattuvayal	47	Trade	Drugs and Pharmaceuticals including Ayurveda

Source : Directorate of Industries and Commerce, Kerala

**Figure 2.4** Share in total units by social category



Source : Directorate of Industries and Commerce, Kerala

**Table 2.7** Ranking of sub sectors (no of units) under Year of Enterprises Campaign

Rank	Manufacturing	Service	Trade
1	Agro food, Beverage, Meat/ Fish Products	Other service Activities	Stores/ Supermarkets
2	Garments and Textiles, Ornaments	Tailoring, Apparel Designing, Ornaments	Agro food, Beverage, Meat/ Fish Products
3	Other manufacturing activities	Hotels/ Restaurants, Catering Service, Other food processing under service category	Garments and Textiles, Boutique, Ornaments
4	Handloom, Coir and Handicraft items	Personal Care Services, Wellness, Gymnasium, Martial Arts, Yoga	Electrical and Electronics Products, (IT and Mobile) Hardware
5	Wood Products	Electrical and Electronics Services	Drugs and Pharmaceuticals including Ayurveda

Source : Directorate of Industries and Commerce, Kerala

### District-wise performance under Year of Enterprises campaign

An analysis of the District-wise data under the YoE campaign provides some interesting insights. Ernakulam, Thiruvananthapuram and Malappuram are the top 3 Districts in terms of the number of units started and employment generated. Ernakulam, Kozhikode and Malappuram are the top 3 Districts in terms of investment made. Employment generation has

corresponded to the number of units started. However, the employment-investment ratio has been different for different districts. The highest employment: investment ratio of 42.32 is noted in Pathanamthitta. It means each one crore rupee invested generated the highest employment of 42 in Pathanamthitta. It is interesting to note that Ernakulam which generated the highest employment has the lowest employment: investment ratio of 26.99. In other words

**Table 2.8** District - Wise Performance under Year of Enterprises Campaign

SI No	Name of District	Number of Enterprises Formed	Investment (Rs in Crore)	Employment Generated	Employment : Investment ratio
1	Ernakulam	35447	3155.6	85163	26.99
2	Thiruvananthapuram	34969	1982.87	70742	35.68
3	Malappuram	32868	2204.7	75121	34.07
4	Thrissur	31272	1815.89	65295	35.96
5	Palakkad	29867	1799.37	65830	36.59
6	Kozhikode	28918	1985.64	62337	31.39
7	Kollam	28807	1639.73	58248	35.52
8	Kannur	26188	1791.16	53256	29.73
9	Alappuzha	25402	1246.67	49666	39.84
10	Kottayam	19129	1193.48	38672	32.40
11	Pathanamthitta	12756	607.02	25690	42.32
12	Kasaragod	12114	836.05	24084	28.81
13	Idukki	10421	682.73	21621	31.67
14	Wayanad	9322	691.7	19821	28.66
<b>Total</b>		<b>337480</b>	<b>21632.61</b>	<b>715546</b>	<b>33.08</b>

\*as on 17/12/2024

Source: [https://yearofenterprises.kerala.gov.in/index.php/public\\_dashboard](https://yearofenterprises.kerala.gov.in/index.php/public_dashboard)

investment in Ernakulam District tends to be in capital intensive activities. The employment: investment ratio for the State as a whole under the YoE campaign has been 33. It means that on an average one crore rupee invested in enterprise generates employment for 33 persons in Kerala. Details are provided in **Table. 2.8**.

### Women and the Year of Enterprises campaign

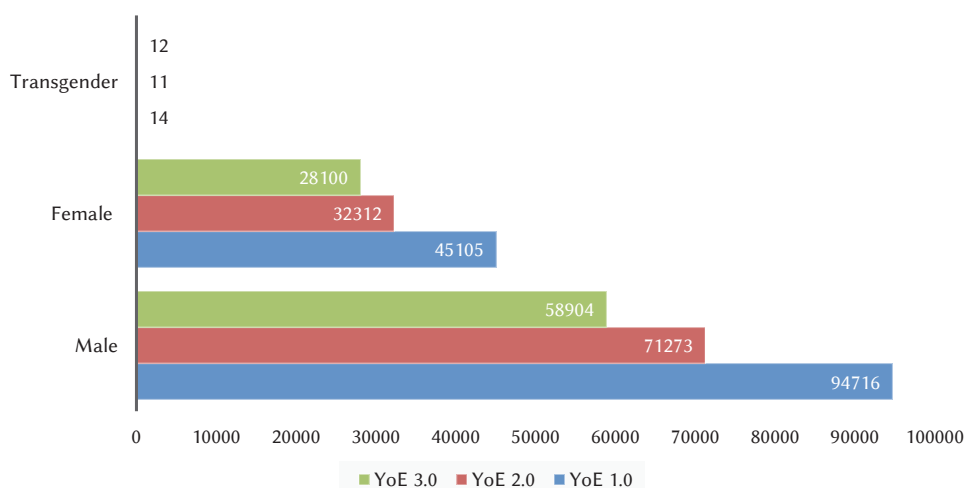
Another unique feature of the YoE campaign has been the active participation of women in

entrepreneurship role. Almost one-third of total units started have been led by women entrepreneurs. 37 units have been started by transgender. Details are provided in **figure 2.5**.

### Kerala: the new leader in business reforms

The Government of Kerala has played a pivotal role in enhancing the ease of doing business through the implementation of various reforms. These reforms are part of the State Business Reforms Action Plan (SBRAP), which aims

**Figure 2.5** Gender wise classification of units under Year of Enterprises Campaign



Source : Directorate of Industries and Commerce, Kerala

### Box 2.2 Kudumbashree and women entrepreneurship

Kudumbashree, the poverty eradication and women empowerment programme implemented by the State Poverty Eradication Mission (SPEM) of the Government of Kerala has played a significant part in the development of enterprises in Kerala. With a view to ensuring financial sustainability of its members, Kudumbashree provides a wide range of support to establish and run micro enterprises. Support includes counselling, training, skill development, financial support, and marketing support to set up and run micro enterprises. In the year 2023-24, with the handholding support of Kudumbashree a total of 34,526 new enterprises involving 39,064 entrepreneurs were formed. In 2024-25 (till November), Kudumbashree has formed 11,771 new Micro Enterprises that consist 14,040 entrepreneurs. Schemes like SHE Starts, Amrutham Nutrimix, Coastal Micro Enterprises, Prathyasha, Jankeeya Hotels, Premium Café's, PM Formalisation of Micro food processing Enterprises (PMFME), Pravasi Bhadratha –PEARL (Pravasi Entrepreneurship Augmentation Reformation of livelihoods), Kudumbashree Livelihood Initiative for Transformation (KLIFT) Campaign, Unarv Campaign have been used by the agency to start and run enterprises by women.

To strengthen Kudumbashree micro-enterprises, 730 trained Micro Enterprise Consultants (MECs) have been deployed, with one assigned to each Community Development Society (CDS) across Kerala. To further aid microenterprise sustainability, Kudumbashree has introduced a Micro Enterprises Insurance scheme, providing insurance coverage to 6,264 enterprises and 23,569 entrepreneurs in manufacturing, trading, and service sectors. Seventeen block-level Micro Enterprises Resource Centres (MERCs) are now operational, serving as central hubs to support sustainable income for entrepreneurs.

Source : Kudumbashree

### Box 2.3 Gender Budget in MSME sector

Out of 40 Schemes implemented by the Directorate of Industries and Commerce, the following schemes have provisions which benefit women

- Entrepreneur Support Scheme (ESS)
- Margin Money Grant to NANO units
- One Family One Enterprises (OFOE)
- Capacity Building Programme
- Local Economic Development
- Revival of MSMEs with Stressed Assets
- Construction of Multi Storied Industrial Estates
- Assistance Scheme for Handicrafts Artisans

Source : Directorate of Industries and Commerce, Kerala

### Box 2.4 Metalko: A Success Story in Precision Laser Cutting.

NCK Metalko LLP, a pioneering precision laser cutting service provider situated in Industrial Development Area, Edayar, Ernakulam, began its operations in July, 2022 with a single state-of-the-art fibre laser cutting machine. The company's smooth inception and operations were made possible with the valuable support of the Industries Department, which provided essential guidance and resources. Founded with a vision to revolutionise metal processing, the company has quickly established itself as a leader in the industry.

From its inception, Metalko focused on serving machine manufacturers, Original Equipment Manufacturers (OEMs), and building strategic partnerships with vendors of prestigious clients. It is transforming many small industries like the boat accessories builders in Munambam, robotic Companies, Furniture companies and many more.

In January 2024, Metalko introduced its second laser cutting machine, one of Kerala's most powerful laser cutting systems. This addition significantly enhanced the company's capacity to handle large-scale projects with greater precision and efficiency, further solidifying its position as an industry leader.

Metalko has a dedicated team which has grown from three to thirteen. The company is committed to nurturing talent, high quality, continuous innovation and fostering a collaborative work environment. Metalko's commitment to excellence is evident in its achievements, including timely delivery of critical components, enhancing client efficiency, and earning trust through exceptional service. Client testimonials frequently highlight Metalko's professionalism, innovative approach, and adherence to timelines as key factors in their satisfaction. Metalko's journey makes it a true success story in Kerala's entrepreneurship growth.



Source : Directorate of Industries and Commerce, Kerala

to streamline Government-to-business service delivery. SBRAP has been in effect since 2016, following guidelines from the Department

for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India. This initiative serves as the

foundation for ranking States and union territories on their ease of doing business performance. The State has actively participated in these ranking exercises and has introduced mechanisms to reduce the regulatory compliance burden. This includes self-evaluations by Government Departments and consultations with stakeholders. As a result, the State has made significant progress in implementing business reforms, with the percentage of reforms executed increasing from 22.8 per cent in 2016 to 91 per cent in 2022.

Kerala has been recognised as the top performer in SBRAP 2022, earning the ‘Top Achiever’ title in nine out of 30 reform areas—the highest number of such recognitions among all States and Union Territories. This remarkable achievement reflects a significant turnaround. Even in the previous editions Kerala had been improving its ranking from 28th in 2019 to 15th in 2020 (Aspirer Category). This progress reflects the positive impact of the State’s business-friendly reforms.

The assessment conducted by DPIIT was based entirely on feedback regarding the effectiveness of the reforms directly from entrepreneurs. To earn the ‘Top Achiever’ title, a reform area must receive over 95 per cent positive feedback.

Details regarding implementation of reforms and ranking of Kerala in SBRAP over years is provided in **Table 2.9**.

While the rankings have not been published every year, there have also been differences of opinion regarding the rankings under SBRAP. The basis

of ranking has fluctuated over years. Ranks were 100 percent based on reform implementation score initially. Subsequently ranks were based on 50 per cent implementation score and 50 per cent feedback score. Later ranks were based 100 per cent on feedback score alone. As a result, the latest edition 2024 will have ranks with 70 per cent weightage for feedback score and 30 per cent on implementation score. Government of India initially provides a list of reforms to be undertaken by the States. The list of reforms that are applicable to each State is subsequently finalised based on discussions between Government of India and the States. The implementation scores are arrived at based on the number of reforms implemented from the approved list of reforms applicable to each State.

A series of well laid out reforms have contributed to this turnaround. The State operates a highly efficient single-window system called K-SWIFT (Kerala Single Window Interface for Fast and Transparent Clearance), through which businesses can obtain 113 State-level and National-level approvals across 22 departments. Additionally, K-SWIFT is integrated with the National Single Window System (NSWS), allowing businesses to secure necessary central approvals as well, streamlining the entire approval process.

The State has implemented the Kerala Centralised Inspection System (K-CIS), an online platform designed to schedule departmental inspections, ensuring greater transparency and objectivity in the process. K-CIS is used by departments such as Labour, Factories and Boilers, the Pollution

**Table 2.9** Implementation of reforms and ranking of Kerala in SBRAP, 2015-16 to 2024

Year	Ranking Basis	Rank	Total reforms
2015 – 16	100% Implementation Score	18	285
2016 – 17	50% Implementation Score and 50% Feedback Score	20	340
2017 – 18	100% Feedback Score	21	372
2019	100% Feedback Score	28	187
2020	100% Feedback Score	15	301
2022	100% Feedback Score	Top Achiever in 9 Reform Areas and Best Performer in the Nation.	352
2024	70% Feedback Score and 30% Implementation Score	Implementation ongoing	

Source : Directorate of Industries and Commerce, Kerala

Control Board, and Legal Metrology to manage and conduct compliance inspections. A total of 22,885 inspections have been carried out through this system.

As part of its ongoing efforts to reduce the compliance burden, Kerala has successfully eliminated 632 business-related compliances across 21 departments and reduced 1,303 citizen-related compliances across 15 departments. Additionally, the State has decriminalised eight clauses under the Abkari Act, further streamlining regulatory processes.

List of Departments and agencies that have contributed in the State Business Reforms Action Plan 2022 are provided in **Table 2.10**.

**Table 2.10** Departments and agencies that have contributed in SBRAP 2022

Sl. No.	Name of the Department
1	Civil Supplies Department
2	Drugs Control Department
3	Electrical Inspectorate
4	Employment Directorate
5	Excise Department
6	Factories and Boilers Department
7	Fire and Safety Department
8	Goods and Services Taxes (GST) Department
9	Health Department - SHA
10	Industries and Commerce
11	Kerala State IT Mission
12	Kerala Water Authority
13	Kerala state Electricity Board
14	Labour Department
15	Legal Metrology
16	Motor Vehicle Department
17	Pollution Control Board
18	Registration Department
19	Revenue Department
20	Local Self Government Department
21	Home Department
22	Law Department

Source : Directorate of Industries and Commerce, Kerala

## Major Reforms undertaken by Kerala to enhance ease of doing business :

### 1. The Kerala Micro Small Medium Enterprises Facilitation Act, 2019

This Act is to exempt MSMEs from obtaining certain State licenses under State Rules for 3 years and six months. ‘Acknowledgment Certificate’ is issued to MSMEs not falling under Red category as per Pollution Control Board guidelines, based on a self-certification from the entrepreneur. The entrepreneur only needs to obtain necessary licenses within 3 years and six months. KSWIFT, the online single window portal can be used to obtain the Acknowledgment Certificate.

**2. Digitisation:** Kerala, being the fully e-governed State and where accessibility to internet is a fundamental right, the State has achieved leaps in digitising processes to reduce compliances. The State has leveraged the opportunity of reducing compliances through digitisation of processes and procedures. The State has introduced online systems for application receiving, processing, collecting payment and approvals for 18 departments.

**3. External Committee on Legislative Reforms:** Government of Kerala has constituted an External Committee to scrutinise all legislations pertaining to doing business in the State and suggest reforms to bring in ease of doing business. The committee has recommended decriminalisation of 38 provisions of various existing Acts and drafted amendments. Apart from these, amendments to 12 Acts, 12 Rules, pertaining to 13 various Departments has been submitted to the Government. The recommendation of the committee is under the scrutiny of the Government.

### 4. The Kerala Micro Small Medium Enterprises Facilitation (Amendment) Act, 2021

This Act is enacted to facilitate non-MSMEs, not falling under Red category as per Pollution Control Board guidelines, a composite license valid for 5 years. An ‘Investment Facilitation Bureau’ is constituted to scrutinise the proposals obtained under the provisions of this Act and the Bureau, within 7 days will take a decision on the proposals.

### 5. The Kerala Industrial Single Window Clearance Boards and Industrial Township Area Development (Amendment) Act, 2022’ (Grievance redressal mechanism)

The amendment to the Single Window Act of

1999 was brought in for resolution of grievances faced by entrepreneurs in obtaining necessary clearances for their projects. Grievance Redressal Committees with statutory powers were constituted in District and State levels to address the grievances of entrepreneurs. Officers are imposed of penal provision of Rs. 250 per day subject to a maximum of Rs. 10,000/- is in the provision of the Act, for undue delay beyond stipulated timelines, in issuing clearances. Online system for registering the grievances is available.

**6.Repeal and Redundancy:** The State has repealed 46 redundant and age-old acts and 59 Amendment Acts which had become obsolete and no longer needed through The Kerala Repealing and Saving Act, 2022 (Act No. 12 of 2022). A total of 105 Acts have been repealed through this act.

By systematically reducing regulatory burdens, such as eliminating hundreds of compliance requirements across various departments, Kerala has created a more efficient, predictable, and welcoming environment for businesses to thrive. These measures have contributed to the State's impressive performance in national rankings and its reputation as a top destination for investment and entrepreneurship.

### **The New Industrial Policy 2023 - a framework for growth with eye on future**

A robust industrial policy is essential to drive economic growth, address emerging challenges, providing direction and creating a nurturing ecosystem for business and entrepreneurship. Keeping this in mind the Government of Kerala has brought out the New Industrial Policy for the State in 2023 to accelerate its industrial growth and create more employment opportunities. This policy builds upon the previous policy from 2018, incorporating changes that align with the current times. With a focus on high-priority industries in the “sunrise” category, the policy aims to provide financial incentives and support to foster their development. The seven focus pillars are i) fostering entrepreneurship ii) enabling infrastructure iii) IR 4.0 ready with robotic manufacturing, data analytical tools, iv) skillset upgradation for futuristic jobs v) sectoral ecosystems vi) ESG compliance and vii) ‘Kerala’ brand.

The 22 Focus Sectors under the New Industrial Policy 2023 include artificial intelligence, robotics and other breakthrough technologies; ayurveda, biotechnology and life sciences; design, electric vehicles, electronic system design and manufacturing, engineering research and development, food technologies, graphene, high value-added rubber products, high-tech farming and value-added plantation produce, logistics and packaging; maritime sector, medical equipment, nano technology, pharmaceuticals, recycling and waste management, renewable energy, retail sector, tourism and hospitality; and 3D printing.

Incentives include low interest loans, capital subsidy incentive, electricity duty exemption, access to finance through Initial Public Offering (IPO) route, investment subsidy, State Goods and Services Taxes (SGST) reimbursement, employment enhancer incentive, waiver of stamp duty and registration charges for manufacturing units, private industrial estates, incentive for participation in trade fairs, intellectual property creation, quality certification incentive, incentives for sustainability and responsible industrialisation, IR 4.0 initiatives in manufacturing, R&D incentive, scale up incentive for Startups, Made in Kerala (Branding and Marketing), and special package to attract PLI investors. The Government has been quick in implementation of the policy. Private Industrial Parks are being created and Made in Kerala products have been launched. Dedicated scheme has also been started for scaling up of enterprises.

The Government has also notified the Unified Industrial Land and Building (Allotment and Disposal) Regulations for KINFRA and KSIDC in 2024 enabling entities to set up industrial units in the land and building owned by the Kerala Industrial Infrastructure Development Corporation (KINFRA) and Kerala State Industrial Development Corporation (KSIDC) in a hassle-free manner. Highlights of the policy include thrust to logistics and warehousing sector, allocation of land on annual rental basis, allotment of plot to private builders and developers, and provision for mortgage of leasehold rights to financial institutions for securing loans.

New policies to be launched soon including Kerala Export Promotion Policy, ESG (Environmental, Social and Governance) Policy, and the Kerala

Logistics Park Policy have been prepared and are being finalised. Action of the State Government in the policy domain has instilled a lot of confidence in investors resulting in a momentum in the industrial landscape.

### **Comprehensive support under Plan schemes – meeting requirements and addressing challenges**

Over the years, Government of Kerala has been able to develop schemes which meet the basic and emerging needs of the entrepreneurs in the State. Increasingly the schemes are developed based on inputs and feedback from the users and prospective customers. The ability of the schemes to meet the requirements of the entrepreneurs has been one of the significant reasons for growth in enterprises, investment and employment in the State. Various types of incentives and related schemes being implemented by the Directorate of Industries and Commerce is provided in **Table 2.11**.

### **Kerala’s Park model of Industrial development – overcoming constraints of land**

Kerala is a relatively small State in India. Its unique geography and topography along with high density of population has led to a situation where land for industrial use is scarce. The situation is compounded by the fact that a significant part of available land falls under the category of being ecologically sensitive. This makes land a high cost resource in the State whose demand is subject to high competition from alternative uses. This has also been a prime factor for the State to lay emphasis on a strategy of park model of development of enterprises in the State. As a result the Directorate of Industries and Commerce, the District Industries Centres and public sector industrial agencies such as Kerala State Industrial Development Corporation (KSIDC), Kerala Industrial Infrastructure Development Corporation (KINFRA), Small Industries Development Corporation (SIDCO) and others develop industrial parks with facilities to support MSMEs.

**Table 2.11** Incentives and related schemes implemented by the Directorate of Industries and Commerce

Sl No	Type of Incentive	Scheme
I	Interest subsidy	1. Interest subvention on deferred land cost investments to entrepreneurs in industrial parks and areas 2. Interest subvention to Nano Household Enterprises 3. Special Package for MSMEs
II	Capital Assistance	1. Entrepreneurship Support Scheme (ESS) 2. Revival of MSMEs with stressed assets 3. Margin Money Grant to Nano Units 4. Revival of small and medium scale cashew factory units 5. Assistance to skilled Entrepreneurs Development Centres 6. Special Package for MSMEs- One family One Enterprise 7. Special Package for MSMEs 8. Assistance to Apex Organisations in the Handicraft sector 9. Revival, Rejuvenation and Resurrection of the private cashew industry sector 10. Local economic development and sustainability of enterprises
III	Rent waiver	Rejuvenating Industrial Co-operative society support scheme
IV	Subsidies on land	Interest Subvention on deferred land cost investments to entrepreneurs industrial areas and parks
V	Infrastructure Development Programmes	1. Improving Infrastructure in Existing DA/DP 2. Modernisation of Existing Common Facility Service Centres 3. Construction of Multi-Storied Industrial Estates 4. Development of Industrial Parks/Areas/Estates in PPP Mode 5. Infrastructure Development and Capacity Building - Setting up of CFCs / Small Industry cluster Development Scheme (Restructured Centrally sponsored scheme of MSE-CDP) 6. Multi-Purpose Trade Facilitation Centres 7. Modernisation of DIC and District/Sub Offices
VI	Entrepreneurial Development Programme	1. KIED as a centre of Excellence in Entrepreneurial Development 2. Enterprise Development Centres 3. Entrepreneurship Development Clubs in Schools and Colleges



VII	Marketing Assistance	1. Multipurpose Trade Facilitation centres 2. Special Package to MSMEs 3. Infrastructure Development and Capacity building Setting up of CFCs / Small Industry cluster Development Scheme (Restructured Centrally sponsored scheme of MSE-CDP) 4. Central MSME sector Scheme ( Matching State share) 5. PM Formalisation of Micro Food Processing Enterprises - PMFME (40% State Share)
VIII	Technology support	1. Entrepreneurship Support Scheme 2. Local Economic Development and sustainability of enterprises 3. Capacity Building Programme 4. Central MSME sector Schemes (Matching State Share)
IX	Insurance Scheme	Local Economic Development and sustainability of enterprises
X	Capacity Building	Capacity Building Programmes
XI	Support for Commerce	Development of Commerce
XII	Support for Handicrafts	1. Assistance to Organisations in Handicrafts Sector 2. Establishment of Common facility Service Centres for Handicrafts 3. Assistance Scheme for Handicrafts Artisans (ASHA) 4. Rejuvenating Industrial Co-operative society support scheme 5. Craft Complex – SURABHI
XIII	Support for Bamboo related Industries	Development of Bamboo Related Industries
XIV	Support for Plantation	Directorate of Plantation

Source : Directorate of Industries and Commerce, Kerala

During recent years, the Government has laid greater emphasis on land acquisition and creation of new industrial parks, expansion of existing parks, development of unused land in existing parks, development of modern or new facilities in existing parks and efficiency in allocation of land and facilities in parks. Industrial areas are named differently by different agencies, into Development Areas, Development Plots, Industrial Parks, Growth Centres and Industrial Estates based on the degree and nature of facilities available in the area. There are a total of 226 Industrial Areas of

various types under various agencies. The details regarding existing facilities in various Industrial Parks under various agencies is showed in **Table 2.12**.

Total area under the 226 Industrial Areas in Kerala is around 7,673 acres of land. Of this, about 5,150 acres is the allottable area, and the allotted area is about 4,298 acres. Details are provided in **Table 2.13**.

The State has made rapid strides in acquiring

**Table 2.12** Number of Industrial Areas of various types under different agencies

Sl No	Agency	No. of Industrial Areas			
		Major Industrial Estates	Mini Industrial Estates	Development Area (DA) / Development Plot (DP)	Industrial Parks
1	District Industries Centres ( under the Directorate of Industries and Commerce)	-	92		
2	SIDCO	17	36		
3	Directorate of Industries and Commerce			40	
4	KINFRA		-		30
5	KSIDC		-		11
	<b>Total</b>	<b>17</b>	<b>128</b>	<b>40</b>	<b>41</b>

Source : Compiled from various agencies

**Table 2.13** Land availability and allotment in Industrial Areas under various agencies

SI No	Agency	Total Area	Allotable Area	Share of allottable area in total area	Allotted Area	Share of allotted area in allottable area
1	2	3	4	5 (=4/3)	6	7
1	District Industries Centres (under the Directorate of Industries and Commerce) Mini Estates (92)*	75.63	44.22	58.47	42	94.98
2a	SIDCO - Major (17)	235.83	NA	NA	195.75	NA
2b	SIDCO - Mini (36)	63.22	NA	NA	31	NA
3	Directorate of Industries and Commerce – DA/DP(40)	2428.24	1918.54	79.01	1903.78	99.23
4	KINFRA (30)	3695.36	2478.81	67.08	1584.8	63.93
5	KSIDC (11)	1174.5	707.5	60.24	540.9	76.45
<b>Total</b>		<b>7672.78</b>	<b>5149.07</b>	<b>67.11</b>	<b>4298.23</b>	<b>83.47</b>

Area in Acres

Source : Compiled from various agencies

land for industrial use, developing such land and allocating them among users. However, the State can undertake steps to improve efficiency in land use in Industrial areas. Some of the acquired area is used to develop common facilities and hence not all area is allottable. The State can improve the share of allottable land (column 5 in Table 2.13) which is only about 67 per cent now. This can be done by a) ensuring land most appropriate for industrial use is acquired for developing industrial areas, and b) focusing more on development of acquired land. Similarly, greater efficiency in allocation, represented by share of allotted land in allottable area (column 7 in Table 2.13) (currently about 83 per cent) can ensure that allottable area does not remain vacant. These steps will ensure that land acquired for Industrial areas are put to optimal use. The State is moving in this direction.

In a significant milestone for Kerala's industrial sector, KINFRA's HiTech Park in Kalamassery and the Integrated Industrial and Textile Park (IITP) in Palakkad have won the prestigious Federation of Indian Chambers of Commerce and Industry (FICCI) Swachh Industry Park Awards. Organised by the FICCI, the Swachh Industry Park Campaign aims to encourage industrial parks owned by State Governments and Union Territories to adopt best practices in cleanliness and sustainability. The stringent eligibility criteria include a minimum area of 100 acres and at least 50 per cent occupancy, ensuring only the most

deserving parks qualify for evaluation. A total of 137 parks competed for various categories.

HiTech Park, Kalamassery received the award for Infrastructure Excellence and IITP Palakkad was recognised for Environmental Sustainability. The accolade recognises the parks' exceptional contributions to cleanliness, efficient waste management, and environmental sustainability. It also highlights Kerala's ability to balance industrial growth with environmental consciousness, setting an inspiring example for the rest of the country.

### **Kerala Industrial Infrastructure Development Corporation (KINFRA)**

The primary objective of Kerala Industrial Infrastructure Development Corporation (KINFRA) is building industry-specific infrastructure across the State thereby promoting private investment, employment creation; and creating a land bank for future industrial growth. KINFRA has promoted economic development of industrially backward regions of the State by setting up industrial parks/townships/zones, which provide most of the facilities required for entrepreneurs to start an industry. KINFRA offers entrepreneurs a readymade manufacturing environment, assisting them in minimising the time and expenses required for establishing a unit.

KINFRA has developed 31 industrial parks, accommodating around 1,200 units across various

sectors such as garment manufacturing, food processing, defence equipment, petrochemicals, IT/ITES and healthcare. KINFRA has constructed over 1.4 million sq ft of industrial space, which generated about 70,000 jobs and attracting investment totalling Rs 5,000 crores. The agency has been able to constantly acquire land, develop them, and attract investment in its Parks which include the best in the country. Details regarding some of the top investors in KINFRA Parks in recent years are given in **Table 2.14**.

### Kerala State Industrial Development Corporation Ltd (KSIDC)

KSIDC is one of the main industrial financing

agencies in Kerala. In addition to industrial financing, KSIDC promotes and facilitates physical and social infrastructure required for industrial growth in the State. It has also played a key role in policy development, scheme implementation, investment promotion and business promotion in recent years. KSIDC has initiated major industrial and infrastructure projects, which are strategically important for Kerala's economic development. Electronic Hardware Park at Kochi, Life Science Park, Second phase of Light Engineering Industrial Park, Palakkad, Medical devices Park (Med Spark) and Mega Food Park are some of the key projects of KSIDC in recent years. It has reported profits since 2018-19. Industrial financing by KSIDC

**Table 2.14** Top investors in KINFRA Parks

Sl No	Company	Sector	KINFRA Park	Employment	Area (in acres/sq ft)	Remarks
1	TCS	IT And Electronics	Electronic Manufacturing Cluster (EMC), Kochi	3000	36	Work in progress
2	TATA Elxsi	IT	KINFRA Film & Video Park (KFVP) Trivandrum	2500	2 lakh sq. ft	Commissioned
3	Gen Robotic Innovations Pvt Ltd	Robotics	KFVP, Trivandrum	100	0.99	Commissioned
4	V - Guard	Electronics R&D	EMC, Kochi	350	3	Nearing completion
5	Agappe Diagnostics	Medical Equipment	EMC, Kochi	200	2	Operational
6	Trans-Asian Shipping Co.	Logistics	EMC, Kochi	80	2	Operational
7	Hykon	Electronics	EMC, Kochi	100	5	Work in progress
8	Vinvish Technologies	Aerospace related products	KINFRA International Apparel Parks Ltd. (KIAP), Trivandrum	1000	4324 sq ft 0.0664	Commissioned
9	Jolly Coats	Different types of Industrial Hoses	Petrochemical Park, Kochi	130	3.5	Work in progress
10	Hail Stone	Engineering products	Integrated Industrial and Textile Park (IITP), Palakkad	375	5 1.3 lakh sq ft	Commissioned Work in progress
11	Vensure	IT/ ITES	KFVP, Trivandrum	150	10000 sq ft	Commissioned
12	Systrome Technologies	Electronics	KINFRA Film & Video Park (KFVP) Trivandrum	300	60000 sq ft	Commissioned

Source : KINFRA

## Box 2.5 KINFRA Projects to be completed soon

The state is looking forward to the completion of some major projects being spearheaded by KINFRA, the main industrial infrastructure development agency of the Government. These projects will add significantly to the States capacity to add value and generate employment.

- **Unity Mall at Technopark, Thiruvananthapuram**

This is a Rs 120 crore project that aims to provide a dedicated platform to promote traditional products, locally manufactured goods, and GI tagged items including space for such products of all other States. The project, led by KINFRA, includes a 5 storied commercial building including an amphitheater, spacious retail outlets, an exhibition area, conference rooms, parking facilities, and a large auditorium with a total built up area 1,85,000 sq ft. The Union Government has provided long-term interest-free loans for the project, with 50 per cent of the total amount already sanctioned. Construction is advancing rapidly.

- **International Exhibition Cum Convention Centre, (IECC) Kakkanad, Kochi**

KINFRA is developing an International Standard Exhibition cum Convention Centre on 7 acres of land at Kakkanad in Ernakulam District. This will enable the small and medium enterprises in the state to display their products, organise various exhibitions and thereby find a market for the products. An air conditioned exhibition centre with 55,000 sq.ft built up area was completed and inaugurated on February 04, 2024. The facility is being rented out for exhibitions and has bookings for next year. The construction activity of the Convention Centre of 52,000 sq ft with guest room facility is expected to be completed by January 2025.

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- **Mini Industrial Park, Thonnakkal**

KINFRA is developing a mini-industrial park for MSME units on 7.48 acres in Vellore Village, Mangalpuram Panchayat, Veiloor. The project envisages providing necessary infrastructure to operate non-polluting general category industries. Common infrastructure facilities like roads, water supply facility, power supply system, 24 hour security facility, and street light are being set up in the park. Infrastructure development works like road, water and electricity are in the final stage. Total project cost is 9.0.Cr. With the completion of the project, it is expected to attract an investment of 30 crore rupees and creation of around 300 jobs. The allotment procedure in this park is under process and out of 6.4 acres of total allottable land, an area of 5.79 acres is already allotted to 14 entrepreneurs.

- **Petrochemical Park, Kochi**

The project is being set up on 481.79 acres of land acquired by the state government from the Central Public Sector Undertaking FACT. Petrochemical Park has been established by KINFRA to create a cluster of petrochemical industries by expanding the Cochin Refinery owned by the anchor investor BPCL in the said park and making full use of the raw materials obtained from it. At present, land has been allotted to 24 industrialists. KINFRA expects that the petrochemical park, when fully operational, will generate an investment of Rs 10,000 crore and create employment opportunities for around 10,000 people. The park is expected to be fully operational by March 2025.

- **KINFRA Film and Video Park, Trivandrum, Phase-II, Standard Design Factory (SDF)**

The constructing a new building is in response to increased demand from the IT and ITES industry. The new building has an area of 1.78 lakh square feet and seven floors including offices and recreational spaces. The project cost is Rs 78.476 crore. About 30 per cent of construction has been completed. It is expected to provide employment to 2,500 people directly and 1,500 people indirectly. An investment of Rs 600 crore is expected and the project is expected to be completed by December 2025. A MoU has been signed for full allotment of the building.

Source: KINFRA

**Table 2.15** Top investors in KSIDC Parks

Sl No.	Name of the firm	Location	Area (Cents)	Sector
1	Minar Re-rolling Mills Pvt Ltd	Industrial Growth Centre (IGC) Kannur	1600	TMT Steel Bars
2	Muralya Dairy Products and Logistics Pvt. Ltd.	Business Park, Angamaly	460	Milk and milk products
3	Sun Aquatic Products Pvt. Ltd.	Mega Food Park, Cherthala	500	Seafood
4	Al-Fas Wood Products Pvt Ltd	IGC Kannur	900	Partcile Board
5	Seraphine Dev Impex Pvt. Ltd.	Mega Food Park, Cherthala	375	Snack food, Pulses
6	Protech Organo Foods Pvt. Ltd.	Mega Food Park, Cherthala	300	Seafood
7	RCC Nutra Fill Pvt. Ltd.	Business Park, Angamaly	484	Gamma Irradiation facility
8	Life Infusion Pharmaceuticals Pvt Ltd	IGC Kinalur	350.00	IV Fluid
9	Aqua Seafood Pvt. Ltd.	Mega Food Park, Cherthala	200	Seafood
10	Chendayad Granites (P) Ltd	IGC Kannur	1100	Construction materials

Source : KSIDC

has ensured that the financial requirements of entrepreneurs in the State are met. In recent years it has been able to attract industries to invest in its parks. Details are provided in **Table 2.15**.

#### **Cluster Development and Common Facility Centres – enhancing access to essential facilities**

Kerala has placed special emphasis on the development of Common Facility Centres at various clusters through the Central Sector Scheme namely Micro Small Enterprises – Cluster Development Programme (MSE-CDP) of the Ministry of Micro Small and Medium Enterprises, Government of India. The scheme has been in operation since 2004 with the objective of enhancing the productivity and competitiveness as well as capacity building of Micro and Small Enterprises (MSEs). The scheme has two components:

- The development of Common Facility Centres in Clusters of MSE Units - financial assistance to Consortium (SPV) of Micro and Small Industrial Units in a particular industrial cluster for the development of Common Facility Centres (CFCs).
- Upgradation of infrastructure facilities in new and existing Industrial Development Areas and Plots - financial assistance for the development

of Infrastructure Development activities such as roads, drains, buildings, street lights, bus shelters etc. in new and existing industrial areas and plots.

The funding pattern of the scheme is provided in **Table 2.16**.

A cluster is a group of enterprises located within an identifiable and contiguous area (to a large extent) or a value chain that may go beyond a geographical area and producing same or similar products or complementary products and services, which can be linked together by common physical infrastructure facilities. As per the scheme, the Consortium of MSEs in a particular industrial sector proposing the Common Facility Centre (CFC) has to incorporate an SPV in the form of a Section 8 Company under Companies Act 2013. Operation and management by SPV of MSEs is a unique feature of the scheme.

The Department of Industries and Commerce, Government of Kerala is implementing the projects under MSE-CDP scheme of the Ministry of MSME, Government of India in the State. Kerala Bureau of Industrial Promotion (KBIP) under the Industries Department is the Implementing Agency in the State for the development of CFC Projects under MSE-

**Table 2.16** Funding pattern of MSE-CDP

Component	Total Project Cost	Funding Pattern		
		Government of India	Government of Kerala	Consortium (SPV)
Common Facility Centre	Rs. 5 crore to Rs 10 Crores	80 %	15%	5%
	Rs. 10 crore to Rs 30 crore	70%	15%	15%
Infrastructure Development – New	Rs. 5 crore to Rs 15 crores	60%	40%	NA
Infrastructure Development – Upgradation of existing infrastructure	Rs. 5 crore to Rs 10 crore	50%	50%	NA

Source : Ministry of MSME, Government of India

**Table 2.17** CFCs Commissioned under MSE-CDP (Rs in lakh)

Sl. No	Name of Cluster	Government of India	Government of Kerala	Consortium	Total Project Cost	Status
1	Rubber Cluster, Changanacherry, Kottayam	239.89	-	26.65	266.54	Commissioned June, 2007
2	Plastic Cluster, Aluva, Ernakulam	315.00	92.00	83.00	490.00	Commissioned February 2009
3	Terra Tile Cluster, Thrissur	249.65	99.86	149.79	499.30	Commissioned January 2010
4	Plywood Cluster, Perumbavoor, Ernakulam	235.31	67.23	114.69	417.23	Commissioned January 2010
5	Rice Millers Cluster, Kalady, Ernakulam	472.84	162.72	77.84	713.40	Commissioned December 2011
6	Kerala Furniture Cluster, Perumbavoor, Ernakulam	245.29	98.12	147.17	490.58	Commissioned September 2010
7	Wood Cluster, (Valluvanad) Perinthalmanna, Malappuram	160.23	45.78	32.89	238.90	Commissioned July 2012
8	General Engineering Cluster, Manjeri, Malappuram	199.00	63.00	53.01	315.01	Commissioned January 2015
9	Wood Cluster, Chadayamangalam, Kollam	181.67	51.91	25.95	259.53	Commissioned May 2017
10	Offset Printing Cluster, Kannur	855.50	244.43	122.21	1,222.14	Commissioned March 2018
11	Wood Furniture Cluster, Taliparamba, Kannur	811.67	235.38	117.69	1,164.74	Commissioned December 2018
12	Furniture Cluster, Chevoor, Thrissur	1002.46	289.01	153.61	1445.08	Commissioned January 2021
<b>Total</b>		<b>4968.51</b>	<b>1449.44</b>	<b>1104.50</b>	<b>7522.45</b>	

Source : Directorate of Industries and Commerce, Kerala

CDP Scheme in Kerala, in collaboration with Ministry of MSME, District Industries Centres (DICs) of respective districts and Consortium of Micro and Small Enterprises (MSEs). The Directorate of Industries and Commerce is the Implementing Agency for the upgradation of infrastructure facilities in new and existing Industrial Development Areas and Plots under the administrative control of Directorate of Industries and Commerce.

So far, the Ministry of MSME, Government of India has sanctioned 16 CFC projects worth Rs.12,519.00 lakh under MSE-CDP scheme for Kerala of which 12 projects worth Rs 7,522.45 lakh have been commissioned and operationalised. Details are provided in **Table 2.17**.

The developmental activities of 4 projects worth Rs 4,997.30 lakh is progressing. Details are provided in **Table 2.18**.

The Ministry of MSME, Government of India has sanctioned two projects worth Rs 1,967.69 lakh for upgradation of infrastructure facilities in Industrial Area Edayar, Ernakulam District and Industrial Development Plot, Poovanthuruthu, Kottayam District. Developmental activities are progressing. Both the projects are implemented by the Directorate of Industries and Commerce.

The State Government has also initiated new models for development of industrial infrastructure. This involves the active participation of the private sector, education sector and the cooperative sector.

**Private Industrial Estates (PIE): New model for public private collaboration**

The PIE scheme has been started to meet the soaring need of land for industrial purposes. The scheme enables the private entities to develop industrial estate in the State. Financial assistance of 30 lakh per acre, up to a maximum of 3 crore

is provided by the State Government for a PIE. In addition to the financial assistance, the following assistance is also offered for a developer of private industrial estate -

- a. Developer Permit will be issued and the permit will confer development permit under the Kerala Municipality and Panchayat Building Rules 2019 and subsequent orders.
- b. Notification as an Industrial Area and Single Window Clearance Board under the Kerala Industrial Single window Clearance Board and Township Area Development Act 1999.

Developer Permit has been issued to 30 Private Industrial Estates till November 2024. Details are provided in **Table 2.19**.

**Campus Industrial Parks: A movement towards the triple helix model**

The State Government has created this scheme with a view to create entrepreneurship among students and to strengthen industry academia collaboration. The scheme also intends to utilise the vacant and unutilised land of Government and private educational institutions. Arts and Science Colleges, Professional Colleges, Polytechnics, Industrial Training Institutes (ITIs), and Universities, owning a minimum of 5 acres of land can apply to develop industrial parks. An educational institution owning a minimum of 2 acres of land, can construct a Standard Design Factory (SDF) on their land. Financial Assistance will be available for developing essential infrastructure (including roads, electricity, drainage, and laboratory facilities) and; for setting up Standard Design Factories (SDFs) and related basic amenities. Over 80 educational institutions have already expressed interest in the initiative.

**Co-operative Industrial Parks: Harnessing the strengths of the co-operative movement**

Kerala takes pride in the strength of its co-operative sector. The sector has made vital

**Table 2.18.** Details of ongoing CFC projects under MSE-CDP

Sl. No.	Project	Total Project Cost (Rs in lakh)
1	Furniture Industry Cluster, Mandankavu, Kozhikode	1,446.70
2	Steel Furniture Cluster, Perumbavoor, Ernakulam	1,591.27
3	Plywood Cluster, Idukki Parliament Constituency, Ernakulam	1,404.12
4	Pappad Cluster, Kochuveli, Thiruvananthapuram	555.22

Source : Directorate of Industries and Commerce, Kerala

**Table 2.19** Geographical distribution of private industrial estates with developer permit

SI No	PIE Name	District
1	Tuffoply Resins India Private Limited	Eranakulam
2	Ozone Granite Pvt. Ltd	Eranakulam
3	Avigne Jeya Private Limited	Eranakulam
4	Woodon MDF Panel Pvt. Ltd	Idukki
5	VMPS Food Parks and Ventures LLP	Kannur
6	Haritha	Kannur
7	DM Green Farm LLP	Kannur
8	Faya Renewables and Power Pvt. Ltd	Kasargod
9	Zehub Technopark Pvt. Ltd	Kollam
10	Indian Virgin Spices Pvt. Ltd	Kottayam
11	Sance Steriles Pvt. Ltd	Kottayam
12	Jacob and Richard International Pvt. Ltd	Kottayam
13	KBoard Panels Pvt. Ltd	Kottayam
14	KBoard Wood Industries Pvt. Ltd	Kottayam
15	Kboard Rubber Factory Pvt. Ltd	Kottayam
16	Mountpark Industrial Estate Pvt. Ltd	Kozhikode
17	Malabar Enterprises	Malappuram
18	Classy Industrial Park	Malappuram
19	PK Industries	Malappuram
20	Karikkad Devswom	Malappuram
21	Yousuf Malabar Industrial Park LLP	Malappuram
22	Cambria Edu Ventures LLP	Malappuram
23	Kadambur Industrial Park	Palakkad
24	Hi Tech Industrial Park	Palakkad
25	Featherlike foam Pvt. Ltd.	Palakkad
26	Delta Aggregates and Sand Pvt. Ltd	Pathanamthitta
27	Pathanamthitta Industrial Promotions Pvt. Ltd	Pathanamthitta
28	Ponnore Enterprises LLP	Thrissur
29	Trichur Technopark Pvt. Ltd	Thrissur
30	Al Ameen Group	Trivandrum

Source : Directorate of Industries and Commerce, Kerala

contributions to Kerala's development. The Co-operative Industrial Park Scheme is a plan to develop industrial parks on the unused land owned by the institutions working in the co-operative sector. Industrial parks are proposed to be established in the co-operative sector on the model of the private industrial park scheme currently devised and implemented by the Industries Department. Co-operative Societies

and Institutions owning at least 7 acres of land or holding at least 7 acres of land on lease for at least 30 years can apply for the Cooperative Industrial Park Developer Permit.

### **Kochi- Bangalore Industrial Corridor: A game changer in regional development**

Government of India is developing various industrial corridor projects as part of the



National Industrial Corridor Programme under the National Industrial Corridor Development and Implementation Trust (NICDIT). It is aimed at development of futuristic industrial cities in India which can compete with the best manufacturing and investment destinations in the world. Government of India has approved Kochi Bangalore Industrial Corridor (KBIC) project as the extension of Chennai Bangalore Industrial Corridor. The Project is planned to be developed in two nodes. Node 1 includes Integrated Manufacturing Clusters (IMC) Palakkad. Node 2 includes Global Industrial Finance and Trade City (Global City) Kochi. This landmark initiative is designed to position Kerala as a leading hub for cutting-edge industries. Once completed, the corridor will host advanced businesses in sectors such as aerospace, pharmaceuticals, defence, food processing, and other high-tech domains, attracting Rs 10,000 crore in investments and generating over 1 lakh jobs. A streamlined single-window system will support these enterprises, making Kerala a go-to destination for innovative ventures. The Kochi-Bengaluru Industrial Corridor will also redefine logistics and industrial capabilities in the region.

The proposed industrial sectors within IMC Palakkad are - Pharmaceuticals, Medicinal Chemicals, Botanical Products, Textiles and Apparels, Food and Beverages, Non-Metallic Mineral Products, Rubber and Plastic Products, Hi-Tech Industry, and Fabricated Metal Machinery and Equipment. The land acquisition of approximately 1,400 acres is completed. Government of Kerala has released Rs 1,489 crore till date for the land acquisition through Kerala Infrastructure Investment Fund Board (KIIFB). Government of Kerala also earmarks fund for the purpose in Annual Plan. Environmental Clearance for IMC Pudukkottai central and west has been obtained on February 15, 2024. The Union Cabinet approval for Rs 3,806 crore (Including land cost of 1,789.92 crore and development cost of 2,026 crore) was obtained for the IMC Palakkad on August 28, 2024.

National Industrial Corridor Development Corporation Limited (NICDC) has transferred 104.50Cr as the 1st tranche of equity to the Special Purpose Vehicle (SPV) Kerala Industrial Corridor Development Corporation Ltd and the State government has transferred the land equivalent to 104.50 crore as the first tranche of equity to SPV.

The master plan and DPR has been prepared by the consultant appointed by the NICDC. The Request for Proposal (RFP) for inviting the Project Management Consultancy (PMC) has been finalised. After the finalisation of the PMC contract, the Global Engineering, Procurement, and Construction (EPC) contract will be invited by March 2025. Work order is expected to be issued by June or July 2025.

### ***Samrabhaka Sabha – Building on Kerala’s strength in Local Governments***

Kerala is a State which takes pride in its strong and effective Local Governments. The 3 tier structure of local governments is recognised world over as a model for participative governance. It has empowered the local communities in planning and programme implementation resulting in direct benefits to the locality and the larger society. The Samrambhaka Sabha, a pioneering panchayat-level collective of entrepreneurs established under the YoE campaign. This *Sabha* is a comprehensive initiative aimed at driving entrepreneurship and industrial growth directly from the grassroots. This *Sabha* is designed to recommend industry types suitable for each locality, identify local entrepreneurs, ensure basic facilities, recruit skilled labor, and address grievances at the local level. Additionally, it aims to build a robust entrepreneurial ecosystem by facilitating market access, supporting skill development, and offering a help-desk in each *Sabha* to assist entrepreneurs effectively. The *Samrambhaka Sabha* will play a vital role in driving innovation, empowering local talent and ensuring sustained progress at the grassroots level.

### **Plan outlay and expenditure in Industries Sector**

One of the prime reasons for the renewed interest in Industrial sector in Kerala has been the constant and unwavering financial support offered by the Government of Kerala through successive Annual Plans. Total outlay for the sector in the 13th Five-Year Plan period was Rs 4,740.10 crore and the expenditure reported is Rs 3,857.71 crore. Total outlay provided for the sector in the first three years of the 14th Five-Year Plan is Rs 3,691.01 crore and the expenditure reported till November 2024 is Rs 1,645.35 crore. Details regarding the sub-sector wise, year wise outlay and expenditure are provided in **Table 2.20**.

**Table 2.20** Plan outlay and expenditure in Industries sector (Rs in lakh)

SI No	Sector/Sub sector	13th plan		2022-23		2023-24		2024-25	
		Outlay	Exp	Outlay	Exp	Outlay	Exp	Outlay	Exp*
1	Village and Small Industries (VSI)								
1.1	Small Scale Industries (SSI)	71609	48046.89	20040	12466.3	21270	12891.9	20494	11360.9
1.2	Commerce	5183	2844.98	700	653.42	700	102.83	650	63
1.3	Handicrafts	2255	2719.21	350	166.87	420	131.6	420	93.75
1.4	Handloom	30163	29030.54	5640	3764.29	5640	3126.22	5189	1539.17
1.5	Coir	63619	62818.98	11700	8581.91	11700	7498.06	10764	4342.65
1.6	KVI	5559	2149.4	1580	870.84	1610	587	1480	358.22
1.7	Cashew	26900	36449.1	5800	6860.52	5800	8197.06	5336	2191
2	M&L	268025	201222.58	75221	26262.99	77721	42909	77309	9037.19
3	Mining and Geology	697	489.32	405	227.32	605	181.57	557	70.16
<b>Total</b>		<b>474010</b>	<b>385771</b>	<b>121436</b>	<b>59854.46</b>	<b>125466</b>	<b>75625.24</b>	<b>122199</b>	<b>29056</b>

\*till November 2024

Source : Planspace Kerala, Kerala State Planning Board and Budget documents, Department of Finance ,Government of Kerala

**Expansion of Bank credit – financing enterprises made easier**

The banking sector has played a significant role in the expansion of entrepreneurship in Kerala. They have supplemented Government funding and investment in the industrial sector in the

State. As a corollary, the new environment for industries in Kerala and success of entrepreneurs in Kerala has also instilled confidence in the banking sector to provide advances for such initiatives. It is significant to note that the share of MSMEs in the priority sector advances has increased from

**Table 2.21** Outstanding advances to various sectors by Commercial Banks in Kerala (Rs in crore)

Sl. No.	Year (ends on March)	Priority Sector Advances		Non Priority Sector Advances	Total Advances (priority and non-priority)	Share of MSME in total priority sector advances	Share of MSME in total advances
		Total Priority sector	MSMEs				
1	2	3	4	5	6	4 out of 3	4 out of 6
1	2013	99317.69	23562.8	75769.63	175087.3	23.72	13.46
2	2014	113555.1	32068.94	78455.12	192010.2	28.24	16.70
3	2015	128655.3	35729.55	90050.77	218706.1	27.77	16.34
4	2016	132255.7	39462.9	100161.9	232417.6	29.84	16.98
5	2017	142102.3	39408.09	113972.4	256074.7	27.73	15.39
6	2018	166870.9	47201.37	119912.5	286783.5	28.29	16.46
7	2019	172939.5	54446.19	156960.4	329900	31.48	16.50
8	2020	179539.7	56893.82	179734	359273.7	31.69	15.84
9	2021	190432.7	59970.7	202236.5	392669.2	31.49	15.27
10	2022	203193.5	64956.92	221432.2	424625.7	31.97	15.30
11	2023	226159.89	68450.91	266997.13	493157.02	30.27	13.88
12	2024	257426.85	80210.28	319665.48	577092.33	31.16	13.90

Source : State Level Bankers Committee, Kerala

## Box 2.6 Invest Kerala Global Summit 2025

Invest Kerala Global Summit organised by the Government of Kerala is scheduled to be held on February 21 and 22, 2025 at the Lulu International Convention Center, Grand Hyatt, Bolgatty, Kochi. This Summit will bring together the finest business minds, industry leaders and stakeholder representatives, offering a unique platform to discuss opportunities, innovations, and partnerships that align with focus on nature, people, and industry. The State believes that by fostering collaboration between the government and industry, Kerala can continue to lead in various sectors even while advancing social equity and environmental leadership.

The Global Investor Meet 2025 is set to be a cornerstone event in Kerala's pursuit of becoming a global hub for innovation and investment. This prestigious event is expected to feature over 22 sessions, along with exhibitions, keynote addresses, fireside chats with industry leaders, and many other engaging activities. With nearly 2,000 delegates and distinguished global personalities expected to attend, the summit will serve as a key platform for attracting investments to the state. It is expected that 9 countries will associate with the Summit as partner countries. The objective of the Invest Kerala Global Summit is to showcase Kerala as a top investment destination, attract high-value investments, and promote sustainable economic growth by highlighting the State's business-friendly ecosystem and skilled talent pool.

As a prelude to the Invest Kerala Global Summit 2025, with an aim to showcase the State as an investment destination before the business community and promote the policy initiatives of the State the following sectoral meetings, road shows and, meetings were organised.

**Sectoral meetings:** International GenAI Conclave, International Robotic Round Table, Food processing and Food Tech, Maritime and Logistics, Biotechnology, Recycling and Waste Management, Ayurveda and Pharmaceuticals, Hitech farming, Value added plantation produce and high value-added rubber products, Tourism and Hospitality, and Retail.

**Roadshows:** Bengaluru, Chennai, Mumbai, Delhi and United Arab Emirates.

**Meetings:** Meetings with entrepreneurs having a turnover of over Rs 100 crore, entrepreneurs who are reinvesting in the State, country representatives of the Loka Kerala Sabha and with the construction firms in the State.

The Invest Kerala Global Summit is set to be an unparalleled opportunity to explore how Kerala can be the ideal destination for investments. The summit is expected to be a platform, where all the stakeholders together can unlock the immense potential of this vibrant State and create lasting, impactful change for generations to come.

Source : KSIDC

about 23 percent in 2013 to around 31 per cent in 2024. In terms of absolute numbers, the advances to MSMEs have increased more than 3 times in the same period. The share of MSMEs in total advances has also increased marginally in the same period. However, there are some concerns with possible implications for the MSME sector in the future. Till 2019, priority sector advances were higher than non-priority sector advances. Both were more or less equal in 2020. However, since 2021, non-priority sector advances have been higher than priority sector advances. This trend can adversely affect MSME advances in the years to come. Details are provided in **Table 2.21**.

### Way forward

Kerala, renowned for its high Human Development Index (HDI) and consistent

performance in achieving Sustainable Development Goals (SDG), is a beacon of inclusive and sustainable growth in India. With its well-educated and skilled workforce and robust healthcare system, Kerala ranks among the top States in human capital development and Physical Quality of Life indices. As the Top Achiever in the Central Government's recently notified SBRAAP 2022, Kerala is recognised for its progress in ease of doing business actions, investor-friendly policies, and forward-thinking governance.

Kerala's consistent focus on start-up development has helped the State gain international recognition, emerging as a leader in affordable talent within Asia, and rank fourth globally in the Global Startup Ecosystem Report. This achievement is propelled by the State's vibrant entrepreneurial landscape

across diverse sectors such as Artificial Intelligence, SaaS, Health-tech, and Fintech. Kerala's traditional business sectors, encompassing agriculture, handloom, coir, food processing, cashew, spice, ayurveda, among others are also significant contributors to its economic strength, deeply rooted in the State's rich cultural heritage.

Our physical and digital infrastructure includes four international airports, two major seaports, numerous mini ports, International Cargo Terminals (ICT), national highways, railways, and metro systems, along with safe submarine cable connectivity, ensuring seamless access to both domestic and international markets. The operationalisation of the Vizhinjam International Sea Port and inland water transport through the West Coast Canal, along with the upgradation of National Highways and the formation of new road networks is set to revolutionise transport and logistics in the State.

Kerala is poised for the future with a dynamic and adaptable workforce, underpinned by an education system that has provided the State with the potential to be India's skilled-labour hub. Through collaborative efforts among academia, industries, and startups, the State fosters innovation and skill development, ensuring its professionals remain competitive in a rapidly evolving global market. A notable feature is the higher participation of women in the workforce, driving diversity and contributing to socioeconomic advancement. Additionally, Kerala's extensive diaspora and international exposure enrich its workforce by providing access to global markets, knowledge, and resources. As a knowledge economy, the State is establishing a strong industry-academia linkage, ensuring that businesses have access to the right expertise and innovation to stay competitive.

The future of industries for Kerala lies in its ability to channel its achievements in various sectors into industrial development. The State must develop a path that takes into consideration its unique position on one hand, and the emerging opportunities on the other. The State Government is committed to such a path. As we look ahead to the opportunities that lie before us, it is clear that Kerala's growth story is just beginning, and the industrial sector is well poised to achieve greater heights in the immediate future.



CHAPTER

03

AGRICULTURE AND ALLIED  
SECTORS



# AGRICULTURE AND ALLIED SECTORS

## 3.1 AGRICULTURE

Agriculture and allied sectors play a critical role in ensuring food security, reducing poverty, generating livelihood and providing impetus to the growth of industries and services. According to the Economic Survey of the Government of India for 2023-24, the agricultural sector provides livelihood support to about 42.3 per cent of the population and shares about 18.2 per cent of India's GDP at current prices. To end poverty and to bring in inclusive growth, activities related to agriculture need to be closely integrated with the Sustainable Development Goals (SDG) targets.

Kerala's agriculture is unique, characterised by small landholdings and the diverse agro-climatic conditions that favour the cultivation of a variety of plantation crops, cash crops, spices, and food crops. The approach to the 14<sup>th</sup> Five-Year Plan focuses on enhancing productivity of crops and the revival of agricultural growth. Climate change, unpredictable rainfall, frequent floods, limited diversification of crops, rapid urbanisation, migration to non-agricultural jobs, and labour shortages have resulted in a poor performance of agriculture in the previous decade. The agricultural development programmes of the State have been oriented to a farm plan-based development approach giving priority to integrated farming systems.

### Gross Value Added in Agriculture

The share of agriculture and allied sectors in the country's total Gross Value Added (GVA) has been declining in the last decade. At the national-level, the share of agriculture and allied sectors in the GVA at constant prices of 2011-12 has declined from 16.5 per cent in 2014-15 to 14.5 per cent (P) in 2023-24. In Kerala, during the same period, it declined from 11.9 per cent to 8.3 (Q) (**Table 3.1.1**).

The yearly change at the national level was from 15.3 per cent in 2022-23 to 14.5 per cent in 2023-24. The corresponding change in Kerala was from 8.51 per cent (P) to 8.3 per cent (Q) (**Table 3.1.1**). As indicated in **Table 3.1.2**, despite the declining share in GVA the agricultural sector of Kerala has grown reasonably well especially during the post-Covid-19 years. The annual growth recorded in 2023-24 was significantly higher at 4.65 (Q) per cent.

### Monsoon 2024

Kerala received normal rainfall during the two principal seasons which are South-West Monsoon from June, 1 to September, 30 and North-East Monsoon from October, 1 to November, 30. District-wise data on the rainfall received in Kerala during the 4 main seasons of the year are



in **Appendix 3.1.1**. There are notable variations across Districts in the occurrence of rainfall, with

**Table 3.1.1** Share of agriculture and allied sectors in GVA/GSVA National and State-level, at constant prices of 2011-12

Year	Share of agriculture and allied sectors in Total GVA (India) (%)	Share of agriculture and allied sectors in GSVA (Kerala) (%)
2014-15	16.5	11.92
2015-16	15.4	10.74
2016-17	15.2	9.96
2017-18	15.3	9.61
2018-19	14.8	9.03
2019-20	15.1	8.55
2020-21	16.3	9.64
2021-22	15.6	8.92
2022-23	15.3	8.51 (P)
2023-24	14.5 (P)	8.30 (Q)

Note: (P) Provisional, (Q) Quick

Source: National Accounts Statistics 2024, GoI; Directorate of Economics and Statistics, GoK

**Table 3.1.2** Growth rate per annum in Gross Value Added in agriculture and allied sectors in Kerala, 2014-15 to 2023-24

Year	Growth rate per annum in Kerala (%)
2014-15	0.02
2015-16	-5.1
2016-17	-0.65
2017-18	2.1
2018-19	-2.09
2019-20	-2.56
2020-21	1.58
2021-22	4.12
2022-23	0.47 (P)
2023-24	4.65 (Q)

Note: (P) Provisional (Q) Quick

Source: Directorate of Economics and Statistics, GoK

some Districts showing deficiency from the normal and others had excess rainfall. The graphical depiction of actual and normal rainfall in different Districts during the main South-West Monsoon period is in **Figure 3.1.1**. The Districts of Alappuzha, Idukki, Ernakulam and Wayanad reported deficiency in rainfall (more than 20 per cent departure from the normal) during South West Monsoon period. The withdrawal of the South West Monsoon 2024 commenced on September 23, delayed by 6 days from its normal withdrawal date of September 17.

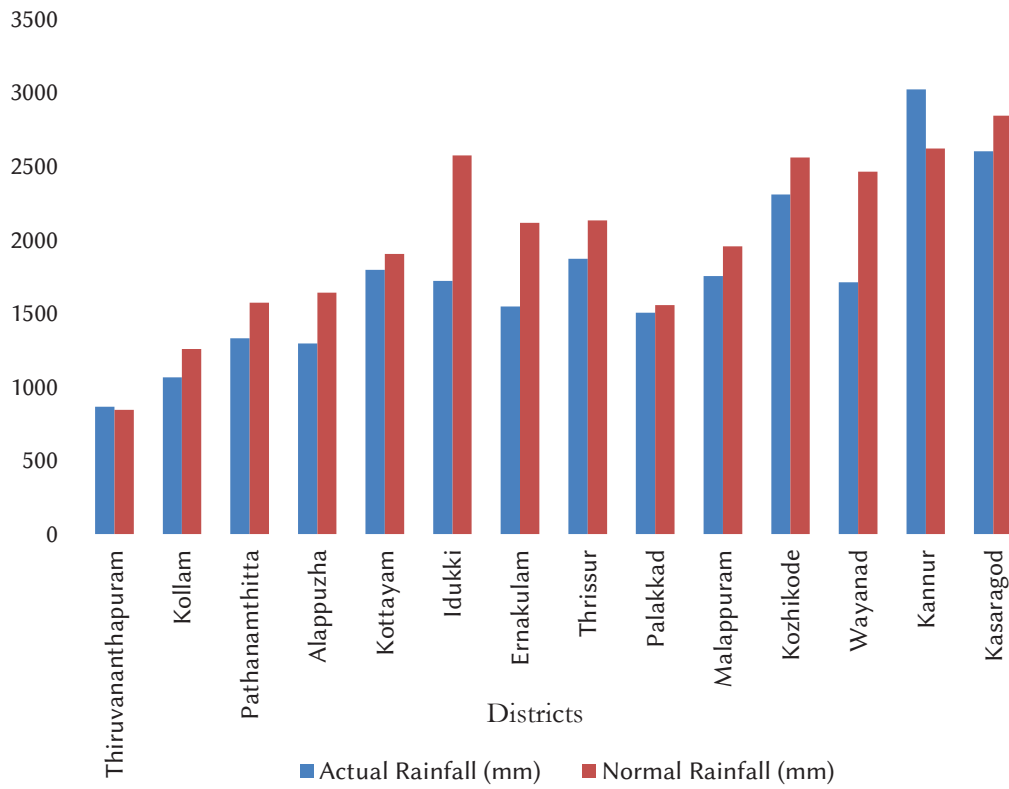
### Land Use Pattern

As per the land use data, 2023-24 of the Department of Economics and Statistics, out of the total geographical area of 38.9 lakh ha, total cropped area was 25.4 lakh ha and the net area sown was 19.7 lakh ha. Land put to non-agricultural use was 6.1 lakh ha and area under forest cover was 10.8 lakh ha. The graphical depiction of the land use pattern in Kerala for the year 2023-24 is in **Figure 3.1.2**. Detailed data on land use pattern for the years 2022-23 and 2023-24 are given in **Appendix 3.1.2**.

Between 2022-23 and 2023-24, the total cropped area is increased by 0.8 per cent. The area sown more than once is increased by 7.5 per cent in 2023-24 over the previous year. The current fallow showed a decline of 9.4 per cent. But the net sown area of the State registered a decline of 0.9 per cent. The area under cultivable waste land reported an increase in 2023-24 by 7.5 per cent over 2022-23. The area under land put to non-agricultural uses, fallow other than current fallow, and area under barren and uncultivated land also recorded an increase in 2023-24 by 2.8 per cent, 2.6 per cent, and 0.2 per cent respectively.

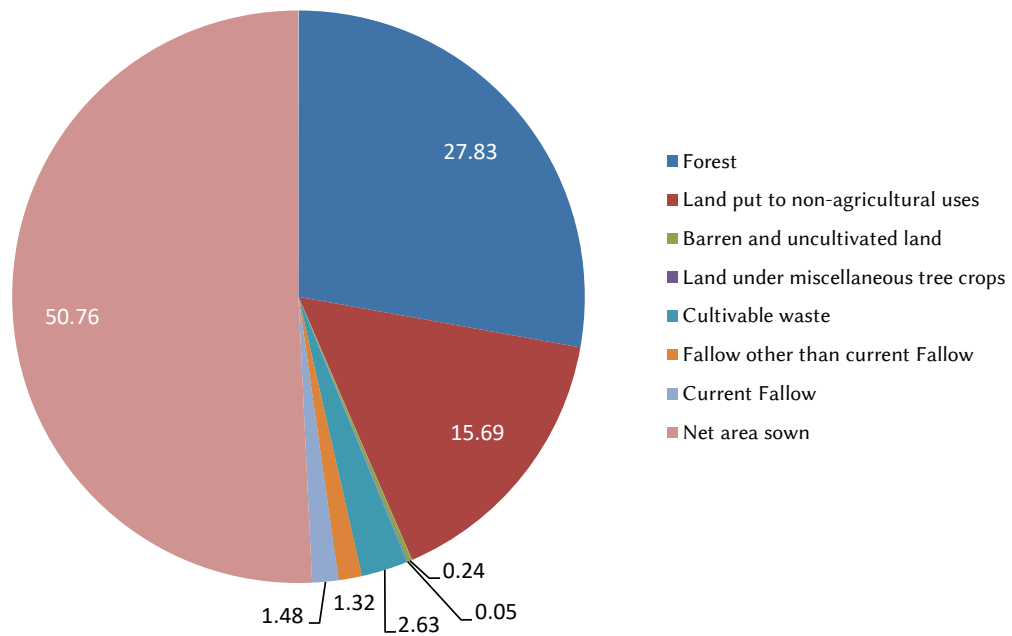
The total number of operational holdings in the State has increased from 68.3 lakh in 2010-11 to 75.8 lakh in 2015-16 showing an increase of 11 per cent. The average size of operational holding has declined to 0.18 ha in 2015-16 from 0.22 ha in 2010-11(**Appendix 3.1.3**). According to the NSS 77<sup>th</sup> round of Situation Assessment of Agricultural Households 2019, 33.2 per cent of rural households in the State are agricultural households compared to 54 per cent at the national-level. Among them, 34.4 per cent are self-employed in the crop production sector in the State compared to 68.9 per cent in the country.

**Figure 3.1.1** South West Monsoon rainfall received from June, 1 to September 30, 2024



Source: India Meteorological Department 2024

**Figure 3.1.2** Land use pattern of Kerala 2023-24



Source: Department of Economics and Statistics, GoK

## Cropping Pattern

According to the Department of Economics and Statistics, Cropping Intensity (CI) of the State in 2023-24 was 128.6 per cent. Coconut constituted the major share of the total cropped area with 30.2 per cent followed by rubber with 21.6 per cent. Food crops comprising of rice, pulses, tapioca, ragi, small millets, sweet potato and other tubers constituted 9.8 per cent and plantation crops such as tea, coffee, rubber and cardamom constituted 28 per cent of the total cropped area. Rice constituted 7.1 per cent of the total cropped area in 2023-24.

Among food crops, the production of pulses, ragi, small millets and sweet potato recorded an increase in 2023-24 compared to 2022-23 by 17.3 per cent, 35.8 per cent, 56.3 per cent, and 1.4 per cent respectively, and the production of rice declined by 10.5 per cent. Among spices, pepper and cardamom reported an increase in production by 11.4 per cent and 3.2 per cent respectively. The area of coconut in 2023-24 recorded an increase of 0.7 per cent over 2022-23, and the production and productivity of coconut declined in 2023-24. The production of rubber in the State reported an increase by 1.7 per cent in 2023-24 over 2022-23. Data regarding the area, production and productivity of principal crops grown in Kerala are shown in **Appendix 3.1.4**.

## Crop-Wise Analysis

### Rice

The Food and Agriculture Organisation of the United Nations (FAO) reported that the world-wide rice production was 530.1 million tonnes in 2023–2024. China was the top producer of rice in the world, followed by India. According to the final estimate of production of food grains, rice production in India was estimated at 1,378.3 lakh tonnes in 2023-24, with an increase of 20.7 lakh tonnes over the previous year.

In 2023-24, the area under rice cultivation (wetland) in the State decreased to 1.8 lakh ha showing a decrease of 5.9 per cent compared to 2022-23. The production and productivity of wetland rice in 2023-24 was 5.3 lakh tonnes and 2,963 kg per ha respectively. They registered a decrease of 10.5 per cent and 4.9 per cent respectively over 2022-23.

Rice constituted 7.1 per cent of the total cropped area in the State in 2023-24. In the last 10 years, the

highest share of area under paddy was recorded in 2020-21 i.e. 2 lakh ha with a production of 6.3 lakh tonnes. (**Appendix.3.1.5**).

Season-wise data of rice reveals that the area under *Mundakan* (winter) crop increased and that of *Virippu* (autumn) and *Puncha* (summer) crops decreased in 2023-24 over the previous year. The seasonal production and productivity recorded a decline in all the three seasons. Similar to the previous year, the *Puncha* season recorded the highest productivity with 3,238 kg per ha. In 2023-24 highest production (2.1 lakh tonnes) was in the *Mundakan* season (**Appendix 3.1.6**).

*Mundakan* crop contributed 40 per cent of the total cultivated area of paddy in 2023-24 with 28,999.9 ha of area in Palakkad District (**Appendix 3.1.7**). In the *Virippu* season, a total of 29,471.7 ha of paddy was in Palakkad District followed by Alappuzha District (6,458.1 ha). The *Puncha* crop was dominant in Alappuzha District (27,153 ha).

Palakkad, Alappuzha, Thrissur, and Kottayam Districts accounted for about 81 per cent of the total area of rice in the State contributing to 82.5 per cent of the total rice production. Palakkad District stood first with respect to area and production of rice in the State followed by Alappuzha District. As for productivity, Alappuzha District (3,346 kg per ha) stood first followed by Malappuram District (3,231 kg per ha). In 2023-24, the production of rice (wetland) in Alappuzha, Kozhikode, and Kannur Districts recorded an increase compared to 2022-23. The highest increase in rice (wetland) production in 2023-24 was recorded in Alappuzha District (increase by 10,795.6 tonnes). According to the data of Department of Economics and Statistics, in 2023-24, Palakkad District recorded the largest decline in rice production (22.1 per cent) under wetland category (**Appendix 3.1.8**).

In addition to wetland, upland paddy was cultivated in 2023-24 in an area of 1,324.3 ha producing 3,043.5 MT. The productivity of upland rice in 2023-24 was 2,298 kg per ha. Significant decline in upland paddy area is noticed since 2021-22 (**Appendix 3.1.8**).

District-wise area, production and productivity of high yielding and local varieties of rice, are given in **Appendix 3.1.9 and 3.1.10**. About 98 per cent

of the paddy area extending to 1.75 lakh ha was cultivated with high yielding varieties and 3,670.6 ha with local varieties.

Promotion of paddy cultivation in the State through major programmes such as: area expansion, operational support for padashekhara samithis, assistance for promotion of fallow land cultivation, specialty rice cultivation, foliar application of micro-nutrients, and biofertilisers, soil ameliorants, registered seed grower's programme, support to paddy development agencies, and royalty to paddy land owners were implemented through the State Plan scheme – 'Rice Development'. In 2024-25, assistance as a production bonus for paddy cultivation was provided for 101.1 ha in various Grama Panchayats, 6 ha in Municipalities, and 10 ha in Corporations. In addition, assistance was provided for the provision of free electricity for agricultural purposes under the same scheme.

### **Vegetables**

With the objective of promoting vegetable production to attain self-sufficiency and nutritional security, the State Government has been implementing the 'Vegetable Development' scheme. Various stakeholders such as Agriculture Development and Farmers Welfare Department, Vegetable and Fruit Promotion Council Kerala (VFPCCK), HortiCorp, State Horticulture Mission (SHM), Primary Agricultural Credit Societies (PACS), Farmer Producer Organisations (FPOs), Kerala Agricultural University, and Local Self Government Department (LSGD) were involved in a mission mode to promote vegetable development in the State. The major programmes of the Agriculture Department in this area in 2023-24 were distribution of high-yielding and hybrid vegetable seeds and seedlings, support for vegetable cultivation in homesteads, urban areas and institutions, promotion of open field precision farming, cool season vegetable cultivation in Idukki and Wayanad Districts, assistance to vegetable clusters, and commercial vegetable cultivation. Assistance of Rs 50,000 per 100 sq.m was provided for promoting vegetable cultivation in rain shelters and in 2023-24, assistance was provided for the establishment of rain shelters in a total area of 27,349 sq. m. In 2023-24, the vegetable production in the State (including bananas and plantains) increased marginally from 17.1 lakh tonnes to 17.2 lakh tonnes from a total cultivated area of 1.2 lakh ha. VFPCCK is implementing various schemes

funded by the Central and State Government in the vegetable and fruit segment for the betterment of the farming community. A total of 85,799 MT of vegetables were produced by the farmers in the Council in 2023-24, from an area of 20,510 ha. In addition, under the Rashtriya Krishi Vikas Yojana (RKVY) project, precision farming has been implemented in an area of 374.1 ha of vegetables through SHM.

### **Coconut**

According to the FAO Statistics 2022, Indonesia stands first in coconut production in the world followed by Philippines, India and Brazil.

In 2023-24, the area under coconut in India was 23.3 lakh ha with a production of 22,226.3 million nuts and productivity of 9,527 nuts per ha. The area, production and productivity increased over the previous year 2022-23 at the national-level. Among the coconut growing States, the southern States of Tamil Nadu, Kerala, Karnataka and Andhra Pradesh contributed to 90 per cent of the total area and 92 per cent of the total production. The Coconut Development Board has been implementing programmes for analysing the factors affecting production in the major coconut growing areas of the country and has specifically come up with major activities such as projects for root wilt affected areas, research and extension activities in collaboration with agricultural universities and other research institutes, and runs schemes for promoting value addition with coconut.

In 2023-24, coconut was cultivated in 7.7 lakh ha occupying 30.2 per cent of the total cropped area in the State. The area recorded an increase of 0.7 per cent over 2022-23. The production and productivity in 2023-24 decreased to 5,523 million nuts and 7,211 nuts per ha respectively. The performance of the coconut sector in the State has been fluctuating over the last five years (**Appendix 3.1.11**).

Productivity improvement and technology adoption programmes were imparted to farmers at grass root levels through the Agriculture Department in the State. A cluster based – *Keragramam* programme was implemented in the State to rehabilitate existing coconut gardens. The integrated management of coconut including coconut basin opening, mulching, Integrated Nutrient Management (INM), Integrated Pest

and Disease Management (IPDM), provision of irrigation facilities, organic manure production, distribution of climbing machines, and initiation of coconut-based value addition units were the major activities carried out through *Keragramam* programme. In addition, *Kera Raksha Varam* campaign was organised across the State to create awareness about the importance of scientific management practices in coconut cultivation. It is expected that these initiatives will result in better yield and production in future. As part of the replanting programme under the Coconut Mission, a total of 48,19,185 coconut seedlings comprising of West Coast Tall (WCT), dwarf and hybrid varieties were distributed throughout the State from 2019-20 to 2023-24 (Table 3.1.3.)

### Pepper

According to the estimates of the International Pepper Community, Vietnam maintained first position in pepper production and export in 2023 contributing to 35 per cent of the global pepper production. Brazil was in the second position with a 17.5 per cent share of global production. India is the third-largest producer with 16 per cent of the global pepper production share (UPASI Annual Report, 2024).

As per the advance estimates of the Spices Board, pepper production in India in 2023-24 was at 1.3 lakh tonnes, with an increase of 8,860 tonnes compared to 2022-23. The area under pepper cultivation also expanded to 3,13,632 ha in 2023-24, marking an increase from 2,99,053 ha in 2022-23. Karnataka stood first in terms of area (2,22,394 ha) and production (89,000 tonnes) of pepper in the country in 2023-24.

Between 2022-2023 and 2023-2024, the volume of export decreased from 17,958 tonnes to 17,890 tonnes. However, there was an increase in the

value of exports to Rs 73,648.9 lakh in 2023-24. The price of pepper increased to Rs 559.5 per kg in 2023 from Rs 516.6 per kg in 2022. (UPASI Annual Report, 2024).

According to the Department of Economics and Statistics, GoK, the production of pepper in the State increased by 3,144.4 tonnes to 30,798.2 tonnes with an area of 72,669.3 ha in 2023-24 (Appendix 3.1.4). The area of pepper in the State recorded a decline in 2023-24 compared to 2022-23 by 1.4 per cent. The productivity of pepper increased by 13 per cent from 375 kg per ha in 2022-23 to 423.8 kg per ha in 2023-24.

### Cashew

According to FAO Statistics 2022, Cote d' Ivoire retained its first position in cashew nut production in the world followed by India.

According to the estimates by Directorate of Cashewnut and Cocoa Development, the national production of raw cashew nuts in 2023-24 was 8 lakh tonnes. There was an increase of 1.7 per cent in the production of raw cashew nut over 2022-23. The area under cashew also recorded an increase to 11.99 lakh ha in 2023-24 from 11.92 lakh ha in 2022-23 (Appendix 3.1.12.) Among the cashew-growing States in India, Maharashtra retained its first position in production in 2023-24 accounting for a share of 24.8 per cent followed by Andhra Pradesh with 16.8 per cent of the domestic production. Kerala was in the sixth position with 9.6 per cent of share in domestic production.

As per the report of the Cashew Export Promotion Council of India (CEPCI), in 2023-24, India exported 46,235 MT of cashew kernels valued at Rs 2,620 crore as against 44,982 MT valued at Rs 2,718 crore in 2022-23. The United

**Table 3.1.3** Status of distribution of coconut seedlings under Coconut Mission, 2019-20 to 2023-24, in numbers

Year	WCT	Dwarf	Hybrid	Total
2019-20	2,22,751	32,493	95,781	3,51,025
2020-21	6,06,967	29,217	1,20,986	7,57,170
2021-22	8,98,647	31,293	1,30,052	10,59,992
2022-23	11,23,790	40,965	98,812	12,63,567
2023-24	11,73,095	69,509	1,44,827	13,87,431
<b>Total</b>	<b>40,25,250</b>	<b>2,03,477</b>	<b>5,90,458</b>	<b>48,19,185</b>

Source: Department of Agriculture Development and Farmers Welfare, Kerala

Arab Emirates (UAE) was the largest export market for Indian cashew, followed by Japan.

In 2023-24, the extent of cashew cultivation as well as its production in Kerala were 1.1 lakh ha and 76,380 MT respectively (**Appendix 3.1.12**).

### **Plantation Crops**

In view of the potential for export, employment generation and poverty alleviation, plantation crops play a vital role in the National and State economy.

Kerala has a substantial share of the four plantation crops: rubber, tea, coffee and cardamom. These four crops together occupied 7.1 lakh ha, accounting for 28 per cent of the total cropped area in the State. The corresponding estimates of production and yield of these four crops are shown in **Appendix 3.1.13**.

Fluctuating price realisation, declining production and productivity and susceptibility in the areas of research and development, processing, marketing and trade have been identified as challenges in the plantation sector of the State. Considering the significance of plantation crops in the economy, initiatives to improve the processing and value addition of plantation crops in addition to expanding, replanting and increasing their productivity are being pursued by the State.

### **Rubber**

According to the International Rubber Study Group (IRSG), the world Natural Rubber (NR) production decreased in 2023 by 3.6 per cent compared to the previous year (Indian Rubber Statistics, 2024). The world NR production recorded in 2023 was 13.9 million tonnes. Among the major NR producing countries, Thailand recorded the highest production of 47.1 lakh tonnes followed by Indonesia with a production of 26.5 lakh tonnes. India was the fifth largest producer with a share of 6.1 per cent of world NR production. The global consumption of Natural Rubber declined marginally over the previous year by 0.8 per cent. India continued its second position in terms of Natural Rubber consumption, next to China (Indian Rubber Statistics, 2024).

As per the Indian Rubber Statistics, 2024, the NR production in the country in 2023-24 (provisional) showed an increase over the previous year, with a growth of 2.2 per cent recording a production of 8.6 lakh tonnes. The productivity of rubber

increased marginally from 1,482 kg per ha in 2022-23 to 1,485 kg per ha in 2023-24. The area under NR in the country also showed an increase in 2023-24 from 8.5 lakh ha in 2022-23 to 8.9 lakh ha.

Rubber occupies the second largest area in the State next to coconut with 21.6 per cent of the total cropped area. According to the provisional data from the Rubber Board, in 2023-24, the rubber production in the State increased by 1.7 per cent to 6.1 lakh tonnes compared to 2022-23. However, there was a marginal decline in area under rubber by 1,480 ha to 5.5 lakh ha in 2023-24. The productivity of rubber marginally increased from 1,570 kg per ha to 1,573 kg per ha (**Appendix 3.1.13**).

In 2023, domestic consumption of Natural Rubber increased by 0.7 lakh tonnes and reached 14.2 lakh tonnes. The import of Natural Rubber in 2023-24, declined to 4.9 lakh tonnes compared to 5.3 lakh tonnes in 2022-23 (**Appendix 3.1.14**). India imported a total of 8.5 lakh tonnes rubber including 3.5 lakh tonnes synthetic rubber.

Annual average domestic price for RSS 4 grade rubber declined to Rs 15,572 per 100 kg in 2023-24 compared to Rs 15,652 per 100 kg in 2022-23. However, Natural Rubber prices increased steadily in the first three months of 2024 in both the domestic and international markets. Between January 2024 and March 2024, the price of RSS4 rubber increased by Rs 1,821 per 100 kg, and reached Rs 17,734 per 100 kg (**Appendix 3.1.15** and **3.1.16**).

### **Coffee**

According to the International Coffee Organisation, the global coffee production in 2023-24 was estimated at 178 million bags (60 kilo bags), a significant increase of 9.8 million bags over 2022-23. As reported by UPASI, the rise in production was largely contributed by the increase in Arabica coffee production by 8.2 million bags and the Robusta coffee production by 1.6 million bags. Brazil was at first position in coffee production in 2022-23, with a share of 38.5 per cent of the global production, followed by Vietnam with 17.4 per cent. India is positioned sixth with 3.9 per cent share in global coffee production.

Coffee Board estimated the domestic coffee production in 2023-24 at 3,74,200 MT, which was an increase in total production by

22,200 MT over the previous year. Robusta production dominated with 69.8 per cent of the total coffee production with an increase in production to 2,61,200 MT over 2,52,000 MT production in 2022-23. Among the major coffee producing States, Karnataka maintained the first position with 71.3 per cent of the total production, followed by Kerala (19.5 per cent).

According to the Estimates of the Coffee Board, the production of coffee in Kerala decreased by 2,071 MT in 2023-24 and reached a total production of 70,354 MT. The area planted under coffee in 2023-24 was 85,957 ha (**Appendix 3.1.13**) and the productivity of the crop in Kerala was 827 kg per ha. According to the Coffee Board, Wayanad District was the largest producer of coffee in the State contributing to 83.6 per cent of total coffee production in the State.

### Tea

As per the International Tea Committee, China was the leading producer of tea in the year 2023, contributing to 49.2 per cent of the world tea production followed by India and Kenya with shares of 21.1 per cent and 8.6 per cent respectively (UPASI Annual Report, 2024).

Domestic tea production in 2023-24 was 1,382.03 million kilogram which is an increase of 7.06 million kilogram over 2022-23 (**Appendix 3.1.17**). Assam was the leading tea producing State in the country (675.9 million kilogram) followed by West Bengal (426.6 million kilogram).

As reported by the Department of Economics and Statistics, the area under tea plantation in Kerala recorded at 35,679.8 ha in 2023-24, showed an

increase of 29.08 ha over 2022-23. The production and productivity of tea in the State was recorded at 65,090 MT and 1,824 kg per ha respectively in 2023-24. The production and productivity of tea recorded a decline over the production and productivity in 2022-23 (**Appendix 3.1.13**).

### Cardamom

India is the second largest producer of small cardamom in the world next to Guatemala. As per the advance estimate of Spices Board 2023-24, cardamom production in India is estimated at 25,230 tonnes, which is an increase of 766 tonnes over 2022-23. In 2023-24, small cardamom exports declined by 1,184 tonnes to a total of 6,168 tonnes. The export value of cardamom increased to Rs 999.6 crore over the export value of Rs 875.2 crore in 2022-23.

Kerala had a major share in cardamom production contributing 90.6 per cent of the national production. The production of cardamom increased to 22,869 MT in 2023-24, which is an increase of 3.2 per cent over 2022-23. The productivity of cardamom also increased significantly to 567 kg per ha over the productivity of 549 kg per ha in 2022-23 (**Appendix 3.1.13**).

### Consumption of Fertilizers and Pesticides

As indicated in **Table 3.1.4**, highest chemical pesticide consumption in the State in 2023-24 was for paddy crop, followed by banana and spices. The total consumption of pesticides reported in 2023-24 was the highest in the last three years with 511.4 MT. This constituted 236.2 MT of chemical pesticides and 275.2 MT of bio-pesticides.

**Table 3.1.4** Commodity and crop-wise consumption of chemical and bio pesticides, 2021-22 to 2023-24 technical grade, in MT

Commodity	Chemical Pesticides			Biopesticides			Total		
	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24
Paddy	59.2	45.7	68.5	56.8	50.2	77.6	116.0	95.9	146.1
Vegetables	40.7	41.6	35.0	46.2	43.6	47.2	86.9	85.2	82.2
Spices	20.9	27.6	38.3	30.2	32.7	34.0	51.1	60.3	72.3
Coconut	43.6	46.0	27.8	65.3	61.9	30.6	108.9	107.9	58.4
Arecanut	12.1	13.2	20.6	17.6	16.8	22.0	29.7	30.0	42.6
Banana	49.2	57.0	46.0	47.6	58.9	63.7	96.8	115.9	109.7
<b>Total</b>	<b>225.7</b>	<b>231.2</b>	<b>236.2</b>	<b>263.7</b>	<b>264.0</b>	<b>275.2</b>	<b>489.4</b>	<b>495.2</b>	<b>511.4</b>

Source: Department of Agriculture Development and Farmers Welfare, Kerala

Compared to the previous year, total consumption of Nitrogen, Phosphorus, and Potassium (NPK) fertilizers decreased in 2023-24. In 2023-24, the consumption of Nitrogen, Phosphorus, and Potassium was at 69,794 MT, 32,740 MT, and 57,263 MT respectively (**Table 3.1.5**)

The per ha consumption of Nitrogenous, Phosphorus, and Potassium fertilizers decreased in 2023-24 compared to the previous year with 26 kg per ha, 12 kg per ha, and 20 kg per ha respectively. The ratio of consumption of Nitrogenous fertilizers to Phosphorus and Potassium fertilizers together was 81 per cent which is less than the previous year (**Appendix 3.1.18**).

### Soil Conservation

Recognising the significance of sustainable soil resource management for agricultural advancement, the Department of Soil Survey and Soil Conservation has undertaken soil conservation initiatives within the State such as establishment of essential infrastructure for soil erosion control, water flow regulation, in situ moisture conservation, flood moderation and mitigation of saline intrusion, and provision of scientific database on soil and land resources, and soil health support service to farmers.

Soil and water conservation projects in the State were implemented by the Department. It has undertaken 595 soil and water conservation projects under Rural Infrastructure Development Fund (RIDF) protecting an area of 1.7 lakh ha so far. In 2023-24, the scheme ‘stabilisation of land slide areas’ was implemented in Idukki, Kozhikkode, Malappuram, Pathanamthitta, Kottayam, Kollam, Ernakulam, Palakkad, and Wayanad Districts covering an area of 1,034.54

ha. Catchments of the Aruvikkara, Sasthamkotta, and Peruvannamoozhi reservoirs in an area of 143.75 ha were protected and micro watershed development through soil and water conservation activities were implemented in Thrithala and Kuttiyadi constituencies protecting an area of 419 ha in 2023-24. Under the Rebuild Kerala Initiative (RKI) scheme, the Department executed eco-restoration work covering an area of 15,594 ha so far.

Five soil analytical laboratories, two soil and plant health clinics, and one mobile soil testing lab are operational under the Soil Survey wing of the Department which provides soil health management support services to farmers through soil sample analysis and distribution of soil health cards. In addition, laboratories provide analytical support for research projects of various organisations, NGOs and individual farmers. The mobile application ‘MANNU’ developed by the Department offers crop-wise fertilizer recommendation based on site specific soil nutrient status to farmers across the State. In 2023-24, a total of 15,998 Soil Health Cards were distributed and as part of mobile soil testing laboratory, 22 soil health campaigns were conducted. Soil maps of 238 Panchayats were digitised and 19 reports were published in 2023-24. The State Soil Museum functioning under the Department at Parottukonam, Thiruvananthapuram acts as a repository of comprehensive information about soils of Kerala, enhancing public awareness and accessibility to vital information regarding soil resources. In 2023-24, ten awareness programmes named ‘Mannarivu’ were conducted in the Museum for farmers and students. Creation of data bank for classification of land is another major activity carried out by the Department and

**Table 3.1.5** Pesticide and Fertilizer (NPK) Consumption Pattern in the State, 2018-19 to 2023-24, in MT

Year	Chemical Pesticides	Biopesticides	Total	Nitrogen	Phosphorus	Potassium
2018-19	517.3	676.8	1194.1	73,109	40,802	67,877
2019-20	291.0	343.8	634.8	75,292	36,797	55,866
2020-21	224.5	268.4	492.9	89,238	42,613	75,085
2021-22	225.7	263.7	484.1	76,682	36,327	50,072
2022-23	231.2	264.0	495.2	83,594	39,819	64,751
2023-24	236.2	275.2	511.4	69,794	32,740	57,263

Source: Department of Agriculture Development and Farmers Welfare, Kerala



### Box 3.1.1 Agricultural activities through Kudumbashree

*Kudumbashree* took active involvement in a range of activities in agriculture, thereby it has been fostering economic growth and food security. *Kudumbashree* continued to do collective farming by organising women to take up lease land farming with the objective of empowering women economically and helping Local Self Governments in moving towards achieving food security. Cultivation of fallow land is undertaken on informal lease by Joint Liability Groups (JLGs) along the lines of the group concept promoted by the National Bank for Agriculture and Rural Development (NABARD) with the support of Panchayats and the *Kudumbashree* community network. A total of 87,297 JLGs were involved in the cultivation of paddy, vegetables, banana, tubers, and other crops in an area of 16,435 ha in 2023-2024. The area brought under cultivation of paddy, vegetables, banana and tubers was 4,459 ha, 5,105 ha, 1,123 ha, and 4,613 ha respectively. Other crops were cultivated in 1,136 ha. Details of the area covered under collective farming in 2023-24 are given in **Appendix 3.1.19**. *Kudumbashree* conducted weekly markets named *Nattuchantha* to market the products of JLGs without the involvement of middlemen and a total of 24,841 *Nattuchantha* were conducted across the State and sold 4,717.32 tonnes of Vegetables in 2023-24.

*Kudumbashree* also involved in agri nutri garden campaigns, which aimed to ensure availability of fresh and nutritious vegetables and fruits. As part of the campaign, a total of 11,03,371 gardens were formed in the households across the State. Furthermore, a total of 543 'Jaivika' plant nurseries engaging 765 women entrepreneurs were set up by the *Kudumbashree* to produce and market quality planting materials at reasonable cost in the State. A total of 175 medium-scale value addition units, 523 small-scale value addition units, 159 bio-pharmacy units, 44 urban vegetable kiosks and intensive banana value addition units in each District were formed by *Kudumbashree*. A total of 18 professional mobile units named 'Green Carpets' that install and support various gardens including terrace garden, kitchen garden, and ornamental garden in urban areas were also established under *Kudumbashree* across the State.

in 2023-24, Data bank creation of 37 Panchayats in Thiruvananthapuram, Ernakulam and Thrissur Districts were completed.

#### **Agricultural Marketing**

A network of wholesale and retail markets operating in both rural and urban areas facilitates the marketing of agricultural commodities. Local market outlets are placed at various levels, facilitating marketing of the local farm produce with different modes of aggregation, either aggregating from farmers or using a cluster-based business model.

The Department of Agriculture initiated marketing of the agricultural products under a unified brand name *Keralagro* to intensify the marketing of various agricultural products produced by farmers, FPOs, farm groups, other farmer associations and co-operatives, thereby increasing the income of farmers and supplying agricultural products to the consumers at fair price. A total of 14 *Keralagro*-branded shops were set up as part of establishing a network of *Keralagro* branded shops across the State and 193 *Keralagro* products were made available to the public through the online marketing platforms.

In 2023-24, VFPCCK contributed significantly to strengthening the agricultural marketing system of the State through various activities including strengthening the rural farmer markets, formation of new bulking points and collection centers, and providing infrastructure facilities and managerial support to the existing farmer markets. Trading of 96,385 MT of vegetables and fruits worth Rs 309.50 crore was carried out through 296 *Swasraya Karsbaka Samithies*.

The Department of Agriculture along with VFPCCK and HORTICORP, organised fruit and vegetable markets under the names *Onamsamrudhi* and *Vishukani* during festivals to supply good quality vegetables at low prices to the public and assuring fair prices for farmers. A total of 1,912 onam markets were conducted in 2023-24.

#### **Post-harvest Management and Value Addition**

Small Farmers Agribusiness Consortium (SFAC) is an organisation under the Department of Agriculture, GoK, working for the promotion of agribusiness for the benefit of farmers and entrepreneurs by providing necessary linkages for the establishment and running of successful agribusiness. Formation and promotion of Farmer

Producer Organisations (FPOs) and promotion of micro, small and medium agro-processing units are the major schemes implemented by SFAC in Kerala. Since 2017-18, a total of 73 MSME units have so far been promoted through SFAC.

FPOs being an appropriate institutional mechanism to mobilise farmers and build their capacity for collective production and marketing, the State Government focused on providing a favourable environment for the creation of new FPOs by providing necessary technical and managerial skills along with marketing infrastructure facilities. Under the RKVY scheme for promotion of Farmer Producer Organisation, the process for the formation of 50 new FPOs and strengthening of existing 50 FPOs continued under SFAC in 2023-24.

VFPCK was recognised as the Cluster Based Business Organisation (CBBO) for the formation of FPOs under Central SFAC and accordingly, 5 FPOs were formed in five blocks of the State. A total of 41 Farmer Producer Companies were formed under VFPCK, engaged in primary processing, organic cultivation and exports, value addition of fruits, vegetables, spices, tubers, and honey.

VFPCK initiated seven Primary Processing Centres (PPCs) and vegetable and fruit processing and marketing centers to promote VFPCK branded products named *Thalir*. PPCs are also involved in managing the glut situation in the market by transferring *Thalir* branded products from one District to another. In addition, VFPCK established incubation centres at Ernakulam and Kozhikode Districts to provide machinery support for value addition of vegetables and fruits at minimum cost.

The Kerala State Warehousing Corporation (KSWC) is a key player in providing warehousing and logistic services to the agricultural and industrial sectors of Kerala. It ensures efficient storage and distribution of a wide range of commodities including food grains, agricultural produce, industrial goods, and essential items. KSWC has 55 warehouses across the State with a storage capacity of 2.4 lakh MT. A container freight station and customs bonded warehouse are also operated by KSWC at Ernakulam District, which is instrumental in

managing the import and export of goods through the State's ports. In 2023-24, KSWC, completed modernisation of godown worth Rs 5 crore. A new multi-storied godown with a total capacity of 3,433 MT was built at Muthalamada, utilising the NABARD Warehouse Infrastructure Fund and a temperature-controlled godown was started at State Warehouse, Vandanmedu.

Facilitating sufficient incubators, promoting technology protocols for ready to use packaging for micro-level entrepreneurs, disseminating knowledge and experience in e-commerce and online marketing, quality standardisation of products, common infrastructure for cold storage and community processing centre can strengthen the agribusiness ventures in the State.

### **Mechanisation**

In order to overcome the shortage of agricultural labour existing in the State, thrust has been given to promote mechanisation of agricultural operations in the past years. Initiatives to facilitate mechanisation support and other agricultural services to farmers in the State include Agro Service Centres (ASC) at block-level, Karshika Karma Senas (KKS) and Custom Hiring Centres (CHC) at Panchayat-level. Kerala State Agricultural Mechanisation Mission constituted in 2018, functions to ensure coordination and monitoring of the activities of ASC, KKS, CHC, similar services providers, Kerala Agromachinery Corporation (KAMCO), and Kerala Agro Industries Corporation Ltd (KAICO) and to enable a single window mechanism to deliver services to farmers.

As reported by the Mission, 99 Agro Service Centres and 368 Karshika Karma Sena units and 28 Krishisree Centres were established in the State. The Mission organised a State-level programme 'Karshika Yanthra Parirakshana Yajnam' to undertake the repairs of all the agro machinery in different Districts, based on demand. In 2023-24, thirteen numbers of agro machinery worth Rs 23.35 lakh were repaired under this programme and a total of 25 machineries belonging to 7 Karshika Karma Senas, 4 Agro Service Centres and 14 Other Govt. Institutions and private individuals were repaired by the mobile repair unit. In 2023-24, capacity building trainings were imparted to 58 service providers of ASC/KKS/KSC and to

418 trainees through the Mission. In addition, the Mission conducted agro machinery repair and service campaign across the State, under the tag 'Karshika Yantram Sarvam Chalitham Keralam'. In 2023-24, a total of 934 individuals, comprising 567 women and 367 men were engaged as service providers through the Agro Service Centres and 3,699 agricultural technicians, comprising 1,948 women and 1,751 men were engaged in the Karshika Karma Senas for various mechanisation services through the Mission. Besides providing mechanisation services, KSAMM was assigned the responsibility for organising Agro Machinery Care Centre (AMCC) for *kole* lands as a part of the RKI Project, organising Combine Harvester Efficiency Monitoring and Inspection Mobile Unit (CHEMIMU) for monitoring and inspection of efficiency of combine harvesters engaged by agents in Kuttanad.

The Centrally Sponsored Scheme on the Sub Mission for Agricultural Mechanisation (SMAM) aims to increase the reach of farm mechanisation to small and marginal farmers and to the regions where mechanisation facilities are unavailable. Under the scheme, the Agriculture Department had provided financial assistance for the procurement of 28,047 agriculture machineries and equipment and a total of 277 farm machinery banks were also established in 2023-24.

Installation of energy efficient axial flow pumps and submersible pumps to replace traditional *petti-para* systems for drainage is being implemented under the scheme 'Development of Agriculture Sector in Kuttanad'. As reported by the Agriculture Department, in 2023-2024, 37 vertical axial flow pumps have been installed in padashekharams of Alappuzha, Kottayam, and Pathanamthitta Districts.

### **Major Achievements of Department of Agriculture Development and Farmers' Welfare in 2023-24**

In 2023-24, the farm plan-based development approach was given emphasis by the Department for holistic development of individual farms to improve the income of the farmer and provide livelihood security from a long-term perspective. The schemes such as farm plan-based production programme including pre-production support, development of production organisations and technology support, and supply chain/value chain development were implemented under this approach by the Department in the State.

Under this approach, individual farms were identified and developed as the basic unit of development through Krishi Bhavans based on a scientific resource-based plan. The concept of FPO formation and development through collectivisation of these farms was promoted to facilitate efficient marketing and better value realisation of produce for farmers. As envisaged by the State Planning Board, development of supply chain network linking the farmers with FPOs, marketing hubs, retail shops, and consumers and facilitating prompt payment to farmers was also targeted under this approach through the application of digital technology.

Schemes supporting major crops of Kerala such as coconut, paddy, vegetables, fruits, flowers, medicinal plants, and spices were also implemented by the Department to bring about self-sufficiency in crop production. Considering the unpredictable climate events, natural disasters, and pest and disease outbreaks that have an impact on crop production of the State, schemes such as State crop insurance, contingency programme to meet natural calamities, and crop health management were implemented. Through the scheme 'crop diversification, intensification and introduction', the area expansion of pulses, oilseeds, and millets was given priority. Market development, post-harvest management and value addition, organic farming and safe to eat food production, soil health management, farm mechanisation, and strengthening agricultural extension were the other major farmer welfare programmes supported by the State. Some highlights of achievement in 2023-24 are as follows:

- As part of the farm plan-based development approach, 10,760 farm units ranging from 10 cents to 200 cents were identified and activities initiated for development. These farm units included 9,760 crop-based model plots and 1,000 Integrated Farming System (IFS) model plots. A total of 100 Farmer Producer Organisations were formed as part of this scheme. In addition, a total of 23,569 Krishikoottams were formed at field-level and the major activities of these groups included, production, value addition, and service. A total of 1,30,548 job opportunities were created in the agriculture sector with their formation.
- As part of Sustainable Development of Rice, assistance as an input subsidy of Rs 5,500 per ha was provided in 82,480.9 ha of paddy. Assistance was also provided for specialty

rice cultivation in an area of 157.1 ha, fallow land cultivation in 678.9 ha, soil ameliorant application in 49,706.8 ha, aerial spraying of bio fertilizers and micronutrients using drone in 4,242.2 ha of paddy, and operational support to padashekara samithis at Rs 360 per ha.

- In 2023-24, Royalty to paddy land owners for ecosystem services was provided at Rs 3,000 per ha covering a total area of 19,806.09 ha in the State.
- To support the production of good quality paddy seeds, the Registered Seed Grower's Programme was implemented in an area of 941.5 ha.
- With the objective of promoting safe-to-eat vegetable production in the homesteads, a total of 55 lakh assorted seed packets and 108.6 lakh vegetable seedlings were distributed to various beneficiaries including students, farmers, NGOs, and residents' associations across the State.
- The distribution of hybrid vegetable seeds and seedlings was initiated in 2023-24 and a total of 13.8 lakh hybrid/high yielding variety seed packets and 116.66 lakh vegetable seedlings were distributed across the State. Cluster-based vegetable cultivation was promoted and 793 clusters were provided with subsidy assistance up to Rs 1.25 lakh per cluster.
- As part of the promotion of cluster-based coconut development, 41 new *Keragramams* with an area of 100 ha each were established in Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha, Ernakulam, Kottayam, Kasaragod, Thrissur, Palakkad, Malappuram, Kozhikode, and Kannur Districts. *Kera Raksha varam* campaign was conducted in the State in various locations and the campaign included the supply of green manure seeds for 15 lakh palms, crown cleaning and plant protection chemicals spraying for 7.4 lakh palms across the State.
- As part of the activities under the Coconut Development Council, a total of 11.7 lakh West Coast Tall (WCT), 69,509 dwarf and 1.5 lakh hybrid coconut seedlings were distributed in the State.
- Under the fruit development scheme, A total of 21.7 lakh planting materials of fruit plants including high-quality graft, layers, tissue culture banana and seedlings were distributed to farmers.
- Cluster-based medicinal plant cultivation of Kacholam, Chethikoduveli, Koovalam, Kurunthoti, Thipali, Thulsi, Ramacham, and

Shatavari was promoted in Alappuzha, Thrissur, Malappuram, Palakkad, and Kannur Districts in an area of 60.40 ha.

- A total of 1,047 soil testing campaigns were conducted across the State in 2023-24 and 17 new Plant Health Clinics were established.
- In 2023-24, good quality planting materials including 607.56 tonnes of paddy seeds, 35 lakh pepper seedlings, 10.1 lakh coconut seedlings, 50.8 lakh vegetable seedlings, 7.7 tonnes of vegetable seeds, 4.5 tonnes of pulse seeds, 40 tonnes of tuberous planting materials, and 8 lakh of other planting materials were produced and distributed by Departmental farms across the State.
- As part of quality control enforcement of fertilizers, pesticides, biofertilizers, and organic manures distributed in the State, samples were collected from outlets and analysed in Departmental laboratories. Accordingly, 2,212 pesticide samples, 4,276 fertilizer samples, and 53 biofertilizer and organic manure samples were analysed. In addition, the State Pesticide Testing Laboratory at Thiruvananthapuram received National Accreditation Board for Testing and Calibration Laboratories (NABL) accreditation.
- The procurement price of green coconut was raised from Rs 32/- per kg to Rs 34/- per kg from April 1, 2023. In 2023-24, 16,576.4 MT of green coconut was procured from 37,284 farmers through KERAFED, VFPC, and KSCDC.
- As part of agricultural extension programmes *Karshaka Sabhas* and *Njattuvela Chandas* were organised in 19,498 wards in the State. The Department of Agriculture conducted the *Krisbi Darshan* programme at Haripad and Cherthala as part of the *Njangalum Krishiyilekku* campaign.
- Pension scheme for small and marginal farmers is being implemented in the State as support for the farmers who have reached the age of 60 years. As per the reports of the Agriculture Department, Rs 304.22 crore had been paid as pension to 2,11,266 beneficiaries in the financial year 2023-24.
- A total of 15,345 farmers were registered as members of Farmer Welfare Fund Board as of July 2024.
- To integrate digital technology into agriculture, 'Digital Crop Survey' was initiated by the Department. The survey was conducted at

### Box 3.1.2 Kerala Agriculture Technology Hub and Information Repository (KATHIR)

'KATHIR', an integrated digital agriculture platform was launched on August 17, 2024 by Hon'ble Chief Minister of Kerala. The web application hosts various modules both for farmers and department officials and integrate scientific models with validated data to generate advisories for agriculture community. KATHIR facilitates farmer participation through a user-friendly mobile application available in vernacular languages and it strengthen decision making based on real time data. KATHIR centralising all data resources (GIS, MIS, Telematics etc.) into a unified data base and it available both as web and mobile application. Agriculture database, location specific planning of farm operations, crop advisories, market intelligence information, farm machinery database, farmer registration, and crop loss reporting are major services provided through KATHIR to farmers. In addition, it serves as a platform to department officials for major services such as registered farmer validation, crop loss report validation, crop health monitoring, issuing of certificates, and creation of farmer groups

selected villages of Alappuzha, Palakkad, and Wayanad Districts during the late Kharif season of 2023 and the Rabi season of 2023-24.

#### Crop Insurance Schemes

The crop insurance schemes under implementation in the State are the State Crop Insurance Scheme and Restructured Weather Based Crop Insurance Scheme (RWBCIS).

The State Crop Insurance covers losses caused by natural calamities such as drought, flood, landslide, earthquake, sea erosion, storm, hurricane, lightning, wild life menace, and forest fire. A total of 27 major agricultural crops namely coconut, arecanut, rubber, cashew, banana, tapioca, pineapple, pepper, cardamom, ginger, turmeric, coffee, tea, cocoa, ground nut, sesamum, vegetables, clove, betel vine, pulses, tubers, sugarcane, tobacco, paddy, nutmeg, mango, and millets were covered under the scheme. In 2023-24, an amount of Rs 19.4 crore was provided as insurance to a total of 7,206 farmers. In addition, as a part of the 'Contingency Programme to Meet Natural Calamities and Pest and Disease Endemic' scheme 2023-24, implemented by the Agriculture Department, an amount of Rs 3.94. crore was released as natural calamity relief assistance through AIMS Portal. A total of 3,472 farmers benefited under the scheme.

The Restructured Weather Based Crop Insurance Scheme (RWBCIS) is implemented by Agriculture Insurance Company of India Ltd. (AIC). Under the scheme, each notified Panchayat is linked to one Automatic Weather Station (AWS) or Reference Weather Station and claims are settled for adverse weather incidence on the basis of weather data from the respective weather stations for each

notified crop. A total of 170 AWSs have been installed for the scheme in the State. The crops notified under the scheme are paddy, banana, pepper, ginger, turmeric, pineapple, cardamom, arecanut, nutmeg, sugarcane, cashew, clove, cocoa, coconut, mango, millets, potato, pulses, vegetables, rubber, tapioca, tubers, and tea for Kharif season and paddy, banana, cashew, mango, sugarcane, pineapple, potato, vegetables, cardamom, clove, cocoa, coconut, coffee, ginger, millets, nutmeg, pepper, pulses, rubber, tapioca, tubers, turmeric, and tea for Rabi season. As reported by AIC, in Kharif 2023 season, 64,205 farmers were enrolled for RWBCIS for an area of 28,322 ha and for Rabi 2023-24 season, 1,09,936 farmers were enrolled for an area of 45,421 ha.

#### Vegetable and Fruit Promotion Council, Kerala (VFPCCK)

The mandate of VFPCCK is to support the commercial fruit and vegetable growers in Kerala in various farm operations from seed to marketing in a sustainable way. All the interventions including agricultural extension, rural credit, group marketing, and value addition are organised through Self Help Groups (SHGs) by the Council. In 2023-24, a total of 85,799 MT of vegetable and 1,08,593 MT of banana were produced by the farmers of the Council from an area of 20,510 ha under vegetable cultivation and 20,366 ha under banana cultivation. VFPCCK had inducted 2,853 new farmers and formed 74 new SHGs thereby increasing the number of farmer beneficiaries so far to 2.1 lakh and SHGs to 10,384 by March 2024.

In 2023-24, the council had produced and supplied 81.4 lakh seedlings through their seedling production units viz., Krishi Business Kendras, Seed Processing Plant, and High-tech nursery.

The seeds of 17 type vegetables were produced under the Seed Processing Plant, Alathur through registered seed growers and 52.2 MT seeds were produced by the Plant in 2023-24. Under Vegetable Development Scheme 2023-24, VFPCCK distributed 20,000 vegetable seed kits of popular hybrid vegetables and infrastructure support in the form of permanent pandal, semi-permanent pandal, and solar fencing was provided to farmers. VFPCCK supplied 61.3 lakh seed kits for various Government schemes and trading of 210 MT of raw jackfruit was facilitated through the jackfruit trading centre at Idukki District in 2023-24. To support climate resilient agriculture, VFPCCK constructed 208 paduthakulams, supplied hydrogel for 107.5 ha, and supported millets as intercrops in a 26.2 ha area, benefiting 716 farmers.

A total of 5,550 soil samples were tested in 2023-24 and soil health cards were distributed through the soil testing laboratories of VFPCCK at Malappuram and Alappuzha Districts. As part of extension activities, VFPCCK conducted 99 training programmes and 14 seminars in 2023-24 benefiting 2,180 farmers.

In 2023-24, hybrid seed production of vegetables including tomato, brinjal, bhindi, chilli, and watermelon was undertaken by VFPCCK and implemented successfully among the registered seed growers of the Council and trials were conducted in the selected farmers' fields for evaluating the performance and suitability to the Kerala conditions.

VFPCCK also involved in export promotion of vegetables and fruits in the State. The council catered to the export of products including *Nendran* banana, *Njalipoovan*, jackfruit, banana stem, and flower, which were sourced from farmers of Malappuram and Kozhikode Districts. The export protocol on banana was disseminated among the farmers and several awareness programmes intended to promote exports were conducted by VFPCCK for various stakeholders. Traceability was incorporated in the banana value chain of 250 farmers in 10 Districts. With the technical guidance from Kerala Agricultural University, the static trial for export production protocol for 'Vazhakulam GI pineapple' to the Middle East was completed in 2023-24. The Council has so far exported 63.5 MT of fruits and vegetables to different countries.

As part of the promotion of organic products and safe-to-eat produce, VFPCCK initiated a chain of 63

*Thalir* green ecoshop outlets under RKI. In 2023-24, VFPCCK procured 7,495 MT of green coconut through its 69 collection centres and 11 mobile collection centres benefiting 16,808 farmers. In addition, VFPCCK deposited 796.5 MT of copra to NAFED in 2023-24.

The 250 VFPCCK Markets were the nodal markets for providing a minimum base price support implemented by the State Government and 5,000 farmers were registered under the programme.

### **State Horticulture Mission (SHM)**

The horticulture sector in Kerala holds immense potential, driven by the State's diverse agro-ecological conditions and rich biodiversity, offering opportunities for the cultivation of a wide variety of fruits, vegetables, ornamentals, plantation crops, spices, aromatic, and medicinal plants. State Horticulture Mission (SHM) provides support in terms of subsidies, technical guidance, and infrastructure development for the development of horticulture sector in Kerala. In 2023-24, SHM implemented the Centrally Sponsored Schemes viz., the Mission for Integrated Development of Horticulture (MIDH) and projects under the Rashtriya Krishi Vikas Yojana (RKVY).

The programmes of the MIDH scheme include initiatives on production and productivity improvement, post-harvest management, and marketing. Establishment of hi-tech and small nurseries for enhancing the availability of good quality planting materials, establishment of new tissue culture units, strengthening of existing tissue culture units, establishment of new gardens, rejuvenation of existing plantations, protected cultivation, horticulture mechanisation, technology dissemination, mushroom production, and pollination support through bee keeping were supported under the component 'production and productivity improvement programme'. The major activities assisted under 'post-harvest management' are the establishment of integrated pack houses, sorting-grading-packing units, cold storage, pre cooling units, reefer vans, preservation units, and ripening chamber. Under the component 'establishment of marketing infrastructure', assistance was provided for the establishment of rural markets, functional infrastructure for collection and grading, strengthening of wholesale markets, market intelligence, extension quality awareness, and market-led extension activities. Besides these components, rejuvenation of senile plantations, vegetable seed production, establishment of plant health clinics and bio-

control labs, infrastructure support for seed production and nurseries, and community water harvesting structures were supported under the MIDH scheme.

The achievements under area expansion of crops through the mission are listed in **Table 3.1.6**.

Besides the above, establishment of 1,780 ha of new fruit orchards, 1,125 ha of hybrid vegetable cultivation, 260 ha of floriculture, 1,724 ha of spice cultivation, 70 ha of betel vine cultivation, 100 ha of *Kantballoor* garlic cultivation, and 79 ha of area under protected cultivation were supported under MIDH. Under the integrated post-harvest management component, a total of 30 pack houses, seven preservation units, eight processing units, two mushroom production units, and one spawn making unit were established with the financial assistance through the mission.

**Table 3.1.6** Achievement under the area expansion programme of MIDH through the mission in 2023-24

Crops	Area expansion in hectare
Dragon Fruit – without integration	34.24
Strawberry – with integration	31.65
Banana	649.91
Pineapple	369.57
Papaya	14.36
Mango	24.60
Jack	63.67
Avocado	24.77
Rambutan	102.24
Passion fruit	18.00
Mangosteen	29.17
Garcinia	8.50
Hybrid Vegetables	1,125.05
<b>Floriculture</b>	
Cut flowers	82.50
Loose flowers	176.50
Seed/Rhizomatic spices – Ginger and Turmeric	516.50
Perennial spices – Pepper, Nutmeg, Clove, Cinnamon etc	1,206.94
Betel vine	69.71
<b>Total</b>	<b>4,547.88</b>

Source: State Horticulture Mission, GoK

Vegetable cultivation, mushroom cultivation, *Arka* Vertical garden for vegetable cultivation, and open precision farming were promoted under RKVY through the mission. An area of 228.4 ha of banana and 374.1 ha of vegetables were bought under precision farming under the project. Installation of 320 *Arka* vertical garden structures was completed under the RKVY scheme and 100 blocks were identified for setting up mushroom villages in the State. SHM established the Centre of Excellence for vegetables and flowers at Regional Agriculture Research Station (RARS), Wayanad under the Indo-Dutch Action Plan with technical support from the Netherlands. The centre aims to impart required skills, knowledge, and training in hi-tech cultivation of flowers and vegetables, besides providing good-quality planting material of high-yielding varieties of vegetables and flowers to farmers of the State. Allocation under Rashtriya Krishi Vikas Yojana (RKVY) is given in (**Appendix 3.1.22**).

Data on prices of agricultural commodities, agricultural inputs, and indicators of development are given in **Appendices 3.1.20, 3.1.21, 3.1.23 and 3.1.24**.

### Agriculture Research, Extension and Education

Kerala Agricultural University (KAU), is the premier agricultural institute in the State, delegated for undertaking education, research, and extension outreach in agriculture and allied sectors and generating quality human resources with skill and knowhow for sustainable development and management of the agriculture sector.

The areas such as developing Agro Ecological Unit (AEU) based package of practices, hybrids in vegetables, technology for commercial scale production of wines from fruits, assessment of climate change impacts on the agricultural sector, social vulnerability, and mitigation and adaptation strategies to manage the impacts were accorded high priority in the research focus of the KAU. Development of stress-tolerant varieties through breeding, biotechnological applications, conservation and utilisation of traditional varieties, and conservation of natural resources (crop varieties, soil, water, flora, and fauna) were the other areas of research interventions. Additionally, the research initiatives focused on developing small machinery suited for small farms and farmers that are women friendly and cost effective, eco-friendly management methods of pests and diseases and technologies to sustain soil health, use of modern techniques in agriculture (precision farming/high-tech agriculture), development of

fruits, vegetables, and small millets, including tubers, which are underutilised, mainly aiming at improving food and nutritional security. The research projects under secondary agriculture deal with product diversification and by-product utilisation and methods to develop nutritionally better products aimed at commercial application of such technologies to ensure effective utilisation of the produces and ensuring employment generation. The research gaps in areas declared as special agricultural zones were also addressed in a focused manner, such as the research programme in small millets for Attappadi and vegetables for Idukki. There was equal emphasis on developing quality seeds and planting materials and enhancing seed testing facilities. The research projects were designed to help small and marginal farmers to improve their livelihood status and facilitate better returns from agriculture. The wider objectives of food and nutritional security, ecological safety, and natural resource conservation were also addressed. Under its three faculties viz., Agriculture, Forestry, and Agricultural Engineering and Technology, KAU offers the Under Graduate, Post Graduate and Doctoral programmes in Agriculture, Agricultural Engineering, Co-operation and Banking, Horticulture, and Forestry. In 32 disciplines, the University offers Post-Graduate (PG) programmes leading to a Master's Degree. Doctoral programmes were offered in 10 disciplines of Agriculture, five disciplines of Horticulture, five disciplines of Forestry, three disciplines of Agricultural Engineering, one discipline in Community Science, and one discipline in Co-operation and Banking. A total of 3,212 UG students, and 862 PG/Ph.D. students carry out their education in the University.

Kerala Agricultural University plays a significant role in the key agricultural extension activities in the State and the Directorate of Extension (DoE) has a crucial role in overseeing the planning, coordination, monitoring, and evaluation of extension activities at KAU. Extension activities of KAU are carried out through seven Krishi Vigyan Kendras (KVKs) and seven extension units, including the Communication Centre (CC), Agricultural Technology Information Centre (ATIC), Central Training Institute (CTI), Public Relations Office (PRO), KAU Press in Thrissur, Agricultural Information and Sales Centre (AISC) in Kozhikode and the Extension Training Centre (ETC) in Manjeshwar. The key extension activities of the DoE, KAU includes conducting

capacity-building initiatives, organising On-Farm Trials (OFTs) and Front Line Demonstrations (FLDs), providing farm advisory services, hosting exhibitions, seminars, workshops, face-to-face agricultural science debate programme, farm advisory and diagnostic services, dissemination of information through mass media and publications, and distribution of quality seeds, seedlings, inputs and value added products for various stakeholders and end-users in the agricultural sector.

KAU was entrusted with providing technical support for the State's flagship Farm Plan-Based Development Programme by way of creating master trainers, preparation and implementation of a technical module and extension activities for disseminating technical inputs on a regular basis by conducting FLDs. KAU scientists took the leadership in operating the Block-Level Agricultural Knowledge Centres (BLAKC) in 152 blocks of the State to disseminate cutting-edge knowledge in agriculture and allied sectors to farmers. Popularisation of drone technology among farmers for spraying nutrients, especially in paddy belts, was a salient achievement of this programme. In 2023-24, 120 FLDs and 40 OFTs were conducted through various KVKs of KAU. Some of the major achievements of the University in 2023-24 are as follows:

- A total of 12 technologies were developed by KAU in 2023-24 including technology for jamun nectar, cashew apple candy, skin emollient cream with mosquito repellence property, cashew apple toffee, cashew apple energy bar, coconut palm jaggery, micro-sol-micronutrient mixture, cocoa pulp extractor, cocoa bean fermentor, passion fruit-aloe functional RTS, bilimbi-aloe functional RTS and red banana-based blended RTS.
- In 2023-24, patents were received for Seed cum fertilizer drill, vanilla composition and the process for its preparation, rechargeable backpack type air assisted electrostatic induction sprayer, banana sucker uprooting machine as an attachment to tractor, power-operated rotary coconut husking machine, apparatus for breaking cocoa pod, crop protective herbicide applicator, gingerol composition and process for its preparation, and process for preparing composition of phenylpropanoid glycosides.
- KAU Released scientific protocol for paddy crop of *Kole* land and 'Package of Practices Recommendations 2024'.
- Launched sale of KAU publications through



online marketing platforms under 'Keralagro' brand name.

- Released coffee table book 'Abode', describing the activities of various units under DoE, KAU in January 2024.
- DoE entered into new collaborations and continued existing ones with the Department of Agriculture, MANAGE, CIFT, NABARD, Directorate of Cashewnut and Cocoa Development (DCCD), LSGD, and VHSE.
- Installed Automatic Weather Station and established an exotic fruit plants demonstration unit at ETC Manjeswar.
- Developed a mobile application named Farm Extension Manager that covers specially categorised information on over 100 crops.
- Centre for e-Learning (CeL, KAU) under the DoE conducted 11 Massive Open Online Courses (MOOC) and four online certificate courses for farmers, extension workers, students, farm entrepreneur groups, and other agri-stakeholders.
- In 2023-24, KVKs hosted around 1,196 training programmes on a wide range of agricultural disciplines and in collaboration with MANAGE and ATMA, DoE implemented Diploma Programme for Agri-Input Dealers Programme (DAESI)
- KAU RKVY-RAFTAAR-Agribusiness Incubator (KAU RABI) conducted about 52 entrepreneurship development training programmes to entrepreneurs, farmers, SHGs, and FPOs.

## FINANCE TO AGRICULTURE AND ALLIED SECTORS

Agriculture finance plays a crucial role in supporting the agricultural sector in Kerala by providing required investment in inputs like seeds, fertilizers, irrigation, and equipment. Access to adequate finance enables farmers to adopt modern farming techniques, improve productivity, and mitigate the risks associated with crop failures and market fluctuations. It also helps small and marginal farmers, who make up a significant portion of the agricultural community in Kerala, to enhance their income and secure their livelihoods. Additionally, agricultural finance is essential for the sustainable development of Kerala's rural economy, promoting food security and reducing poverty in the region. By facilitating investment in infrastructure, storage, and value addition, it

further strengthens the State's overall agricultural ecosystem.

Kerala has significant potential for credit flow in the agriculture sector, which can drive productivity and profitability leading to economic growth. The credit projection for total agriculture and allied activities for 2024-25 is estimated at Rs 1,23,757.7 crore, constituting 52 per cent of the total projections and the potential for credit support assessed for crop production, maintenance, and marketing for the year 2024-25 is Rs 81,368 crore, which is 34 per cent of the total projection under the priority sector for 2024-25 (State Focus Paper 2024-25, NABARD). NABARD is in the process of completing the projections for the year 2025-26. There is a high demand for capital investment in agriculture and allied activities, which are essential for improving food security. However, limited access to financial services is a major obstacle, leading to low credit growth in the agriculture sector. There is investment needs for large-scale mechanisation, climate-smart technologies, post-harvest management, and logistics. Small holder households and enterprises in developing countries often face a lack of adequate investment capital, resulting in low capital formation in their economy. Smaller investments are also critical for farmers and micro, small, and medium enterprises to enhance productivity. Additionally, the climate-related aspect of financing is also becoming important.

### Agricultural Credit Policy

The Government of India has initiated several policy measures to improve the accessibility of farmers to the institutional sources of credit. The emphasis of these policies has been on progressive institutionalisation for providing timely and adequate credit support to all farmers with particular focus on small and marginal farmers and weaker sections of society to enable them to adopt modern technology and improved agricultural practices for increasing agricultural production and productivity. The policy emphasizes on augmenting credit flow at the ground-level through credit planning, adoption of region-specific strategies, and rationalisation of lending policies and procedures. The Government of India fixes agriculture credit disbursement targets for the banking sector every year and banks have consistently surpassed these targets. The achievement for agriculture credit flow against the target in the Financial Year 2023 was 116 per

cent. Credit flow to agriculture (from Commercial Banks, Regional Rural Banks, and Cooperatives taken together) registered a growth of 13.6 per cent in the financial year 2024.

### **Institutional Arrangements**

The financial institutions play a greater role in providing credit to the entire supply chain in agriculture and allied activities. Agricultural credit is disbursed through a multi-agency network consisting of Commercial Banks (CBs), Regional Rural Banks (RRBs), Small Finance Banks (SFBs), and Cooperatives. By promoting financial inclusion, these institutions also empower marginalised communities, foster entrepreneurship, and contribute to poverty alleviation, making them instrumental in the overall development of the State.

Kerala has an excellent banking network. As per State Level Bankers Committee (SLBC) data, the total number of bank branches in Kerala as of March 2024 is 7,921. Of the total number of bank branches, 1,790 branches are in urban areas, 5,281 branches in semi-urban areas and 850 branches in rural areas.

In Kerala, a number of banking policies and initiatives targeted at the socio-economic development of the State are coordinated and carried out in large part by the SLBC. In accordance with RBI rules, the SLBC was established under the Lead Bank Scheme. As a high-level inter-institutional forum, it facilitates coordination between Banks and the Government over issues related to banking development. Canara Bank is the convenor of the SLBC for Kerala State. Effective development programme implementation is facilitated by SLBC in the areas of training, financial literacy, employment for the unemployed, supplying banking services in areas without banks, and poverty alleviation. In order to carry out several Government directives, particularly those pertaining to financial inclusion and lending to the priority sector, SLBC collaborates with the State Government.

The Cooperative Banks and Primary Agriculture Credit Societies (PACS) have played a greater role in furthering financial inclusion in the State. PACS play a major role in bringing rural and low-income populations to the banking system and also function as the backbone of the rural credit system. The cooperative sector in Kerala experienced

an active role of the Government in their development and functioning. At the local-level, the Credit Co-operatives have a good network through 1,646 PACS, as on March 2024.

### **Growth in Agriculture Advances**

One of the most important supply-side factors influencing agricultural productivity is credit, which helps farmers to invest in essential resources and technologies. Primary sector lending in Kerala has achieved 87 per cent in March, 2024 quarter as against the target fixed for FY 2023-24. The financial institutions in the State provide long-term, medium-term, and short-term loans to the primary sector. In Kerala, the total agricultural advances increased from Rs 87,091 crore in March 2021 to Rs 1,31,379 crore in March 2024, marking a substantial growth of more than 50 per cent over the four-year period (**Figure 3.1.3**). The substantial increase in agricultural advances over the years underscores the importance of continued investment and support for the agricultural sector in Kerala, which is vital for the State's overall economic growth and rural welfare.

### **Credit flow to Agriculture Sector**

The total agriculture credit flow in the State includes crop loans and agriculture term loans, and there was a considerable increase in agriculture credit flow in the State from Rs 1,19,709 crore in 2022-23 to Rs 1,38,490 crore in 2023-24 (**Appendix 3.1.25**). Out of the total agriculture credit lending in 2023-24, Rs 1,04,693.79 crore was disbursed by Public and Private sector Commercial Banks, Rs 11,095.72 crore by Co-operative Banks, Rs 18,089.64 crore by RRBs, and Rs 4,610.58 crore by other Banks. In 2023-24, Rs 96,494 crore was disbursed as crop loans in the State, of which Private and Public sector Commercial Banks lent Rs 73,332 crore, Co-operative Banks lent Rs 5,646 crore, RRBs lent Rs 17,511 crore and Rs 4.76 crore by other banks. The share of Commercial banks stood at 74.7 per cent of total agricultural term credit, whereas the share of Co-operatives was only 13 per cent, and share of RRBs was 1.4 per cent (**Figure 3.1.4**). It shows that Commercial Banks continue to play a predominant role in the agriculture term credit (**Appendix 3.1.27**). The achievement in total agricultural loan lending was 87 per cent of the target fixed for 2023-24. Total priority sector credit in 2023-24 was 2,22,885 crore, which is 83 per cent of the target fixed for 2023-24. Commercial Banks accounted for the majority of credit extended to the priority sector i.e., 80.3 per cent.

### Investment Credit

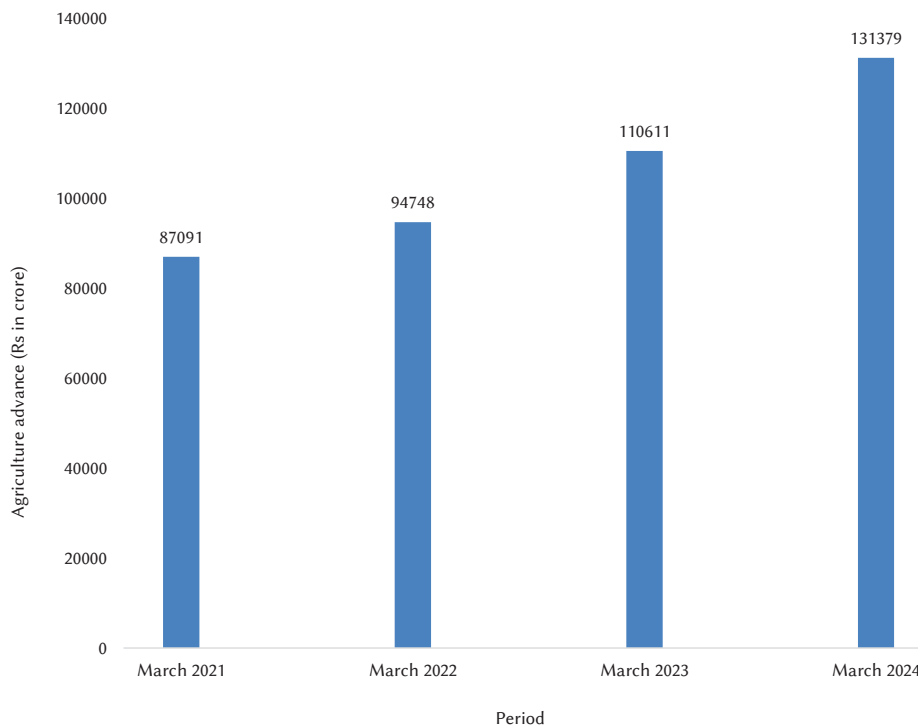
Investment credit holds greater importance than production credit in agriculture because it focuses on long-term improvements that enhance the overall productivity and sustainability of farming operations. These investments lead to lasting improvements in farm efficiency, reduce input costs over time, and allow farmers to adopt modern technologies, increasing their resilience to climate variability, and market risks. A balance between short-term and long-term investment credit ought to be brought in to maintain sustainable agricultural growth. It is noted that there has been a significant change in the proportion of investment credit in the last few years. In 2022-23, production (short-term) credit and investment (long-term) credit constituted 68.1 per cent and 31.9 per cent respectively of the total Ground Level Credit (GLC) flow to agriculture. In 2023-24, the proportion of production and investment credit changed to 69.7 per cent and 30.3 per cent respectively. In the long run, investment credit is crucial for transforming traditional agricultural practices into modern, sustainable, and commercially viable enterprise. It needs to be ensured that the importance of investment credit continues to increase in the

long run for sustained increases in income from agriculture and also for enhancing production and productivity in tune with the requirements. In 2023-24, Rs 1,38,490 crore was disbursed as total agriculture credit in the State, of which Rs 96,494 crore was production credit and Rs 41,996 crore was investment credit. Break up of production and investment credit is provided in **Appendix 3.1.25** and in **Figure 3.1.5**

In 2023-24, the agriculture credit was utilised in different sub-sectors including crop loans, minor irrigation, land development, farm mechanisation, plantation, horticulture, dairy development, poultry, fisheries, forest/wasteland development, storage, and others. Out of the total agriculture credit of Rs 1,38,490 crore, 69.7 per cent was utilised for crop loans and 10 per cent for dairy development. Sub-sector-wise agriculture credit flow is shown in **Appendix 3.1.26**. Banks need to ensure that agricultural term credit is dispensed to augment capital formation in the agricultural sector.

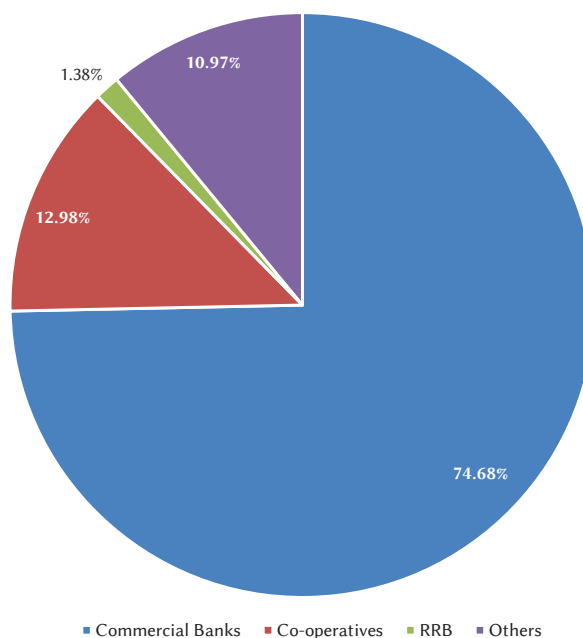
The Credit Deposit ratio (CD ratio) of the State stood at 73.2 per cent in March 2024, which was an increase compared to the CD ratio of 69 per cent

**Figure 3.1.3** Agriculture advances except Co-operative Banks, Rs in crore



Source: SLBC

**Figure 3.1.4** Agency-wise achievement of agriculture term-credit in 2023-24



Source: NABARD

in March 2023. As per the Annual Performance Report 2023-24 Kerala, by NABARD, the highest CD Ratio of 136.3 per cent was recorded in Idukki District and the lowest CD ratio of 31.7 per cent was recorded in Pathanamthitta District. Non-Performing Assets (NPA) in the agriculture sector was 3.4 per cent in 2022-23, whereas the NPA percentage in agriculture has reduced to 2.7 per cent of the total agriculture advances in the financial year 2023-24.

### Kisan Credit Card (KCC)

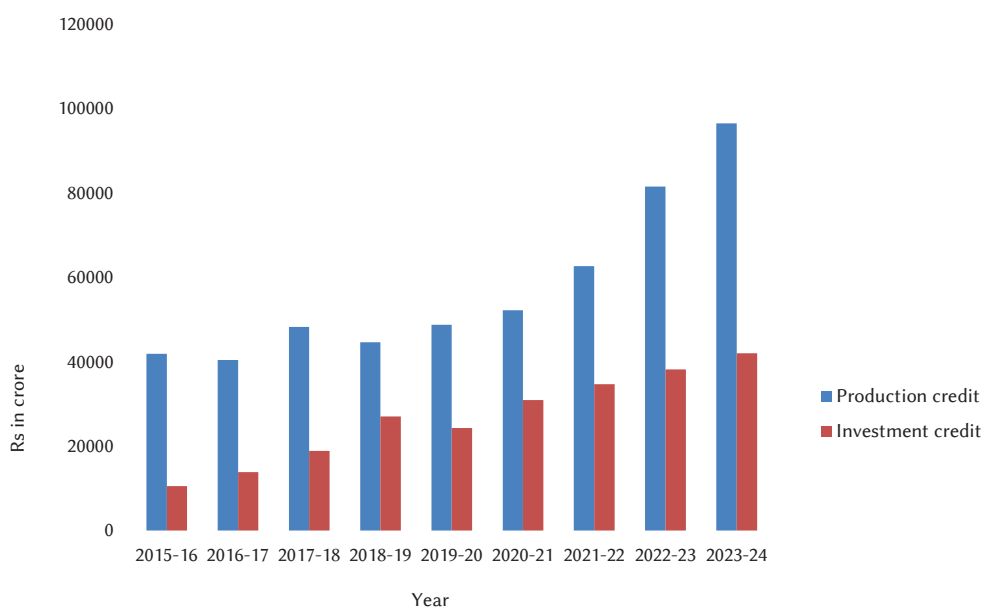
The KCC scheme was introduced in 1998-99 to provide timely and affordable credit to farmers. It aims to simplify the process of availing credit for agricultural activities, ensuring that farmers have easy access to funds for purchasing seeds, fertilizers, pesticides, and other inputs required for crop production. KCC also covers allied activities such as dairy, poultry, and fisheries, making it a comprehensive tool for rural financial inclusion. As on March 31, 2024, the balance outstanding under the Kisan Credit Card was Rs 42,910 crore in the State. The cumulative disbursement under KCC in the year 2023-24 was Rs 39,286 crore and a total of 19,37,676 cards were issued to farmers across the State through various financial institutions. The progress in issues of KCC through various

agencies is shown in **Appendix 3.1.28**. RuPay Kisan Credit Cards were issued to farmers as a smart and efficient tool for accessing credit. This card functions similarly to a debit or credit card and is linked to the KCC account, allowing farmers to conveniently withdraw cash, make purchases, and pay for agricultural inputs directly at point-of-sale (POS) terminals. Additionally, the Personal Accident Insurance Scheme (PAIS) was integrated with the KCC to provide insurance coverage to farmers against accidental death or disability. According to the SLBC report March, 2024, a total of 7,63,738 persons were covered under PAIS. KCC was made mandatory for availing the benefit of interest subvention on short-term loans (ISS) disbursed from April 2020. Aadhar was also made mandatory for availing the benefit of ISS.

### Agriculture Infrastructure Fund (AIF)

The Government of India launched AIF scheme in 2020 with the key objective of mobilising a medium to long term debt financing facility for investment in viable projects for post-harvest management infrastructure and community farming assets through incentives and financial support in order to improve agriculture infrastructure in the country. Under this scheme, interest subvention of 3 per cent per annum is

**Figure 3.1.5** Share of production and investment credit in total agriculture credit from 2015-16 to 2023-24



Source: SLBC

available for loans up to a limit of Rs 2.00 crore. This subvention will be available for a maximum period of seven years. As reported by SLBC, Kerala, in 2023-24, a total of 888 loan applications, amounting Rs 244.7 crore were disbursed in the State under AIF scheme. NABARD introduced a special refinance scheme for financing under Agriculture Infrastructure Fund (AIF) for RRBs, Co-operative Banks and subsidiaries of NABARD with a view to addressing the existing infrastructure gaps and to provide a boost to the rural financial institutions for funding projects under AIF.

### NABARD

NABARD (National Bank for Agriculture and Rural Development) is an apex regulatory body in India that focuses on the development of rural areas by promoting agriculture and rural industries. NABARD acts as a liaison between the Indian Government, State Governments, and other institutions to ensure smooth coordination and implementation of rural development policies. NABARD extends support to the States in the form of loan/refinance and also as grant support. Loan/refinance is extended for augmenting ground-level credit flow to agriculture and allied sectors and for the creation of rural infrastructure. Financial assistance in the form of grants is extended for various developmental activities ranging from fostering innovation in the farm sector to promotion of Farmers Producer Organisations (FPOs), promotion of off farm

activities, skill development, support for financial inclusion and digitising banking transactions, creation of livelihood opportunities through Self Help Groups (SHGs)/Joint Liability Groups (JLGs) and capacity enhancement through training and marketing support for such groups.

### *Long Term Rural Credit Fund (LTRCF), Short Term Refinance and Direct Refinance*

NABARD provides short-term, medium-term, and long-term refinance to banks, rural financial institutions and non-banking financial companies, in order to enable and augment ground-level credit flow to agriculture and allied sectors and other rural livelihood segments. Government of India has set up a 'Long Term Rural Credit Fund' with NABARD for providing long-term refinance support for investment credit in agriculture activities exclusively for Co-operative Banks and Regional Rural Banks (RRBs) at a concessional rate of interest. In 2023-24, Rs 785.4 crore was refinanced under LTRCF. All State Co-operative Banks, Kerala State Co-operative Agricultural and Rural Development Bank (KSCARDB) and RRBs are eligible to avail refinance facilities from NABARD, subject to the satisfaction of eligibility criteria.

In 2023-24, Kerala region had disbursed a total refinance of Rs 15,684.4 crore against the target of Rs 14,140 crore through State co-operative Bank,

Regional Rural Banks and KSCARDB, which includes short-term refinance of Rs 12,947.5 crore and long-term refinance of Rs 2,736.9 crore, with an achievement of 110.9 per cent and a growth of 16.4 per cent over 2022-23. Of the total fund disbursed under refinance, Rs 10,743.6 crore was disbursed to State Co-operative Bank, Rs 3,940.7 crore was disbursed to Kerala Gramin Bank, and Rs 1,000 crore was disbursed to KSCARDB.

Under the special refinance scheme, a total of Rs 61.6 crore was disbursed to rejuvenate the PACS as MSCs (Multi-Service Centres) in 2023-24. As per this scheme, a refinance facility for the creation of quality infrastructure and increase business portfolio of PACS in tune with the needs of the members was provided with an ultimate lending rate to PACS at 4 per cent per annum through State Co-operative Bank. A total of 23 agro-processing centres, 12 procurement centres, seven organic farming and manure production units, 22 farmer information and training centres, one super specialty hospital, 14 medicals/pharmacy, and 21 polyclinics/diagnostic centres were the cumulative impact of refinance for PACS as MSC. The agency-wise disbursement of re-finance assistance by NABARD is shown in **Appendix 3.1.29**.

#### *Other major assistance from NABARD*

Through various funds instituted by the Govt. of India in NABARD, it has been supporting the creation of infrastructure in rural areas under agriculture and allied, social and connectivity sectors. Major infrastructure initiatives in Kerala through NABARD include the Rural Infrastructure Development Fund (RIDF), NABARD Infrastructure Development Assistance (NIDA), Fisheries and Aquaculture Infrastructure Development Fund (FIDF), Warehouse Infrastructure Fund (WIF), Dairy Processing and Infrastructure Development Fund (DIDF), and Food Processing Fund (FPF).

- The Rural Infrastructure Development Fund supports the State's efforts in the creation of infrastructure for agriculture development. A total of 6,840 projects were sanctioned under RIDF in Kerala, amounting to a loan amount of Rs 13,221.3 crore, out of which Rs 9,630.3 crore has been disbursed as on March 31, 2024. The tranche-wise sanction and disbursements under RIDF are shown in **Appendix 3.1.30**.
- Through NIDA, NABARD supported K-FON, a flagship project of the State, revolutionising

connectivity across Kerala. The project connected over 28,000 Government offices and nearly 4,700 economically weaker families, enhancing access to essential services and opportunities. In 2023-24, NABARD also supported the development of 15 roads in 5 Districts of Kerala and the development of 9 micro-watersheds in Kannur District through NIDA.

- A total loan amount of Rs 12.20 crore was sanctioned to Ernakulam Regional Cooperative Milk Producers' Union, under DIDF to strengthen the dairy plant at Edappally and to establish a solar power plant of 2 MW at Tripunithura dairy farm.
- In 2023-24, eight projects were sanctioned to Kerala State Warehousing Corporation under WIF to strengthen the warehousing capacity of the State. KINFRA mega food park was supported under FPF with loan assistance of Rs 28.3 crore and Rs 150 crore was sanctioned under FIDF for the development of Arthungal Fishing Harbour in Alappuzha District.
- NABARD provided assistance for farm innovations, technology transfer, and capacity building of farming community through the Farm Sector Promotion Fund (FSPF). In 2023-24, NABARD sanctioned 13 projects across the State with a total sanction of Rs 56 lakh focusing on promotion of farming using IoT devices, new technologies in processing and farming, coconut harvesting through robots, nurturing and management of FPOs, projects addressing climate change mitigation methods, enhancing the farmer income, farm development plans and the promotion of agro tourism.
- NABARD also provides support under the Climate Change Fund (CCF) towards the development of agroforestry units in various Districts of Kerala as well as capacity building of various stakeholders. NABARD sanctioned 17 JLG linkage projects to various agencies for the formation and credit linkage of 2,970 JLGs with a total grant support of Rs 118.8 lakh in 2023-24.

According to NABARD, the State's development perspectives include all-round development, which includes more capital formation and collectivisation in agriculture, financial inclusion, MSME development, resilience to climate change, and the sustainable growth of both farm and non-farm sectors.



## 3.2 COOPERATIVES IN KERALA

Cooperatives are people-centred enterprises that are owned, managed, and operated by members in order to meet their common economic, social, and cultural needs and aspirations based on the values of self-help, self-responsibility, democracy, equality, and solidarity. The cooperative movement extends across the globe and encompasses diverse sectors of the economy. At least 12 per cent of the people in the world are members of the three million cooperatives in the world. Cooperatives provide jobs or work opportunities to 10 per cent of the employed population of the world. As per the World Cooperative Monitor 2023, the top 300 cooperatives and mutuals in the world report a total turnover of 2,409.4 billion USD for the year 2021, with most of the organisations operating in the agriculture sector (105 enterprises), insurance sector (96 enterprises), and wholesale and retail trade (57 enterprises).

In India, cooperatives play a crucial role in the economic transformation of rural areas and have social and economic goals. As per the World Cooperative Monitor 2023, Indian Farmers Fertiliser Cooperative Limited (IFFCO) and Gujarat Cooperative Milk Marketing Federation Limited are the two Indian producer Cooperatives that rank first and second, respectively, based on the ratio of turnover over Gross Domestic Product (GDP) per capita globally. According to the National Cooperative Database 2023, there are around 8 lakh registered cooperatives in the country categorised among 29 sectors, out of which 80 per cent are non-credit cooperatives and

20 per cent are credit cooperatives, with more than 29 crore members, mainly from the marginalised and lower-income groups in the rural areas.

Cooperatives in Kerala play a critical role in mobilising people and pooling their resources to meet the common needs of members and thereby the larger society. The State has an extensive network of cooperatives engaged in various activities, including credit, procurement, production, construction, marketing, agricultural processing, consumer sector, traditional industries, public health, public distribution system, education, insurance, women's development, and fisheries. Through their wide reach, cooperatives have played a vital role in economic development, particularly for the development of income-poor and marginalised people in rural areas.

The cooperative societies are classified according to the area, nature of work, authorities, and functions undertaken by them. As on March 31, 2024 there were 16,393 cooperative societies in Kerala, of which 12,416 were active, while the rest were dormant. Among them, the majority are consumer cooperatives with a total of 4,617 numbers, of which 3,803 were working. Details of various types of cooperatives in Kerala are given in **Appendix 3.2.1**.

### **Credit Cooperatives**

Credit cooperatives in Kerala are an important source of credit, particularly in rural area. In the cooperative sector, credit cooperatives including,



Kerala Bank, Primary Agriculture Cooperative Society (PACS), Farmers Service Societies (FSS), Kerala State Cooperative Agricultural and Rural Development Bank (KSCARDB), and Primary Cooperative Agricultural and Rural Development Banks (PCARDBs) play a lead role in credit disbursement to the primary sector. The primary societies in Kerala command a high market share under the short-term credit structure, mobilise a substantial deposit, and maintain robust relationships with its members. The institutions, including PACS have branches that are spread across the State. The Government had initiated several measures to bring about a structural change in the cooperative agricultural credit sector of the State. The Government had taken a policy decision to convert the prevailing three tier credit structure of the State into a two-tier structure. As on March 31, 2024, a total of 3,759 credit cooperative societies were registered in the State, of which 3,370 were active. Credit cooperatives form 22.9 per cent of total cooperatives in the State. Selected credit operations and physical achievements of credit cooperatives are given in **Appendix 3.2.2**.

#### **Primary Agricultural Credit Societies (PACS)**

PACS form the short-term credit structure of cooperatives in the State. The primary societies in Kerala mobilises substantial deposits, provide loans and advances to their members and hold a significant market share. PACS play a major role in bringing rural and low-income populations to the banking system there by functioning as the backbone of the rural credit system. These institutions also undertake other services like agriculture input distribution, operation of consumer and medical stores, aggregation and marketing of agriculture produce and value addition, grading, branding, and packing. As on March 31, 2024 there were 1,646 PACS in the State, of which 1,585 societies were functional. Selected indicators of credit operations and performances of PACS are given in **Appendix 3.2.3** and **Appendix 3.2.4**.

#### **The Kerala State Cooperative Bank (Kerala Bank)**

The Kerala Bank, which came into being in November, 2019, has a vision of becoming a universal bank in the cooperative structure with a wide network across the State and abroad, providing a complete range of financial services, to all segments of society, under one roof with professionalism and social commitment.

Kerala Bank promotes savings and investments of individuals and institutions. Lending and services are given priority by the Bank to individual customers, Primary Agriculture Cooperative Societies, other cooperative societies and institutions, industries, SHGs, and JLGs. Kerala Bank launched a State-wide promotional programme for organising new FPOs and so far, 26 FPOs were formed under the leadership of the Bank. In 2023, Kerala State Cooperative Bank had launched digital banking services. In 2023-24, mobile app subscribers reached around 2.2 lakh and UPI registration crossed 1.25 lakh registration. The Bank made profit over the last five years and in 2023–2024, it reported a profit of Rs 209 crore with a total business of 1,16,582 crore. Kerala Bank has a head office, a corporate business office at Ernakulam, seven regional offices, 13 Credit Processing Centres and 823 branches across the State with a membership coverage of 1,689 numbers. The members include the Government of Kerala and 1,688 societies as ‘A’ class members. As on March 31, 2024 the total share capital of the Bank was Rs 2,150 crore, which included the share of the Government, societies, and individuals. The total deposit was Rs 67,979 crore, which included the deposits of societies, individuals, and institutions. The total borrowing of the Bank was Rs 13,810 crore, which included borrowings from NABARD, Government of Kerala, long-term deposits and others. In 2023-24, newly sanctioned loans by the Kerala Bank were in the tune of Rs 19,601 crore, and the Bank disbursed a total of 99,200 loans to the agriculture sector. The detailed financial particulars of the Kerala Bank for the financial year 2023-24, are given in **Appendix 3.2.5**.

Kerala Bank provided many services to Primary Agriculture Cooperative Societies (PACS), which are owners of the Kerala Bank. The Bank floated a revival package for the weaker PACS and established a PACS advisory committee in 14 Districts of the State. In 2023-24, the Bank sanctioned a total of Rs 10,335 crore as loans to PACS, which is 21 per cent of the total loan portfolio of the Bank. Furthermore, 151 Agriculture Infrastructure Fund (AIF) projects were sanctioned to 151 versatile PACS across the State. Through this, PACS implement projects such as storage godown, custom hiring centres, bio-input production and sales, procurement and marketing centres, cold storage, agricultural nurseries and primary processing centres of

agricultural commodities. Kerala Bank developed and launched the 'COBANK' app, to provide PACS with digital services. Under the coordination of Kerala Bank, a consortium of PACS was also formed to explore the domestic as well as the export market. Kerala Bank conducted special campaigns in 2023-24, such as, 'Mission 24' to deliver digital banking experience to the common man and 'Mission Rainbow 2024' campaign, which was held for 100 days from November 1, 2023 to February 8, 2024 to increase business and reduce NPA.

### **Kerala State Cooperative Agricultural and Rural Development Bank Ltd (KSCARDB)**

Kerala State Cooperative Agricultural and Rural Development Bank Ltd. (KSCARDB) is the pioneer in long-term lending, advancing credit for agricultural and allied activities, non-farm sector activities and rural housing with a motto of comprehensive rural development through credit. The Bank depends mainly on refinance provided by NABARD and that is then channeled to the ultimate borrowers through the network of affiliated Primary Cooperative Agricultural and Rural Development Banks (PCARDBs). The branches of PCARDBs are located in each Taluk, with the head office of KSCARDB located at Thiruvananthapuram. The prime objective of the Bank is the social and financial upliftment of the rural folk at the grassroot-level. Nearly 80 per cent of KSCARDB borrowers are small and marginal farmers. The total long-term loan issued in 2023-24 was Rs 772.6 crore, of which Rs 17.7 crore was issued as ordinary loans for purposes including construction and renovation of wells and tanks, pump sets and agricultural machinery, horticulture, animal husbandry, land development, construction of godowns and cattle sheds, fencing, construction of drainage channels and others. A total of Rs 755 crore was issued as scheme loans for purposes including minor irrigation, plantation and horticulture, agricultural machinery, dairy and animal husbandry, land development, poultry, fisheries, purchase of land and others. Classification of long-term loans issued by KSCARDB is given in **Appendix 3.2.6**

### **Assistance from National Cooperative Development Corporation (NCDC)**

NCDC has been providing assistance to cooperatives directly or through the State Government for expanding and strengthening their business and infrastructure creation in

credit, marketing, rural and service sectors such as healthcare, education and tourism.

Integrated Cooperative Development Project (ICDP) is a unique project assisted by NCDC for comprehensive and integrated development of selected Districts through cooperative networks. The other objectives of the scheme are to develop PACS as viable multipurpose societies by increasing value and range of business, strengthening the existing cooperative structure by providing vertical and horizontal linkage, revamping the agricultural and credit sector to cater the needs of small and marginal farmers and weaker sections.

As on August 31, 2024, NCDC disbursed cumulative financial assistance of Rs 10,414 crore for various cooperative development projects in Kerala. Of this, Rs 2,634 crore was provided through the State Government and Rs 7,780 crore disbursed as direct funding. Under direct funding, the long-term loan component was Rs 2.8 crore and Rs 10.3 crore was subsidy component, and Rs 7,767 crore was disbursed as working capital assistance.

Details of NCDC assistance are shown in **Appendix 3.2.8**. Sanctions and release of NCDC funds in Kerala are shown in **Appendix 3.2.9**. Year-wise release of loans and interest rates are shown in **Appendix 3.2.10**.

### **Assistance from NABARD to the Cooperative system (ST-SAO)**

National Bank for Agriculture and Rural Development (NABARD) has sanctioned Rs 5,459.4 crore as Short-Term Seasonal Agricultural Operations (ST-SAO) refinance to Kerala State Cooperative Bank in 2023-24. This along with the portion of the Kerala State Cooperative Bank was disbursed through the District offices as agricultural loan (**Table 3.2.1**).

### **Consumer Cooperatives**

Consumer cooperatives play an important role in providing consumer goods, medicines and stationary items at subsidised rates to the consumers and preventing their exploitation by private retailers. In Kerala, consumer cooperatives are one of the principal agencies in the public distribution system by providing essential and consumer articles to the general public at a reasonable rate, compared to the rate prevailing

in the open market. As on March 31, 2024, a total of 4,617 consumer cooperative societies were registered in the State, of which 3,803 cooperative societies were working. Consumer cooperatives in the State comprises Kerala State Cooperative Consumers' Federation Ltd. (Consumerfed) at the State-level, wholesale cooperative stores at the District-level and primary consumer societies and stores at the grassroot-level.

**Table 3.2.1** District-wise disbursement of ST-SAO refinance (Rs in crore)

Sl no	District Co-operative Bank	Total
1	Thiruvananthapuram	178.55
2	Kollam	304.46
3	Pathanamthitta	177.48
4	Alappuzha	269.56
5	Kottayam	472.76
6	Idukki	274.65
7	Ernakulam	575.24
8	Thrissur	405.90
9	Palakkad	332.58
10	Malappuram	332.63
11	Kozhikode	661.08
12	Wayanad	355.12
13	Kannur	717.22
14	Kasargode	402.19
<b>Total</b>		<b>5,459.42</b>

Source: Registrar of Co-operatives, GoK.

Consumerfed was established in the year 1965 and it is the apex body of the consumer wholesale cooperatives in Kerala with head office at Ernakulam, 11 regional offices and 6 business divisions. The 11 regional offices directly supervise and coordinate Triveni outlets, Neethi Medical stores, Beverage outlets, and E-Triveni centres. The notebook unit, gas plant and Triveni Institute of Pharmacy are directly controlled by the head office.

The major business divisions are explained below.

#### A. Triveni Division

The Triveni supermarkets and mobile Triveni units are working under District-level Regional Offices. At present, there are 169 Triveni mega/little super markets and 20 mobile Triveni units

functioning across Kerala. The total sales volume in Triveni segment in 2023-24 was Rs 285 crore. According to the direction of the Government of Kerala, Consumerfed organised subsidy outlets and other market intervention programmes for price stabilisation of essential items. In 2024, the Federation had achieved Ramsan, Vishu, and Onam total subsidy sales of Rs 69 crore by conducting 1,750 festival markets. During the Onam season 2024, consumerfed was able to achieve a sales turnover of Rs 125 crore.

#### B. Neethi Medical Division

Consumerfed has broadened its retail business portfolio by bringing in medicinal and surgical items through its Neethi medical scheme at reasonable rates across Kerala. It has 12 Neethi medical warehouses and 73 Neethi medical stores across Kerala. In addition to this, PACS runs 92 Neethi medical stores. In the financial year 2023-24, Neethi Medical Scheme sales reached 253 crore and sales in 2024-2025 reached Rs 82 crore as on August, 2024.

#### C. Beverages Division

Consumerfed owns 44 foreign liquor shops and 3 beer shops across Kerala. An increase of Rs 164 crore was recorded in sales turnover in the financial year 2023-24, over the sales turnover of Rs 2,183 crore in 2022-23, reaching Rs 2,347 crore. With the objective of increasing sales, the foreign liquor shops were upgraded with self-service counters, premium counters, and delivery counters.

#### D. Notebook Division

Consumerfed also owns a notebook manufacturing unit at Thrissur, which manufacture good quality and demanded notebooks. The unit had a sales of Rs 8.7 crore in 2023-24 and the total sales turn over from April 1, 2024 to August 31, 2024 was Rs 6.3 crore.

#### E. Neethi Gas Plant

Consumerfed also owns a gas plant at Moongilmada, Palakkad through which domestic gas named Neethi Gas is filled and distributed across Kerala, with a total sales of Rs 84.4 lakh in 2023-24. Consumerfed made a tie up with Indian Oil Corporation Ltd (IOCL) to take up the sale of *Chottu gas* cylinders through Triveni outlets from 2021. In 2023-24, the total sales of Chottu gas cylinders was Rs 20 lakh.

### **F. Triveni Institute of Pharmacy (TIP)**

Consumerfed operates 'Triveni Institute of Pharmacy', which offers B. Pharm course from 2018. The Institute has a total of 227 students for the B.Pharm course and 167 students for the D.Pharm course. TIP achieved 100 per cent pass and student's placement in the last academic year.

### **Vanitha Cooperatives**

The cooperative movement has made a significant contribution to women's empowerment. The Kerala Women Cooperative Federation Ltd No. 4440 (VANITHAFED), is an apex federation of primary women cooperative societies, which started functioning on April 1, 2003. The main objective of the Federation is to provide integrated credit and services to the beneficiaries through its member societies in an effective and coordinated manner for improving the social and economic conditions of the women in the State. As on March, 2024, 1,262 women cooperative societies were registered in the State, of which 955 societies were working.

### **Housing Cooperative Societies**

The Kerala State Cooperative Housing Federation Ltd (Housefed) is the apex body of the housing cooperatives, functioning with State Government and primary housing cooperative societies as members. As on March, 2024, there were 393 primary housing cooperative Societies in the State, of which 286 societies were active.

### **Scheduled Castes/Scheduled Tribes Cooperative Societies**

Scheduled Castes/Scheduled Tribes cooperatives are organised and established for the socio-economic development of the Scheduled Castes and Scheduled Tribes people in the State. The revival of Scheduled Castes/Scheduled Tribes cooperatives is vital for supporting the income and livelihood of the Scheduled Castes/Scheduled Tribes families. As on March 31, 2024, there were 849 Scheduled Castes/Scheduled Tribes cooperative societies registered in the State, of which 442 were working. In 2023-24, total assistance of Rs 466 lakh was provided to 69 Scheduled Castes/Scheduled Tribes cooperatives. An apex institution of primary Scheduled Castes/Scheduled Tribes cooperatives known as Kerala State Federation of Scheduled Castes and Scheduled Tribes cooperative is also functioning in the State for the promotion of Scheduled Castes/Scheduled Tribes. The Federation has

a total number of 701 members including 564 Scheduled Caste cooperatives, 103 Scheduled Tribe cooperatives, 33 Scheduled Castes and Scheduled Tribes cooperatives, and the State Government.

### **Marketing Cooperatives**

The activities of cooperatives in marketing are organised by the apex institution of primary marketing societies known as Kerala State Cooperative Marketing Federation (Marketfed), and the apex body of primary rubber marketing societies known as Kerala State Cooperative Rubber Marketing Federation (Rubber Mark). As on March 31, 2024, there were 590 primary marketing and processing societies, of which 226 societies were working in the State.

### **Health Cooperatives**

As on March 31, 2024, a total of 191 hospital and dispensaries cooperative societies were registered in the State, of which 100 societies were active. An apex body of health cooperatives named Kerala State Hospital Federation Ltd. (Hospitalfed) is functioning in the State with Ernakulam as its headquarters.

### **Miscellaneous Cooperatives**

As on March 31, 2024, there are 4,667 registered miscellaneous cooperative societies in the State, of which 3,191 were functioning. Miscellaneous cooperatives include labour contract, transport, rubber plantation, poultry, joint farming, collective farming, writer's cooperative society (Sahithya Pravarthaka Cooperative Society) and tourism societies.

### **Education, Research, and Training**

#### **Cooperative Academy of Professional Education (CAPE)**

The Cooperative Academy of Professional Education (CAPE) is an autonomous society under the Government of Kerala and promoted by the Department of Cooperation. It was formed to establish educational institutions in professional fields to provide facilities for education and training. Under CAPE, nine engineering colleges, an MBA college and a finishing school are functioning, which offer opportunity to around 12,000 students to pursue higher studies. During the years, society modified and upgraded various infrastructure facilities viz., college laboratories, women hostels, auditoriums, libraries, and placement offices in many colleges. Various CAPE

### **Box 3.2.1 Uralungal Labour Contract Co-operative Society Ltd No.10957 (ULCCS)**

ULCCS has been functioning as a registered entity since 1925. The society is one of the oldest labour cooperatives in India, owned and managed by workers with the vision to create sustainable societies and benchmark infrastructure contributing to the socio-economic and cultural development of the nation. More than 13,000 workers are directly depending on the society for their livelihood. The Society undertakes civil construction work in infrastructure development and ULCCS took on 1,380 new projects worth Rs 2,539 crore, increasing the project portfolio to Rs 4,994 crore. Major projects of ULCCS include art and craft village at Thiruvananthapuram, Sargaalaya Kerala Arts and Crafts Village at Iringal and Indian Institute of Infrastructure and Construction (IIIC) at Kollam. ULCCS has been ranked at third position in the list of cooperatives operating in industries and utilities sector in the World based on the turnover/GDP per capita (World Co-operative Monitor Report, 2023)

institutions have received ISO certification and accreditation from the National Assessment and Accreditation Council (NAAC) and National Board of Accreditation (NBA).

#### **State Co-Operative Union (SCU)**

The State Cooperative Union is a statutory body established under Section 89 of the Kerala Cooperative Societies Act, 1969 for providing education on cooperative principles and practices and to organise training programmes. There are 13 cooperative training colleges, 10 training centres and six extension centres functioning for conducting academic programmes on Higher Diploma in Cooperation (HDC) and Junior Diploma in Cooperation (JDC) courses. Training centres at Kottarakkara, Cherthala, Wayanad, and Kannur are exclusive centres for Scheduled Castes/Scheduled Tribes students. Grant-in-aid for member education programmes and for running Scheduled Castes/Scheduled Tribes centres are provided by the Government as assistance to the training centres. In 2023-24, a total amount of Rs 6 lakh was released for the Member Education Grant, Rs 0.60 lakh released as a basic grant and Rs 2.11 lakh released as the running cost of Scheduled Castes/Scheduled Tribes training centres. The Kerala Institute of Cooperative Management (KICMA), at Neyyar dam, which is an associated institute of SCU, offers MBA course since 2008.

#### **Institute of Cooperative Management (ICM)**

The Institute of Cooperative Management in Thiruvananthapuram and Kannur is established by the Government under the administrative control of the National Council for Cooperative Training. The Institute provides advanced training courses to the officers of Cooperative Department, officials and non-officials in the cooperative sector. The State Government is providing financial assistance to the institutions as grant-in-aid as per the Budget allocation every year. In the financial year 2023-24, the ICM Kannur conducted 89 training

programmes with 2,810 participants. In 2022-23, the ICM Thiruvananthapuram conducted 17 training programmes with 422 participants. The training programmes focused on improving the efficiency and effectiveness of employees of PACS, other societies, auditors and inspectors of the Cooperative Department, and managerial and leadership qualities of the board of directors.

#### **Agricultural Cooperative Staff Training Institution (ACSTI)**

The Agricultural Cooperative Staff Training Institute (ACSTI) was established in 1992 and sponsored by the National Cooperative Development Corporation (NCDC). It has been functioning for the last 32 years and conducting training for the personnel of cooperative credit structure. In 2023-24, the Institute conducted 191 training programmes with 7,561 participants. The ACSTI has been granted accreditation (Grade 'A') by the Centre for Professional Excellence in Cooperatives (C-PEC) for the period of April 1, 2022 to March 31, 2025. The institute conducted a Post Graduate Diploma Programme in Cooperative and Bank Management.

#### **Innovative Initiatives and model schemes in 2023-24**

##### **Cooperative Initiative in Technology Driven Agriculture (CITA)**

Cooperative Initiative in Technology Driven Agriculture (CITA) is an initiative in the State Plan 2022-23, to address the problems of small and marginal farmers in Kerala with the help of the cooperative sector to help them with the support of technology to process and market their produce directly or through value addition. The scheme formulated jointly by Kerala State Planning Board and Department of Cooperation, aims to support production, value addition, marketing,

transportation and branding the products of small and marginal farmers by ensuring maximum price for their products.

The scheme ensures intervention in production and marketing, increasing production efficiently through farming in open fields, precision agriculture, kitchen gardens, terrace farms and also integrating allied activities such as animal husbandry and fisheries. The scheme is implemented by utilising the small farmers of the area with the help of Primary Agricultural Cooperative Societies (PACS) (Table 3.2.2). The project is targeted to be implemented in 14 Districts in a phased manner within the next five years.

### **Branding and marketing of cooperative products**

In order to enhance the brand visibility and increase the sale of products by different cooperative societies, the Department of Cooperation has formulated the Plan project named 'branding and marketing of cooperative products'. The project aims to ensure the quality of the products from cooperative societies, to build an integrated branding and market network to deliver quality products to the customers, to enter the national and international markets, to set up outlets in key locations, to set up quality testing labs, and to create online markets. A trademark for cooperative products named *coopkerala* is launched to improve the quality marketing aspects of cooperative products. The logo of 'cooperative mark' is also launched on the products from cooperatives, serving as a collective identity that will boost the products' appeal and give a reassurance about the quality of the product to the consumers. The brand name *coopkerala* and the outlet trade name *coopmart* have been registered under the Trademarks Act, 1999. A managing Committee, comprising of 11 members is constituted to issue *coopkerala* certification marks to cooperative products that satisfies the stipulated standards and criteria fixed by the Department of Cooperation. As part of the project, various *Coopmart* outlets were established in selected societies and more than 400 products that are manufactured by 75 cooperative societies were sold through the outlets across Kerala.

### **Palakkad Paddy Procurement Processing and Marketing Cooperative Society Ltd. No. P 1449 (PAPCOS)**

The Department of Cooperation, established the society as an initiative to address the problems faced by the paddy farmers in Palakkad District in procurement, processing, and marketing of paddy. The major functions of the society are procurement and processing of paddy, marketing of rice, broken rice, bran, rice powder, and husk. This will enable the farmers to avoid distress sales to intermediary sellers. The present paid-up share capital of the society is Rs 13.7 crore. PAPCOS purchased 27.66 acres of land at Alathur Taluk. The society has a membership of 36 PACS in the Palakkad District. The society has proposed to set up a modern rice mill, with the facility of storing and processing of paddy produced by the farmers.

### **The Kerala Paddy Procurement Processing and Marketing Cooperative Society Ltd. No.4505 (KAPCOS)**

The Kerala Paddy Procurement Processing and Marketing Cooperative Society Ltd (KAPCOS) was registered in 2021 with an authorised share capital of Rs 310 crore, with the objective to address the procurement and marketing issues faced by the paddy farmers in the State. The KAPCOS will procure paddy at a fair price from the farmers, process and market it through Government, semi-Government, cooperative and private marketing institutions, online markets, and own marketing centres. The Society has 43 PACS in Kottayam District as member societies. The area of operation of the society is entire State except Palakkad District.

### **Sahakarana veedhi**

Sahakarana veedhi is the official publication of the Department of Cooperation, which highlights the major policies and major activities in the cooperative sector. In 2023-24 and 2024-25 (up to July 31, 2024), more than 1,71,322 copies of Sahakarana veedhi were distributed.

### **CARe Home**

In the CARe Home scheme, rebuilding of the fully or severely damaged houses of flood affected people in Kerala Floods – 2018 is implemented with the support of cooperative institutions. Kerala

**Table 3.2.2** Details of CITA scheme from 2022-23 to 2024-25 (upto October, 2024)

Sl No	Name of the Societies	Name of the Project	Allotted Amount (Rs in lakh)
1	Anikkad Regional Farmer's SCB Ltd No.3867, Kottayam		39
2	Panayal Service Cooperative Bank Ltd No. 46, Kasaragod		115
3	Madappally Service Cooperative Bank Ltd No.160, Kottayam		39
4	Mankulam Service Cooperative Bank Ltd No I 108, Idukki		39
5	Thankamani Service Cooperative Bank Ltd K K. 281, Idukki		144
6	Pattuvam Service Cooperative Bank Ltd No C 132, Kannur		145
7	Bedaduka Farmers Service Cooperative Bank Ltd No F 92, Kasaragod	Integrated Farming	50
8	Okkal Service Cooperative Bank Ltd No. 2181, Ernakulam		45
9	Bharanikavu Service Cooperative Bank Ltd No.829, Alappuzha		138.84
10	Cheruthazham Service Cooperative Bank Ltd F 747		91.80
	<b>Total</b>		<b>846.64</b>
11	Karakulam Service Cooperative Bank Ltd No 3064, Thiruvananthapuram		10
12	Poovattur East Service Cooperative Bank Ltd No 3503, Kollam		10
13	Puthupally Service Cooperative Bank Ltd No 2730, Alappuzha		10
14	Madapally Service Cooperative Bank Ltd No 160 Kottayam		10
15	Varapetti Service Cooperative Bank Ltd No 1015 Ernakulam		10
16	Koratti Service Cooperative Bank Ltd No 590, Thrissur	Grameen Market	10
17	Mannarkkad Rural Service Cooperative Bank Ltd No. P.922 Palakkad		10
18	Marayoor Service Cooperative Bank Ltd No 2022, Idukki		10
19	Ulleri Service Cooperative Bank Ltd No D. 2033, Kozhikode		10
20	Meenangadi Service Cooperative Bank Ltd No F.1061.106 Wayanad		10
21	Kasaragod Service Cooperative Bank Ltd No. C.832, Kasaragod		10
	<b>Total</b>		<b>110</b>
22	Kollam Jilla Live Stock Marketing and Horticultural Producers Processing and Marketing Cooperative Society, Kollam	Storage, Processing and Marketing	50
	<b>Total</b>		<b>50</b>
	<b>Grand Total</b>		<b>1,006.64</b>

Source: Registrar of cooperative societies, Kerala

Government accorded sanction to construct 2,000 houses all over the State under the first stage of CARE Home project and the number was extended to build 2,094 houses. Construction works of all the houses were completed and handed over to the concerned beneficiaries.

After the completion of the first phase of CARE Home project, the Department started to

implement the second phase of the project. In the second phase of the CARE Home project, it was decided to construct one collective dwelling (flat) in each District of the State to rehabilitate the people who lost their land and house during flood and natural calamities in 2018 and 2019.

The first collective dwellings with a total of 40 dwelling units were constructed in Pazhyannoor

Panchayat in Thrissur District and keys were handed over in 2021. In Palakkad District, construction works were started in November, 2023 for the collective dwellings at Kannadi-2 village, which included 28 dwelling units with additional facilities. In addition, the construction works of collective dwellings which included 18 units with additional facilities are at the final stage at Panniyur village, Kannur District.

### **Navakeraleeyam Kudishika Nivaranam (One Time Settlement Scheme)**

In order to reduce the NPA of cooperatives, the Department of Cooperation announced a one-time settlement scheme called Navakeraleeyam Kudishika Nivaranam. All cooperative societies and Banks under the Registrar of Cooperative Societies are included in this scheme and maximum interest incentive has been offered to the borrowers. Under this scheme, only simple interest is charged for the outstanding loan amount of defaulters. Those who are deceased, suffering from serious health issues such as cancer, heart and kidney disease and those who are affected by flood, Covid-19 pandemic and loss of employment due to subsequent lockdown are entitled to get maximum incentives in this scheme. In 2023-24, a concession of Rs 489 crore had been granted to 1,97,810 default accounts under the scheme.

### **Distribution of Social Security Pension**

The Kerala Social Security Pension Limited was constituted at the Government-level under the Companies Act for the smooth distribution of social security pension in the State. As per the Government order, a consortium of cooperative societies, comprising of PACS, employees of cooperative societies and other primary cooperative societies was also formed to raise funds for the social security pension distribution. For effecting payment, the amount is raised from these cooperative societies at an interest rate of 9.1 per cent. The current balance in the consortium pool account is Rs 5,980 crore as on March 31, 2024.

### **Youth Cooperative Societies**

Youth cooperative societies are the first cooperative sector initiative in the country for the youth and have members in the age group between 18 and 45 years. The primary goal of the programme is to attract young people into the cooperative sector by giving them the chance to establish youth cooperative societies that can operate as service providers and in the field of entrepreneurship. The societies cover a wide range

of sectors including start-ups, IT, agriculture, documentation, waste management, trade, manufacturing and marketing, media, eco-tourism, online service centres, processing and value addition, catering services and organic farming. There are 32 registered youth cooperative societies functioning in the State and the Department is supporting the societies through financial assistance and capacity-building programmes.

### **Muttathe Mulla Scheme**

To safeguard the general public from the grasp of private money lenders, the Muttathe Mulla Scheme was introduced in 2018. The scheme has been implemented through Kudumbasree units. As on March 31, 2024 an amount of Rs 3,875 crore was disbursed to beneficiaries as loan under this scheme.

### **Deposit Mobilisation Campaign**

In 2023-2024, the Department of Cooperation conducted the deposit mobilisation campaign to attract depositors including youth. The campaign was successful and the sector mobilised Rs 7,468 crore, against a target of Rs 9,000 crore and the achievement was 83 per cent (**Appendix 3.2.7 and Figure 3.2.1**.)

### **Cooperative Expo**

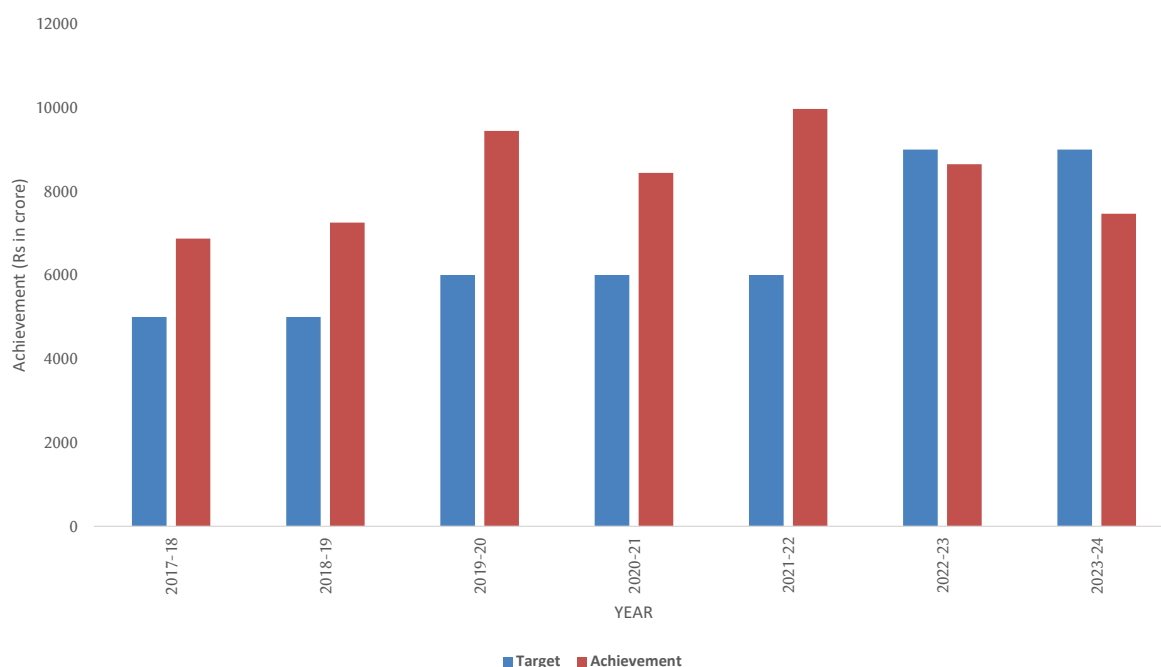
The 'Cooperative Expo 2023' with the tagline *Orumayude Pooram* second edition was organised by the Department of Cooperation from April 22 to April 30, 2023 at Marine Drive in Ernakulam District. There were more than 300 stalls of apex cooperatives, cooperative boards, hospital cooperatives, producers cooperatives, other major cooperative societies and institutions under the Registrar of Cooperative Societies, cooperatives under the functional registrars, and national cooperative institutions in the Expo. In addition, the Department organised seminars and discussions on various subjects in the cooperative sector, cultural programmes, and business meets in the expo venue with the aim of expanding the business of the cooperatives.

### **Member Relief Fund Scheme**

Member Relief Fund Scheme is implemented by the Department of Cooperation for providing financial assistance to the 'A' class members of the primary cooperative societies registered under the Registrar of Cooperative Societies. The members who undergo treatments for kidney ailments, heart disease, liver problems, and paralysis were given assistance through the scheme.



**Figure 3.2.1** The progress of deposit mobilisation campaign from 2017-18 to 2023-24 in Kerala



Source: Registrar of cooperative societies, Kerala

The High-Level Committee held on September 20, 2024, considered 2,329 applications under the scheme and made necessary arrangements for disbursement of Rs 494 lakh to the eligible beneficiaries.

### 100 Day's Programme Sahakaranam Souhrutham

In connection with the 2<sup>nd</sup> Hundred Days Programme of the Kerala Government, the Department implemented a loan scheme – *Sahakaranam Souhrutham*, to disburse loans for differently abled people to start business ventures. The scheme is being implemented through Kerala State Cooperative Bank/Urban Cooperative Bank/Primary Cooperative Societies, in order to create job opportunities for the beneficiaries. Under the scheme, maximum loan amount eligible for sanction is 75 per cent of the project cost or Rs 3 lakh (whichever is less). Loans are granted at low interest rates to beneficiaries. An amount of Rs 4.3 crore was disbursed through 519 loan accounts under the scheme, which created a total of 578 employment opportunities.

### Sahayahastham

As part of the 3<sup>rd</sup> phase of the Hundred Days Programme of the Government, *Sahayahastham*

scheme is being implemented through the Primary Cooperative Banks/Societies, to start small roadside trade and small enterprises. In addition, Sahayahastham scheme will provide loans for initial expenses and maintenance to those who intend to buy autorickshaws to earn a livelihood. The maximum loan amount eligible for sanction is Rs 20,000, out of which, Rs 10,000 is for capital expenditure and the remaining Rs 10,000 as working capital. Under the scheme, an amount of Rs 589 lakh was disbursed to 2,949 loan accounts through Primary Co-Operative Banks/Societies.

### Soura Jyothi

As part of the 3<sup>rd</sup> phase of the Hundred Days Programme conducted by the Government, the scheme – *Soura Jyothi* is being implemented through the Primary Agricultural Cooperative Societies/Banks in Kerala. Under the scheme, loans are sanctioned to the individuals to start 2KV – 10KV solar power plants at home. The maximum loan amount eligible for sanction is 80 per cent of the project cost or Rs 3 lakh (whichever is less). The State-level inauguration of the project was conducted on May 13, 2023 at Kottayam District by the Minister for Cooperation Shri. V. N. Vasavan and an amount of Rs 219 lakh was disbursed till date in 106 loan accounts.

### Box 3.2.2 Kerala Bank – The Way Forward

Kerala Bank, as the flagship institution within the State's cooperative framework, needs to enhance its developmental role, expand its range of banking products, and actively contribute to the State's economic growth. The economic relationship between the Kerala Bank and primary cooperative societies must be strengthened. By collaborating with self-help groups, cooperatives, and Government agencies, the Bank can promote savings habits, financial management skills, and access to credit among marginalised communities. To ensure sustainable growth, Kerala Bank would focus on responsible lending, especially in sectors like agriculture, MSMEs, and renewable energy, which align with Kerala's development goals. In addition, Kerala Bank plays a dominant role in the banking and financial sector of Kerala, therefore they can easily collect the scattered deposits of non-residents into Kerala Bank. Along with this, the Kerala Bank can create a new awakening in the financial sector of Kerala by intervening in the sectors of production, construction, storage, distribution and basic facilities

### Modernisation of Department

#### **Integrated Cooperative Department Management System (ICDMS)**

As part of the modernisation of the Department of Cooperation, Integrated Cooperative Department Management System (ICDMS), an online application was developed by C-DIT. Three services namely registration and Byelaw amendment module, fund management module and audit module are implemented online under the ICDMS scheme. Applications for registration of cooperative societies and amendment of Byelaws can be submitted through online platform, directly by the public or cooperative societies and are integrated with the treasury online payment gateway for payment of fees. At present, applications for registration of cooperative societies and Byelaw amendment are submitted and registered through ICDMS.

The Fund Management Module is designed to accurately monitor the repayment of financial assistance provided to cooperative societies through State/NCDC schemes.

#### **Cooperative Audit Monitoring and Information System (CAMIS)**

As part of the ICDMS project, an online application called Cooperative Audit Monitoring and Information System (CAMIS) is developed for the audit of cooperative societies. Basic information and audit information of all cooperative societies in Kerala under the control of the Registrar of Cooperative Societies and Functional Registrar are made available to the public through the website [www.camis.kerala.gov.in](http://www.camis.kerala.gov.in).

### Cooperative Election Management System

Cooperative Election Management System is a software that developed and implemented for online submission and follow-up of application to conduct elections of cooperative societies.

The cooperative movement must position itself as a forward-looking organisational model to engage and attract a larger number of young people. To achieve this, the sector should incorporate more technology and secure greater funding for new ventures, including start-ups. Cooperatives can adopt advanced data management systems and fintech solutions to provide better services, including digital lending, to their members. E-commerce platforms can also be introduced for farmers and small-scale producers to sell their products, which will improve market access and eliminate intermediaries.



### 3.3 LIVESTOCK

The livestock sector is a vital part of the global food system and economy, and it supports the livelihoods of many people. This sector contributes to food security, nutrition, poverty alleviation, employment and economic growth. Livestock holdings are a crucial asset and safety net for the poor, especially for women and income-poor groups and source of nourishment for billions of rural and urban households. Livestock in India are raised as an integral component of mixed farming systems. The Government provides substantial allocations to improve the sector's performance with respect to productivity, disease control, fodder production, value addition, and scientific breeding practices.

India's livestock sector is one of the largest in the world. As per the 20th Livestock Census (2019), the total livestock population in the country is 5368 lakh, registering an increase of 4.8 per cent over the Livestock Census of 2012.

The 20<sup>th</sup> Livestock Census (2019) reports the State's livestock population as 29.1 lakh (5.4 per cent). The poultry population in the State was 297.7 lakh accounting for 3.5 per cent of total poultry population in the country. The poultry population registered 16.8 per cent increase over previous livestock census (2012). The growth rate of poultry population in Kerala (22.6 per cent) is higher than that recorded at the National level.

#### **Contribution to the National and State Economy**

As per the estimates of National Accounts

Statistics (NAS) 2024, the contribution of livestock in total agriculture and allied sector's Gross Value Added (GVA) by economic activity at current (2011-12) prices increased from 30.21 per cent in 2021-22 to 30.23 per cent in 2022-23. The contribution of the livestock sector was 5.5 per cent of total Gross Value Added (GVA) at basic prices in 2022-23. Livestock's contribution has decreased from 5.72 per cent to 5.5 per cent (Statement 1.6 NAS, 2024).

In Kerala, the livestock sector is one of the fastest growing sectors of the rural economy. The contribution of livestock sector in total agriculture and allied sector Gross State Value Added (GSVA) at current prices 2011-12 was 27.97 per cent (Quick estimates) (Appendix 1.1.7 DES, 2023-24). The share in the total Gross State Value Added (GSVA) at current prices of the State was 2.76 per cent during 2022-23(P) and 2.69 per cent during 2023-24(Q). In real terms, GSVA in the Livestock sector at current prices (2011-12) was Rs 25,26,354 Lakh in 2022-23(P) and it increased to Rs 27,62,961 Lakh in 2023-24(Q) (Appendix 1.1.7 DES, 2023-24).

#### **Major Department and Agencies under Livestock Sector**

The major departments and agencies under the Livestock sector of Kerala are Animal Husbandry Department, Kerala Feeds Limited (KFL), Kerala Livestock Development Board (KLDB), Kerala State Poultry Development Corporation (KSPDC), Kerala Veterinary and Animal Science University (KVASU), Meat Products of India Ltd. (MPI),

Dairy Development Department and Kerala Cooperative Milk Marketing Federation Ltd (KCMMF-MILMA).

The Department of Animal Husbandry in Kerala spearheads developmental activities related to this sub-sector. The major activities of the Department are veterinary services, animal healthcare, disease eradication, and development of cattle, goat, pig and poultry, control of zoonotic diseases, conducting and coordinating extension activities and training programmes for farmers and veterinarians, and production of biologicals.

The department's primary objectives are to increase the State's cattle population in terms of both number and quality. The State has implemented cattle development programmes to increase milk and meat production. The most significant of these is crossbreeding. Additionally, the department offers programmes for the development of poultry, the breeding of pigs and rabbits, and the raising of goats and buffaloes. It provides farmers with training on scientific production unit management in order to increase output. Women are trained to keep domestic livestock and poultry of a manageable size to supplement their families' incomes. Dairy farming, goat farming, duck farming, pig farming, broiler production, layer management, backyard poultry production, quail farming, and chick sexing are just a few of the trainings the Department offers. The Department also conducts the Quinquennial Animal Census and an Integrated Sample Survey to estimate the production of main livestock products like milk, eggs, and meat annually.

Animal Husbandry Department provides veterinary care mainly through 14 District Veterinary Centres, 214 Veterinary Hospitals, 50 Poly Clinics, 870 Veterinary Dispensaries, 38 Regional Animal Husbandry Centres, 1322 Veterinary Sub Centres, 5 Mobile Veterinary Hospitals, 4 Mobile Veterinary Dispensaries, 20 Veterinary Aid Centre, 5 Mobile Farm Aid Units, 10 Livestock Management Training Centres, and one Motor Boat Veterinary Hospital. Now 29 Mobile Veterinary units are in service as part of the existing institutions (VD/VH). Effective and timely action was taken by the Animal Husbandry Department in liaison with Local Governments to eradicate contagious diseases. Mass vaccination campaigns such as foot and mouth disease control programme, rabies-free Kerala vaccination

programme, Assistance to States for Control of Animal Diseases (ASCAD), and regular poultry vaccinations are being conducted.

Kerala Feeds Limited (KFL) is a Public Sector Undertaking under the Animal Husbandry department of Government of Kerala. The company is committed to produce and sell good quality compounded cattle feed and feed supplements to dairy farmers at affordable rates, caters the major portion of cattle feed demand in the State by timely supply of its feeds and supplements through a strong and established network of private dealers and societies.

Kerala Livestock Development Board (KLDB) provides the inputs required for cattle breeding in line with the breeding policy of the State, promotes fodder production under field condition to support economic milk production, offers training courses in animal husbandry and fodder production, develops malabari goats through the production and supply of selected breeding stock, produces and supplies good quality piglets for breeding and fattening.

Kerala State Poultry Development Corporation (KSPDC) is a fully owned Government of Kerala Undertaking primarily to provide increased momentum and thrust to propel the poultry industry of the State. The Corporation has been providing impetus for the promotion and development of poultry sector in the state of Kerala.

Meat Products of India Ltd. (MPI) is a fully Government owned company incorporated with the main objective of processing, production and marketing of safe and wholesome meat and meat products by observing all Food Safety Rules and Animal Welfare Regulations for which slaughter houses, animal and bird rearing farms, rendering plants, feed mixing plants, sales outlets, cold storages, plants for processing value added meat products etc. were established.

Kerala Veterinary and Animal Sciences University (KVASU) which came into existence on 14<sup>th</sup> June, 2010, is the result of the recognition of the need to advance animal production sector activities and to widen the arena of academic opportunities, applied research and entrepreneurship in the field of animal health, production and allied subject.

The initial thrust of the Dairy Development Department was on the establishment of processing facilities in a few major centres of the state. The department is also the nodal agency for fodder development activities and now department's activities are focused on the holistic development of the dairy sector in the state. Department's quality control activities are focused on ensuring fresh, safe and quality milk at the procurement level and thereby ensuring the same to the consumers of the state.

Kerala Cooperative Milk Marketing Federation (KCMMF-MILMA), which was formed in 1980 as a state adjunct of the National Dairy Programme 'Operation Flood', is a three-tiered organization. The primary societies are grouped under three Regional Cooperative Milk Producers' Unions viz TRCMPU for Thiruvananthapuram region, ERCMPU for Ernakulum region and MRCMPU for Malabar region. The financial performance of the animal husbandry sector is shown in **Table 3.3.1**

In 2023-24, the total outlay for the Livestock sector was Rs 42,549 lakh and the total expenditure was Rs 21,249.61 Lakh (49.94 per cent). In 2024-25, the outlay was Rs 39,240 Lakh with an expenditure of 7640.91 Lakh (19.47 per cent) as on 21.10.2024. Details of outbreaks, attacks and

death of animals due to major contagious diseases in Kerala from 2016-17 to 2023-24 are given in **Appendix 3.3.1**.

**Major Livestock Products in Kerala**

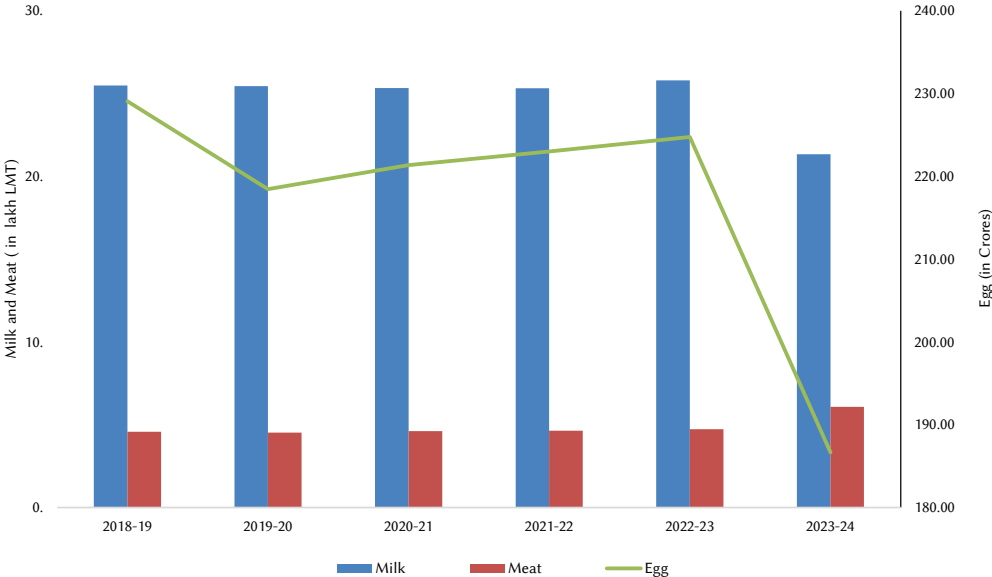
Milk, meat and egg are the major livestock products in the State. The production of these three livestock products during 2018-19 to 2023-24 is shown in **Figure 3.3.1**.

The production of milk and egg has decreased in 2023-24 compared to 2022-23. Cows of Kerala are the high yielding varieties. Shortage in availability of fodder and high cost of cattle feed are major reasons for underfeeding of cows resulting in suboptimal production of milk (Dairy Development Department, GoK). Lack of sufficient land for starting large poultry farms, high labour and feed cost, declining poultry population, lack of quality backyard layer chicks, inflow of eggs at lesser price, lack of quality feed, broiler day-old-chicks at an optimal price and lack of commercial egg production are the factors which reduced the egg production in the State (Kerala State Poultry Development Corporation).

**Milk Production**

India is ranked 1<sup>st</sup> in milk and milk products with 23.93 crore tonnes contributing 24.76 per cent of global milk production of 98.11 crore tonnes. At

**Figure 3.3.1** Production of milk, egg and meat from 2018-19 to 2023-24



Source: Kerala State Animal Husbandry Department, GoK 2024

**Table 3.3.1** Department /agency wise outlay and expenditure during the first three years of the 14<sup>th</sup> FYP period, in Rs lakh and in per centage.

Sl. No.	Department/ PSUs	2022-23			2023-24			2024-25 as on 21.10.24		
		Outlay	Expenditure	Expenditure (in %)	Outlay	Treasury Expenditure	Expenditure (in %)	Outlay	Treasury Expenditure	Expenditure (in %)
1	Animal Husbandry Department	17434.02	10708.07	61.42	16805.00	9148.96	54.44	14364.44	2796.27	19.47
2	Kerala Feeds Limited	1000.00	800.00	80.00	2000.00	618.26	30.91	1620.00	444.26	27.42
3	Kerala Livestock Development Board (KLDB)	2346.98	1553.66	66.20	2968.00	1798.34	60.59	3146.56	788.24	25.05
4	Kerala State Poultry Development Corporation (KSPDC)	750.00	595.64	79.42	700.00	371.00	53.00	900.00	80.00	8.89
5	Kerala Veterinary and Animal Sciences University (KVASU)	6342.00	3430.24	54.09	6500.00	2930.89	45.09	5700.00	1295.91	22.74
6	Meat Products of India Limited (MPI)	3950.00	186.00	4.71	1350.00	450.00	33.33	1714.00	624.00	36.41
7	Dairy Development Department	9931.00	7154.73	72.04	11476.00	5444.67	47.44	10925.00	1612.23	14.76
8	Kerala Cooperative Milk Marketing Federation (KCMMF)	750.00	308.13	41.08	750.00	487.49	65.00	870.00	0.00	0.00
	<b>Total</b>	<b>42504.00</b>	<b>24736.47</b>	<b>58.20</b>	<b>42549.00</b>	<b>21249.61</b>	<b>49.94</b>	<b>39240.00</b>	<b>7640.91</b>	<b>19.47</b>

Source: Kerala State Planning Board

the national-level, production of milk and milk products has increased from 23.64 crore tonnes in 2022-23 to 24.29 crore tonnes in 2023-24, registering a growth of 2.68 per cent (FAO-Dairy Market Review, 2024). India's milk production has grown remarkably over the past decade with a compound Annual Growth rate (CAGR) of 6 per cent (Press Information Bureau, GoI). The average yield per animal per day for exotic crossbred is 8.43 Kg per day and for indigenous and non-descript is 3.54 Kg per day (Basic Animal Husbandry Statistics, 2024).

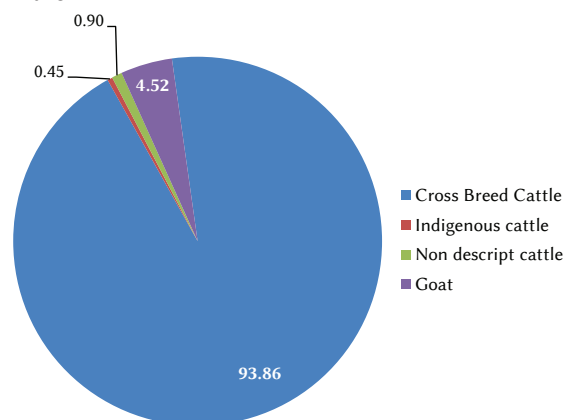
The per capita availability of milk has been increasing in India and stands at 471 grams/day in 2023-24, significantly higher than the global average of 329 grams per day as reported in the Food Outlook, November 2024. The highest per capita availability is in Punjab (1245 grams per day) followed by Rajasthan (1171 grams per day). The species-wise milk production in the country shows that 31.49 per cent of total milk production is contributed by indigenous buffaloes, followed by cross-bred cattle (31.11 per cent). The indigenous cattle contribute 11.36 per cent of the total milk production in India. Goat milk contributes 3.36 per cent of the total milk production (Basic Animal Husbandry Statistics 2024).

Kerala is ranked 15<sup>th</sup> among the milk producing States as per the BAHs 2024. Kerala's per capita availability is 197 grams per day (Basic Animal Husbandry Statistics, 2023). The total requirement of milk in Kerala in 2023-24 was 31.75 lakh metric tonnes, whereas the annual production was only 25.32 lakh metric tonnes. The state is 20 per cent deficient as far as self-sufficiency in the sector is concerned. Thus there is a gap of around 6.43 LMT per annum (Dairy Development Department, GoK). Out of 21.33 MT of milk produced in the State, a major share of 20.02 MT was produced by cross bred cattle (94 per cent). Indigenous cattle produced only 0.96 MT of milk (0.5 per cent). The contribution of non-descript cattle was 1.92 MT (0.9 per cent). The milk production from goats was 0.96 MT (4.5 per cent). Indigenous and non-descript buffaloes contributed the rest (Animal Husbandry Department, GoK). Details of species-wise milk production in Kerala in 2023-24 are provided in **Figure 3.3.2**.

Even though the herd sizes are low compared to major milk-producing states, cattle productivity in Kerala is higher than the national average.

The average yield per animal per day for Exotic/Crossbred cows in India in 2022-23 was 8.55 Kg/day/animal. For indigenous cattle and non-descript cattle, it was 3.44 kg/day/animal. The yield rate from Exotic and crossbred in Kerala was 10.77 kg/day/animal, and 3.21 kg/day/animal from Indigenous and Non-Descript category. This is the third highest among the Indian states after Punjab 13.49 kg/day/animal and Chandigarh 12.22 kg/day/animal (Basic Animal Husbandry Statistics 2023). This advantage for Kerala was due to high per cent of exotic and crossbred animals in the population compared to other states. Dairy Co-operatives have procured 6.78 lakh Metric Tonnes of Milk (18.6 Lakh liters per day) in 2023-24.

**Figure 3.3.2** Species-wise milk production in Kerala in 2023-24



Source: Animal Husbandry Directorate, GoK 2024

### Egg Production

Egg and meat production in India has taken a quantum leap in the last four decades, emerging from unscientific farming practices to commercial production systems with state-of-the-art technological interventions. According to Food and Agriculture Organization Statistics (FAOSTAT), India ranks third globally in egg production (Production data for 2023). Total egg production in India has increased from 1,29,600 crore in 2021-22 to 1,38,376 crore in 2022-23 registering a growth of 6.8 per cent. There has been a steady increase in the per capita availability of eggs since 2000-01. In 2023-24 the largest producer of eggs was Andhra Pradesh, which produced 17.85 per cent of total egg production in the country, followed by Tamil Nadu (15.64 per cent) and Telangana (12.87 per cent). Other states contributing a major share of the country's egg



production include West Bengal (11.37 per cent) and Karnataka (6.63 per cent). Kerala contributes 1.68 per cent to the total egg production in the country. The highest per capita availability of egg is in Andhra Pradesh (479 eggs per annum) followed by Telangana (483 eggs per annum) and Tamil Nadu (291 eggs per annum) (Basic Animal Husbandry Statistics 2024).

Kerala's rank is 14<sup>th</sup> in egg production among the States of India. The production of egg increased from 22.48 crore in 2022-23 to 24.05 crore in 2023-24 (Basic Animal Husbandry Statistics 2024). The per capita availability of eggs in our State was 67 eggs per annum in 2023-24 which is lower than the country average of 103 eggs per annum (Basic Animal Husbandry Statistics 2024). Kerala State Poultry Development Corporation (KSPDC) through various schemes produced 62,10,720 eggs (per year at 180 eggs per bird) and (300 eggs/bird) in 2024-25 (up to 31.08.2024). It was 1,85,65,470 numbers in 2023-24. In 2024-25, the approximate income generated from sales of eggs (Rs.8/egg) was Rs 4,96,85,760 and Rs 14,85,23,760 was generated in 2023-24 (KSPDC, 2024). There is a decline in the egg production and decline in income generated from sale of eggs in Kerala in 2024-25. Actual number of birds distributed also shows a declining trend from 1,08,570 (2023-24) to 36,320 (2024-25).

According to Basic Animal Husbandry Statistics, 2024, about 44.38 per cent of the total eggs produced in the State are from improved ducks and around 32.43 per cent are from improved fowls, 4.07 per cent from Desi ducks and 2.09 per cent from Desi fowls.

### **Meat Production**

Global Meat production increased by 1.5 per cent in 2023, to 371 million tonnes (carcass weight equivalent) according to Meat Market Review 2023, FAO, published in 2024. Meat production has witnessed a steady increase over the last ten years in our country. India is in 5<sup>th</sup> position in meat production in the world. Meat production in the country has increased by 5.1 per cent from 9.77 million tonnes in 2022-23 to 10.25 million tonnes in 2023-24. The largest producer of meat in the country in the year 2023-24 was West Bengal producing 12.62 per cent of the total meat followed by Uttar Pradesh (12.29 per cent), Maharashtra (11.28 per cent), Telangana (10.85 per cent) and Andhra Pradesh (10.42 per cent). These

states together contribute 57.9 per cent of total meat production in the country during this period. Kerala's contribution to the total meat production in the country was 5.05 per cent in 2023-24 (Basic Animal Husbandry Statistics 2024). Species-wise meat contribution shows that 48.95 per cent of meat production in the country is contributed by poultry in 2023-24. West Bengal, Uttar Pradesh and Maharashtra are the country's largest meat producers in 2023-24 with 12.62, 12.29 and 11.28 per cent respectively. Kerala contributes 5.05 per cent in total meat production. In India's total meat production, meat from cattle and buffalo accounts for 2.6 per cent and 18.08 per cent, respectively. Meat production from goat, sheep, pig and poultry is 15.49, 11.13, 3.72 and 47.19 per cent respectively. In Kerala, majority of the meat is produced from poultry with 47.19 per cent in 2023-24 (Basic Animal Husbandry Statistics, 2024)

During the first 2 years of the 14th Five-Year Plan, meat production in Kerala was 10.8 MT. Total meat production in 2023-24 was 6.08 lakh MT. The total requirement of meat in the State in 2023-24 was 8.80 lakh MT. Domestic demands for meat has been growing at a faster rate. In this context, expanding the "Kerala Chicken" scheme is essential. Kerala Chicken is a project promoted by the Government of Kerala to create availability of quality broiler chicken meat at reasonable prices to consumers throughout Kerala under the brand name of Kerala Chicken. The project was started in November 2017 in association with the Animal Husbandry Department, Kerala State Poultry Development Corporation (KSPDC), Meat Products of India Limited (MPI) and Kudumbashree. Under this project, Government of Kerala envisages establishing Broiler chicken farms throughout Kerala, establishment of infrastructure viz., Breeder units, hatcheries, feed supply units, abattoirs, blast freezers, rendering plants, cold storages and marketing under the brand name "Kerala Chicken" and sales through outlets including Kudumbashree. A scheme to encourage growing of male calves should also be thought of in this regard. Species-wise meat production in Kerala is shown in **Figure 3.3.3**

Out of 5.18 MT of meat produced in the State, a major share was from Poultry (47.19 per cent) followed by Buffalo (28.68 per cent), Cattle (19.36 per cent), Goat (2.72 per cent) and Pig (2.03 per cent). The real potential of the meat sector in Kerala has not been fully tapped. The

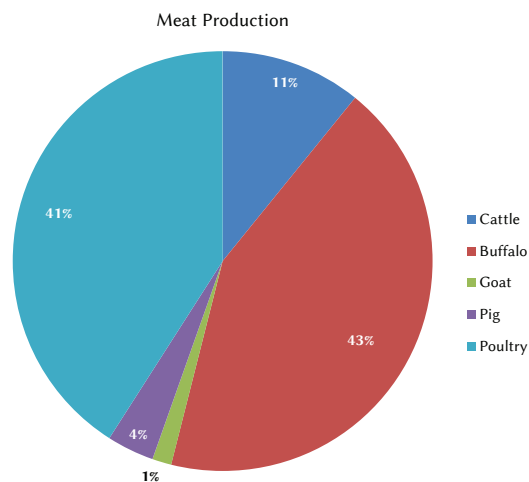
requirement of meat, especially beef in Kerala is met from animals brought for slaughter from outside the State, mainly from Andhra Pradesh, Karnataka and Tamil Nadu.

For the production of safe and wholesome meat, it is essential to establish modern scientific infrastructure for slaughter operations, promote value addition and strengthen human resource development to have trained human resources in the sector. With the help of LSGs, the Government has set up 40 rendering plants under PPP mode. The scientific infrastructure would eliminate environmental pollution, prevent the spread of infectious and zoonotic diseases and generate economic returns from by products and waste.

### Feed and Fodder Base

To support the development of livestock sector, special focus has been given to fodder and feed production considering the wide gap in the availability of critical inputs. The Dairy Development Department is the nodal agency for fodder development activities in the State. Under the scheme, production and conservation of fodder in farmer fields and dairy co-operatives and commercial and massive fodder production in barren lands and wastelands have been initiated. The fertile lands which remain underutilized under the ownership of progressive farmers, other individuals, LSGDs and PSUs are selected and intensive fodder cultivation activities are taken up. According to Government Statistics, Kerala produces only 60 per cent of the roughages required for cattle in Kerala. In 2023-24, fodder cultivation was taken up in 1132.7 ha of land and 163 lakh fodder root slips/stem cuttings were supplied (**Appendix 3.3.4**). Besides, assistance was provided to farmers for Azolla cultivation, mechanisation of fodder cultivation and also for harvesting and irrigation facilities. The total cattle feed production in 2023-24 was 2.95 lakh metric tonnes. It was 3.64 lakh metric tonnes in 2022-23 (**Appendix 3.3.3**). Quality of cattle feed supplied through the Special Livestock Breeding Programme (SLBP) was drastically reduced from 5000 MT to 120 MT per month. The cost of feed ingredients has been increasing, particularly for de-oiled rice bran, maize, rice polish, which constitute 70-75 per cent of the mix cost. Procurement rates of these materials and also that of de-oiled coconut cake and de-oiled cottonseed extractions have shown a steep increase over the year (Kerala Feeds Limited).

**Figure 3.3.3** Species wise meat production in Kerala 2023-24



Source: Animal Husbandry Department, GoK 2024

As on 31.03.2024, there are 7462 fodder plots in the State, of which, 5578 plots (74.8 per cent) are between one acre and 2.5 acres in area. There are 1681 plots (22.53 per cent) with area between 2.5 acres and 5 acres. There are only 203 plots (2.7 per cent) of area more than five acres. This shows that the number of fodder plots have decreased during 2023-24. Kerala produces only 60 per cent of the roughages required for cattle in Kerala. Marginal and Small farmers who are the major cattle owners of the State have limited space for fodder development. Since fodder is not directly yielding any benefit, fodder cultivation takes a back seat (Dairy Development Department, GoK). Dairying in Kerala has become an uneconomic activity mainly due to the increasing feed cost and labour cost. Applied research including screening trials and management trials will be carried out to identify and introduce new varieties of fodder suitable for the agro-climatic regions of the State (KLDB). The area under fodder farms in Kerala is shown in **Table 3.3.2**.

The table indicates that there was a decrease in the area cultivated under fodder from the year 2022-23. The total fodder required for the milch animals in the State is 335.5 Lakh kg per day. However, the available fodder cultivation is only 47 per cent of the total required fodder. It is estimated that fodder cultivation would be required in at least 64,000 Ha, if Kerala has to meet the roughage production target. Public Sector Undertakings viz., Kerala Feeds Ltd., MILMA, District Cooperative Societies and Joint Liability Groups must be encouraged and supported to initiate and expand

fodder production in the State. Besides improving productivity in areas already under fodder cultivation, improving productivity of grazing and pasture lands, raising perennial fodder crops on field bunds and boundaries, peri-urban areas and exploiting unutilized and under-utilized fodder crops are also some of the promising options to enhance fodder availability (Dairy Development Department, GoK).

**Table 3.3.2** Area under fodder farms, Kerala 2017-18 to 2023-24

Year	Total area covered under fodder cultivation (in Ha)
2017-18	2250.00
2018-19	2750.00
2019-20	2865.00
2020-21	2363.00
2021-22	2397.00
2022-23	2277.00
2023-24	1132.72

Source: Dairy Development Department, GoK .

### Breeding Support

Breeding is one of the important tools to facilitate production potential and bring about progressive genetic improvement in production on a long-term basis in animals. In our State, cattle breedings have been carried out systematically and we have a well-planned breeding policy. According to the breeding policy of the State, the germplasm provided by Kerala Livestock Development Board alone is used in the State under the supervision of the Director of Animal Husbandry. Every year about 25 new technicians are given “Basic training in Artificial Insemination” commensurate with the starting of new AI Centres. Up to 31.03.2024, 1873 persons have been trained in AH activities. The Board is responsible for the supply of breeding management inputs for cattle, goat, buffalo and pigs and also for fodder production in the state. Animal Husbandry Department is ensuring artificial insemination facilities through veterinary hospitals in every Panchayat. The department also provides door step delivery of artificial insemination services through mobile veterinary units.

According to the existing breeding policy, the exotic inheritance-level is limited to around 50 per cent in the small holding population. But the small farmers with good resources and farmers

involved in commercial and semi-commercial dairying are provided with semen of high-value pure breed Holstein Friesian bulls (imported/ imported sexed/bulls procured from the outside State) under close monitoring by the State Animal Husbandry Department and the Kerala Livestock Development Board. The conservation programme for indigenous breeds of the State (like Vechur) is also undertaken. KLD Board is supplying semen of indigenous breeds like Vechur, Gir, Kasargod dwarf, Red Sindhi, Kangayam, and Kangrej. The department is also spending plan funds for conducting infertility camps and has a separate institution namely, State Institute for Fertility Management for managing the infertility problems in cattle of our State.

The objective of Kerala Livestock Development Board (KLDB) is to develop a breed of dairy cattle suitable for the prevailing dairy environment of the State. The Board’s main functions are production of breeding inputs, breed improvement through progeny testing and genomic assessments, research and development and training.

KLDB has three bull stations, four bull mother farms and one each of indigenous cattle, goat and pig farms and a Pig Breeding Unit at Vagamon. It has seven regional semen banks, one each catering to two districts. In 2023-24, it has strengthened infrastructural facilities in 3 Bull stations, maintained 3 Modern Bull Mother Farms and 360 Bull mothers, and produced 49 bull calves and 58 female calves. The bulls used for semen production are screened for infectious and genetic diseases as per Minimum Standard Protocols advocated by GoI for production of frozen semen. All three semen stations under KLDB have been ISO 9001:2015 certified and have Hazard Analysis and Critical Control Point (HACCP) certification with biosecurity measures in force. KLDB has initiated the production and supply of goat semen to the State livestock holders through Animal Husbandry Department. KLDB has produced and distributed 29,445 Frozen Buck Semen doses (as on 31.08.2024). The Board also undertakes the supply of breeding stock of pigs to Government agencies inside and outside the State and breeding and fattening stock to the pig farmers in the State. KLDB has maintained 37 male pigs, 139 female pigs, 102 farrowing (as on 31.08.2024). In the period it has produced and sold 753 and 660 piglets respectively.

In Kerala, the frozen semen production in 2023-24 was 27.96 lakh doses. The distribution of frozen semen inside the State was 12.03 lakh doses. The distribution of frozen semen outside the State was 5.91 lakh doses. Details of the production and distribution of Frozen Semen in Kerala are shown in **Appendix 3.3.5**. In 2023-24, 10.27 lakh numbers of artificial inseminations (AI) were done in 2504 insemination centres with a calving recorded as 2.57 lakh. The average number of inseminations needed for producing one calf is four. The details of artificial inseminations conducted and recorded calving are shown in **Appendix 3.3.6**. The major activities of KLDB are given in **Appendix 3.3.7**. KLDB has developed a new software application for herd book registration electronically in association with Digital University (IITMK). The data could be synched with similar applications of the Animal Husbandry and Dairy Development departments. The Board undertakes Kudumbasree linked forage programmes and establishment of fodder demonstration units and conservation and dissemination of indigenous cattle germplasm. It has taken up genetic upgradation of cattle through field performance recording programme and assisting selection of bulls through genomic selection.

Due to the continued focus on exotic germplasm-based cross-breeding in the livestock sector, the number of indigenous breeds with better adaptability, disease-resistance and feed efficiency ratio is declining. Hence, it is essential to conserve and improve the productivity of Indian indigenous breeds. The Department focuses on complete or total artificial insemination coverage along with the application of advanced cutting-edge reproductive technology developments.

#### **Box No 3.3.1 Ksheerasree Portal**

The Ksheerasree portal of Dairy Department bagged Digital India Awards 2022 and State e Governance Award 2021-2022. The Digital India Awards 2022 was received by department from the honorable President of India and the State e Governance award was received by department from the honorable Chief Minister of State. ‘Ksheerasree’ portal was conceived by the Department of Dairy Development, Govt. of Kerala and was developed by National Informatics Centre to address the needs of the dairy sector in the State. The Dairy Development Department offers several subsidy schemes targeting dairy farmers, most of which are offered through Ksheerasree portal.

The entire workflow is fully automated with fully automated beneficiary selection. Approximately 2.5 lakh dairy farmers and more than 3000 dairy cooperative societies are registered in portal as of now. Portal ensures transparency and efficiency in offering G2C, G2B and G2G services. In Kerala, Ksheerasree portal is now widely accepted by the dairy farming community because it makes their life easier. Schemes implemented through this portal are Idukki Package, Strengthening of Quality Control Lab, MSDP, Milk Incentive, Production and conservation of fodder and Ksheeragramam. The portal has 280915 registered farmers and 465723 E-DBT beneficiaries.

The Special Livestock Breeding Programme (SLBP) is a calf rearing program that subsidizes cattle feed for rearing cattle up to 32 months along with health cover and insurance that has been under implementation since 1976. In 2006-07, the scheme was extended to buffalo calves to curtail the drastic reduction in the buffalo population. The number of new calves (cow) enrolled under the programme in 2023-24 was 1778. Year-wise details of calves enrolled under the Special Livestock Breeding Programme from 2011-12 onwards are shown in **Appendix 3.3.8**

#### **Production of Vaccine in Institute of Animal Health and Veterinary Biologicals, Palode**

The Institute of Animal Health and Veterinary Biologicals, Palode is the sole agency that produces and distributes animal vaccines in Kerala. The production details of vaccines manufactured in the Institute are shown in **Appendix 3.3.9**. In 2023-24, poultry vaccine production was 190.96 lakh doses and livestock vaccine was 4.11 lakh doses. Production of poultry vaccine decreased by 2.12 per cent and livestock vaccine decreased by 54.3 per cent compared to the previous year. The number of vaccinations done in 2023-24 was 30.22 lakh for livestock and 84.17 lakh for poultry. In comparison to the previous year, vaccination for livestock decreased by 6.1 per cent and poultry vaccination increased by 42.01 per cent. Anti-Rabies vaccinations to dogs decreased from 5.91 lakh in 2022-23 to 4.77 Lakh in 2023-24. Details are provided in **Appendix 3.3.10**

#### **Bhumika – GIS based mapping as a tool for Animal Resource Management System**

Animal Husbandry Department has developed GIS-based mapping of farmers “Bhumika” to build a geospatial data base of farmers engaged in animal

husbandry activities for effective management and monitoring of health, breeding, production, risk and disaster, and human resource management. The institutions coming under the purview of the Department have been brought under the geo-mapping system. It has been estimated that about 25 lakh households are involved in animal husbandry activities in the State. Total Geospatial information of 5,48,979 farmers and 9,42,012 animals has been mapped in the portal as on 07.10.2024. Animal Husbandry Department has developed Geographic Information System (GIS) based mapping of farmers “Bhumika” to build a geospatial data base of farmers. It was developed in association with Digital University through which the geographical location of farmers who are engaged in animal resources activities are mapped for effective management and monitoring of health, breeding, production, risk, disaster, and human resource. This portal covers 5,48,979 locations (households). The app is available in Google Play store for download.

### Prices

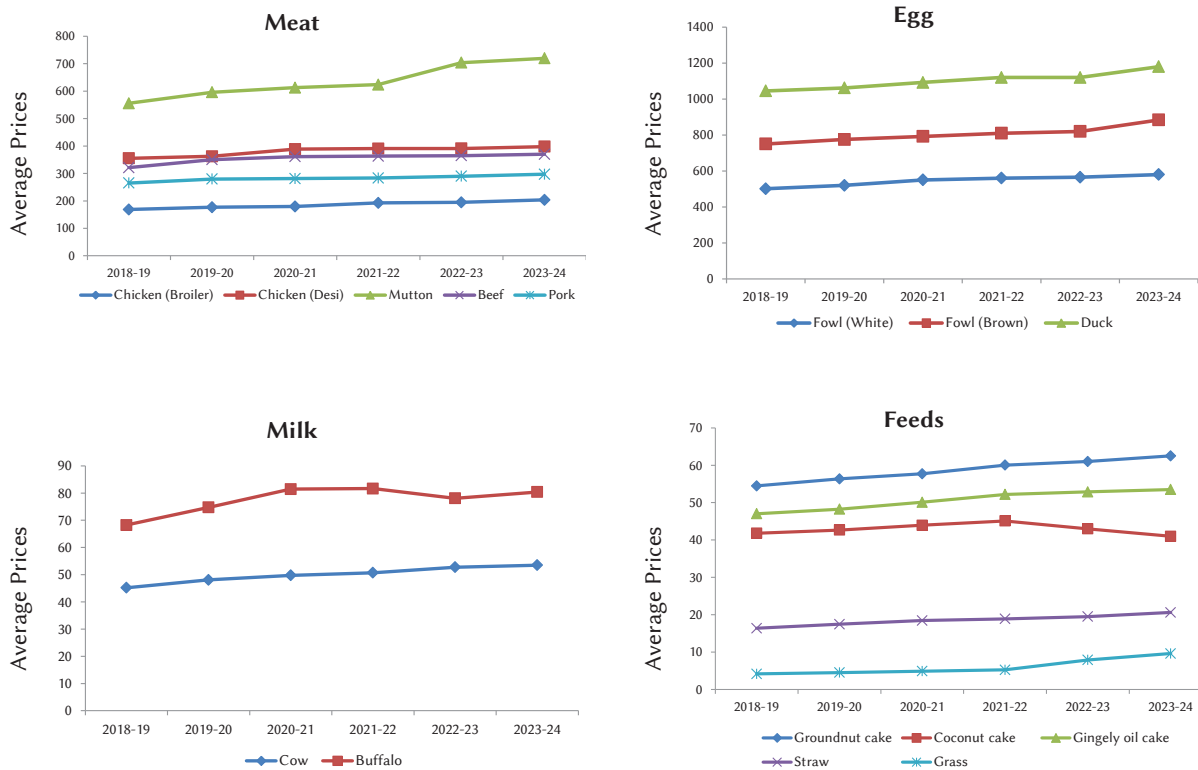
Average price of important inputs and products of livestock sector for the last seven years is presented in **Appendix 3.3.11**. All the products recorded an increase in prices from 2011-12, over this time period to 2023-24. According to the data from the Department of Animal Husbandry, in the year 2023-24, the price of chicken broiler, chicken desi, mutton, beef and pork has increased by 74.8 per cent, 105.7 per cent, 134.9 per cent, 137.9 per cent and 94 per cent respectively, compared to the previous year. Compared to 2022-23, the price of fowl-white egg has increased by 94 per cent, fowl brown egg by 109.5 per cent and duck egg by 130.5 per cent in 2023-24. The price of cow milk has increased by 94.6 per cent and buffalo milk by 144.6 per cent in the same period.

On the input side, in 2023-24, the price of straw increased by 157.5 per cent, grass by 295.5 per cent, ground nut cake by 122.7 per cent, and gingerly oil cake by 155.2 per cent but coconut cake decreased by 116.4 per cent. The increase in the price of inputs is a serious threat to dairy farming and hence the possibility of indigenous source of feeds is to be explored. The trend in average prices of livestock products from 2018-19 to 2023-24 is shown in the **Figure 3.3.4**.

### Physical Achievements of Animal Husbandry Sector during 2023-24

- Emergency night Veterinary service extended to 152 centres as per data provided by AH directorate.
- The laboratory network under Animal Husbandry Department was strengthened with infrastructure development in the labs for improved disease diagnosis facilities.
- The State Institute for Animal Diseases (SIAD), formerly known as Chief Disease Investigation Office (CDIO) at Palode, the Avian Disease Diagnosis lab at Thiruvalla, the District lab at Palakkad, and the State Livestock Marine and Agri-Products laboratory at Maradu in Ernakulam were able to obtain NABL accreditation.
- In the department farms 60.84 lakh eggs and 31.84 lakh chicks were produced.
- An amount of Rs 3.44 crore was disbursed to those farmers as compensation, whose animals are not covered under insurance. E-Samrudha Project - A comprehensive data base including productivity, health and ownership information of animals tagged by radio frequency identification device will be made available through the e-Samrudha scheme. As part of this, 15,342 farmers have been registered and 49,818 animals (48,508 cattle and 1,310 buffaloes) have been tagged with Radio Frequency Identification (RFID) tags in Pathanamthitta District.
- Mobile Veterinary Unit/Night Emergency Veterinary Service Scheme: - 19 Mobile Veterinary Units are being implemented under Livestock Health and Disease Control Scheme which is a central initiative. In addition, overnight emergency veterinary services are provided at the farmers’ doorsteps from 6 pm to 6 am the next morning. This scheme is being implemented in 156 centres in 152 blocks, Thiruvananthapuram, Kollam, Kochi Corporations and Neyyattinkara Municipality.
- Total cattle feed sale of Kerala Feeds Limited was 2,02,056 MT in the financial year 2023-24. KFL has supplied 20486.89 MT good quality cattle feed at subsidized rates through different programmes and 71,430 MT of cattle feed at subsidized rate to dairy farmers of Kerala. Purchased two Near-Infrared (NIR) Spectrophotometers at Kozhikode and Karunagappally units.
- KLDB is responsible for the supply of breeding management inputs for Cattle, Goat, Buffalo and Pigs and also for fodder Production. It has

**Figure 3.3.4** Trend in average prices of livestock products from 2018-19 to 2023-24



Source: Animal Husbandry Department GoK, 2024

maintained 1155 cattle and buffaloes, 700 goats and 599 pigs. Produced 378 kids and 2224 piglets; distributed 384 kids and 1840 piglets. Number of cows enrolled under milk recording was 6436.

- Supplied frozen semen to 3,063 Artificial Insemination centres in 2023-24. 27,95,746 doses of cattle and buffalo frozen semen were produced, 12,02,561 doses of frozen semen were sold in Kerala and 5,91,157 doses of frozen semen were supplied outside the State. In the case of frozen goat semen, production was 70,081 doses. 46,602 doses of frozen goat semen were sold in Kerala and 850 doses were sold outside Kerala.
- ADAPT(Application for Data Analysis in Progeny Testing Programme) : KLDB has developed a software ADAPT(Application for Data Analysis in Progeny Testing Programme) in collaboration with Digital University, Kerala that can reliably analyze the data of cows available from the field and coordinate field operations through computer/mobile application from farmer homes. This state-of-the-art digital technology will enable the various

functions of the progeny testing program to be efficiently carried out under one roof, creating a new generation of cows backed by genetic traits to increase productivity and modernize and strengthen the dairy sector of the future. Under this, the Board has registered 1580 female calves, enrolled 1109 cows for milk recording and completed 853 lactations.

- KLDB-IISER Joint Research Project: Genomic Lab with NABL Accreditation was set up at KLD Board Kudappanakunnu to achieve the objectives of selecting bulls based on their Pedigree details and identifying genomic excellence, increasing milk production and genetic excellence of cattle. The project aims to identify the particular genes associated with the disease resistance traits in cattle and the possibility of incorporating the same into embryos for betterment of the traits after modification using 'CRISPR-Cas9 gene editing technology'.
- Embryo transfer and In-Vitro Fertilization (IVF) implemented for local cows: The KLD Board implements modern technologies related

### Box No 3.3.2 Digital Herd Book Systems

A breed registry, also known as a herd book, studbook or register, is an official list of animals within a specific breed whose parents are known. Animals are usually registered by their breeders while they are young. Such registries usually issue certificates for each recorded animal, called a pedigree, pedigreed animal documentation, or most commonly, an animal's "papers". Registration papers may consist of a simple certificate or a listing of ancestors in the animal's background, sometimes with a chart showing the lineage. The programme is being implemented in the same area as that of progeny testing and this was selected owing to the availability of a higher proportion of cross bred. It covers a breedable population of about 60,000 crossbred animals spread around 83 AI Centres.

Though Kerala started the artificial insemination technique as early as in 1970s, the pedigree records of our cows were not available at our fingertips for finding out the best cows in the State, or the bulls whose daughters are the best yielders, or find out the best generation of cows (line) in the State, or suggest the best semen for inseminating a particular cow to produce the best offspring etc. By digitalizing and maintaining a breeding history (digital herd register) along with health and management details, weather correlation on production, the State will be in a position to find the best cow/bull/breed suitable for Kerala and may even become a valuable data repository and a data warehouse to develop a suitable breed for the State in the future.

In order to find out a way out of the problem, as suggested by Kerala State Planning Board, the Government has earmarked Rs 60.00 lakh for the development of a digital Herd Book as a Decision Support System (DSS) under Modernisation and e-Governance scheme of the Animal Husbandry department during the financial year 2024-25 with the help of the Digital University (formerly IIITM-K) An amount of Rs 37.77 lakh was utilized as on 31.08.2024 for the implementation of the scheme. This Decision Support System (DSS) will capture all details of the dairy animals from birth to death like health, breeding, pedigree, selection, feeding, milk production, vaccinations, agro-climatic correlation in expression of genetic potential and traceability of animal product. This will become the basis of all future animal husbandry development activities.

The Department has developed an animal database with provisions for capturing birth, health, breeding, production and death details with appropriate dashboards and integration with other software maintained by the department, KLDB, NDDDB etc. A mobile application for the farmers with provisions for viewing all the details of their animals including the treatment, breeding have also been developed for entering the daily production details of animals. This database will become a central repository where all the herd management activities of the animals will be captured and act like an animal aadhaar database. Up to 31.08.2024, 1540 female calves has been identified and registered, 174508 herd books have been maintained, opened 1540 herd books and 3936 Heart girth measurements have been done.

to cattle reproduction such as embryo transfer and In-Vitro Fertilization (IVF). With this technology it is possible to produce high quality calves with high genetic value in a very short period of time. This embryo transfer project is being implemented at Mattupetti Farm of KLD Board. Already 850 embryos have been produced. Moreover, around 38 calves have been born through embryo transfer technology in the farm itself. Ova were collected from the ovaries of a dead Sunandini cow and embryos were created through IVF at the embryo transfer laboratory in Mattupetti. From these embryos, a calf of the dead cow was born. The birth of this calf is one of the many benefits that 'IVF technology' can bring to the dairy sector. The Vechur cow's embryo, produced for the first time in the world through IVF technology, was deep-frozen and deposited in the uterus of other cows and through this, a male calf was born. The birth of this male calf named 'Abhimanyu' is a matter of pride for the state. Completed the whole genome sequencing of Vechur animals in collaboration with IISER, Thiruvananthapuram

and the result has been published in the journal Frontier Genetics. Artificial Insemination facilities for goats were provided in 1153 AI centers in the State.

- 20,669 beneficiaries were assisted through various welfare schemes of KSPDC. 8,14,943 birds, 38.39 tons of Poultry Feed, 53 cages were supplied. 1744.46 additional tons of poultry meat and 22.16 crore eggs were produced in the State. An income of Rs 177.31 crore and Rs 25.45 crore were generated from the sale of egg and meat respectively.
- Under the Re-Build Kerala project, preliminary steps have been initiated to set up a state-of-the-art broiler processing plant and pet food manufacturing unit at Kotukal in Kollam district, capable of processing 1,000 broilers per hour.
- Meat Products of India Limited was producing and distributing only frozen meat products, now it is venturing into fresh and chilled meat products. The company has received HACCP ISO 22000:2018 FSMS Certification for the export of Buffalo meat and pork. A value added

meat production and processing plant was set up at Yeroor in Kollam district by Meat Products of India Limited. Production capacity is 2000 Kg per shift per day and production commenced from 16.05.2024.

- “OPPAM” - Livelihood Enhancement of Wayanad Tribal Colonies through Need Based Package of Inputs is a novel project of Kerala Veterinary and Animal Sciences University (KVASU) aimed at enhancing the social and economic wellbeing of the tribal community of Wayanad by providing sustainable livelihood support through capacity building and campaigns and to augment entrepreneurial culture among tribal groups. As a part of this a basic nutrition workshop was conducted at Vellapankandy Tribal Hamlet, goat, nutrition kit, native chicks were distributed at Karithndan Tribal Hamlet, inaugurated Chembatty Tribal Library and organized a book challenge during 2023-24.
- The “Riemerella” vaccine for use in ducks has been developed and patented by Kerala Veterinary and Animal Sciences University (KVASU). “Anemia” card for diagnosis in goats were developed, released the best breeds of chicken like “Triveni”, “Thalassery”, duck breeds like “Chaitra” and pig breeds like “Mannuthy White” were released for farmers. Patent has been received for a functional composite flour premix (Ready-to-cook form) having enhanced calcium absorption properties. A total number of 25 doses of sexed semen were given to animals and out of these 7 calves were born during 2023-24 and the success rate is about 28 per cent.

### **Kisan Credit Card (KCC) Campaign**

The Reserve Bank of India has extended the Kisan Credit Card Scheme (KCC) facility to farmers engaged in Animal Husbandry for their working capital requirements of rearing of animals and birds. The working capital components in Animal Husbandry, under the scale of finance include recurring cost towards feeding, veterinary aid, insurance of the milch animals, labour, water and electricity supply. Animal Husbandry Directorate was designated as the nodal agency for leading the campaign for distribution of Kissan Credit Card in the State during 2023. First campaign was done during 2023-24 and the second campaign started from 15th September 2024 and will be completed by 31<sup>st</sup> March 2025. According to Animal Husbandry Directorate 17,537 applications have been received as on 27.09.2024. Of which

17,512 were accepted and 12,769 were sanctioned. In the State 632 farmers are already having KCC, 397 applicants are in default (NPA), No milch animal in possession are 38 numbers, applicants not traceable are of 396 numbers and 62 persons are not a member of PACs. KCC target for 2024-25 is 15,000 in Kerala. The credit under KCC is being extended to dairy farmers for meeting the recurring expenditure involved in dairy farming. Credit at nominal interest rate is offered to dairy farmers for purchase of feeds and fodder, dairy farm equipments, construction of scientific cattle sheds to counter environmental stress, repair and maintenance of existing cattle shed, insurance, and meeting veterinary aid.

### **Dairy Development**

Milk and dairy products are vital sources of nutrition and provide livelihoods for millions of people in the dairy value chain worldwide. World Milk Production grew 1.5 per cent in 2023 to about 927 MT. World Milk Production (roughly 81 per cent cow milk, 15 per cent Buffalo milk, and 4 per cent for goat, sheep and camel milk combined) is projected to grow at 1.6 per cent p.a. over the next decade (to 1085 MT in 2033) supported by yield per animal. This rate of growth is faster than other main agricultural commodities. More than half of the growth in production is anticipated to come from India and Pakistan which will jointly account for over 30 per cent of world production in 2033 (Organization for Economic Cooperation and Development (OECD)-FAO Agricultural Outlook 2024-2033). According to Food and Agriculture Organization (FAO), approximately 150 million households around the globe are engaged in milk production.

In most developing countries, milk is produced by small holders, and milk production contributes to household livelihoods, food security and nutrition. Milk provides relatively quick returns for small-scale producers and is an important source of cash income Food and Agriculture Organization (FAO). Dairy is the single-largest agro commodity in India. The dairy sector is a major sector of Indian economy which provides employment to millions of rural population and contributes to the income of rural households. The sector plays an important role in achieving food security, reduces poverty, and generates gainful employment opportunities especially to women. Owing to the increasing demand for dairy products driven by the growing population, higher



purchasing power of the customer, increased focus on nutrition and growing aversion for unbranded and loose products, milk production in India is set to reach approximately 628 MMT in the next 25 years (i.e., till 2047). The dairy sector plays a vital role in achieving Sustainable Development Goals – especially SDG-1, SDG-3, SDG-5, SDG-8 and SDG-10 thereby plays a significant role in transforming lives of agrarian sector.

As per FAO's Food Outlook-Bi annual report on Global Food Markets, June 2024 world milk production is forecast to reach nearly 979 million tonnes, up by 1.4 per cent. Much of the expansion is expected to come from Asia-led by India, China and Pakistan and will be driven principally by rising dairy cow numbers and growing contributions of more efficient large-scale dairy farms with higher milk yields. In Asia, milk output reached 446.9 million tonnes, which is more by 2.7 per cent from 2022, equivalent to 11.8 million tonnes. With this change, Asia accounted for 46 per cent of global milk output. In India, milk production rose to 236 million tonnes in 2023, increased by 2.5 per cent, induced by rising dairy herd numbers. Less than ideal weather conditions with the delayed onset of winter and the drop in artificial insemination in 2020 due to COVID-19 led to a reduction in the number of calf births, which affected milk production growth in 2022 and 2023. Moreover, milk production was negatively affected by under-feeding due to higher fodder prices, lower market demand for milk and heat stress (Dairy Market Review, 2023).

India is the largest producer of milk and is expected to experience a continued strong production growth. Production is based on small households connected to cooperatives for processing and distribution. This integration into the wider supply chains is also important for the value added to dairying in India. The growth is expected to come from more milking cows and buffaloes as well as from increased yield. The per capita consumption of processed and fresh dairy products in milk solids is 20.0 Kg per person in India during 2021-23 and is projected to be 25.3 Kg per person in 2033. It is 3.2 and 3.8 respectively in the case of processed dairy products (OECD-FAO 2024). Most of the milk in the country is produced by small, marginal farmers and landless labourers. India is home to the highest number of milk cows, at over 61 million head as of 2023. India's cattle inventory amounted to about 308

million in 2022. While the global cattle population stood at over one billion, India had the highest cattle population followed by Brazil, China and the United States that year. Milk production is growing at the compound annual growth rate (CAGR) of 6 per cent from 187.30 million tonnes during 2018-19 to 230.58 million tonnes during 2022-23. World milk production in 2023 reached 965.7 million tonnes, rising by 1.5 per cent from 2022, (Dairy Market Review, 2023). The per capita availability of milk is 459 grams per day in India during 2022-23 as against the world average of 322 grams per day in 2022 (Food Outlook June, 2023).

In India, about 46 per cent of the milk produced is either consumed at the producer level or sold to non-producers in the rural area, the balance 54 per cent of the milk is available for sale to organised and unorganised players. The total size of dairy market was about Rs 13.17 lakh crore in 2021. The dairy market has been growing at about 15 per cent per annum in last 15 years and is expected to reach a market size of about Rs 30.84 lakh crore by 2027 as per International Market Analysis Research and Consulting Group (IMARC) 2021 report. The liquid milk market represents about half of the total dairy market in the country. Of the total liquid milk market, the share of organized sector has increased from 32 per cent to 41 per cent in last three years. It is estimated that the share of organized sector would reach to 54 per cent by 2026 (Annual Report 2023-24, Department of Animal Husbandry and Dairying, GoI).

### **Programmes and initiatives**

Kerala has a separate Department of Dairy Development, which functions as the nodal agency for rural dairy extension, fodder resource development and rural milk marketing in the State. The Department with the financial aid of State Government and Central Government, implements various schemes in the State with the objectives of attaining self-sufficiency in milk production, increasing fodder production, reducing production cost, strengthening of Dairy Cooperatives and ensuring safe and quality milk to the consumers, fair margin to producers and socio-economic benefits to dairy farmers. The objective of the Department is to ensure comprehensive and sustainable development of the sector while promoting the well-being of dairy farmers, consumers, and other stakeholders. It also acts as the nodal agency for fodder development in the State.

**Table 3.3.3** Financial performance of Dairy sector during the first 3 years of the 14th FYP (Rs. in lakh)

Year	Outlay	Expenditure	Expenditure as per cent of total outlay
2022-23	10681	7462.86*	70.00
2023-24	12226	5932.16	49.00
2024-25 (as on 21.10.2024)	11795	1612.23	14.00
<b>Total</b>	<b>34702</b>	<b>15007.25</b>	<b>43.25</b>

Source: \*Annual Plan Accounts and Planspace As on 21.10.2024

The department has 162 dairy extension service units, 14 quality control units, one State Dairy Lab (NABL accredited) for testing milk and milk products and cattle feed, 3 Regional Dairy Labs, 14 Mobile Quality Control Units, 6 Dairy Training Centres, State fodder farm and a State Dairy Management Information Centre attached to the Directorate.

### Dairy Cooperatives

Dairy cooperatives play a pivotal role in achieving self-sufficiency in milk and dairy products in India. Most of India's dairy co-operatives are based on maximising farmers' profit and productivity through cooperative effort. The Dairy Cooperatives in Kerala are among the top and stable dairy cooperatives in the country. The regional unions in the State extends maximum price to member producers when compared to other unions in the country. The Dairy Cooperatives being the backbone of the dairy industry provide a ready market and steady price to the dairy farmers. There are 3608 registered Dairy Cooperative societies including Anand Pattern Cooperative Societies (APCOS) and non-APCOS as on 30<sup>th</sup> June 2024. Out of the total registered 3608 DCs, 3348 are functional and remaining 260 DCs are dormant. The registered Dairy Cooperative Societies in the State collect milk twice a day from their farmers and pay the milk value based on the quality (fat and SNF per cent). The details of Dairy Cooperative Societies are shown in **Figure 3.3.5**.

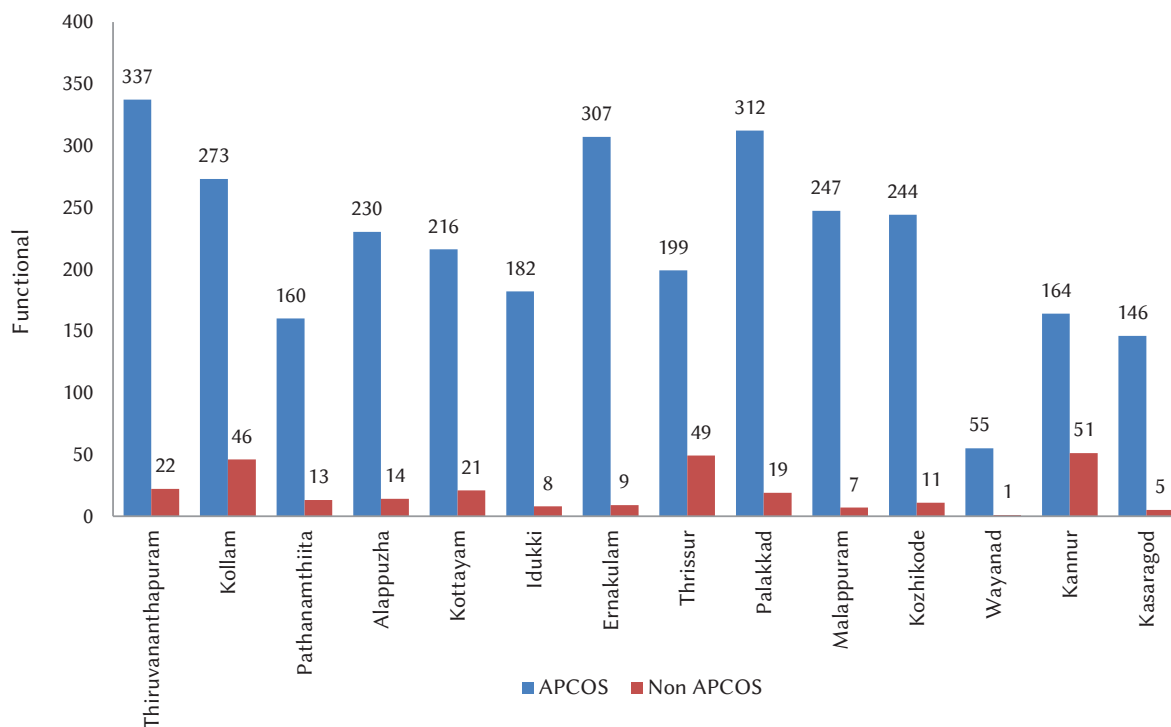
As per the National Action Plan on Dairy Development Vision 2022 report, it is envisioned to increase milk procurement and processing through setting up of Village-level dairy infrastructure. National Action Plan for Dairy Development is designed to provide technical and financial assistance for the dairy development and thereby creating any infrastructure related to the processing, production, marketing and

procurement by the milk federation/unions while extending their activities by providing training facilities to the farmers. It envisages achieving milk production target of 254.5 MT by 2022 and 300 MT by 2023-24. National Dairy Plan Phase-I will cover the case of States i.e, Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal) Under this Plan, organized milk handling is to be increased to 41 per cent by 2022 and 50 per cent by 2023-24. Milk procurement by co-operatives is targeted to increase from the present 23 per cent to around 50 per cent by the end of the 14<sup>th</sup> Five year plan period.

Indian dairy cooperatives and private players could create additional milk processing capacity of 4.5-4.8 crore litre per day in the next decade. India's milk processing capacity is to be enhanced from the current 12 crore litre per day to around 17 crore litre per day. It is estimated that where one lakh litres of milk is procured and distributed to organized players, around 6,000 people get employment annually, and the Animal Husbandry Infrastructure Investment Fund, has the potential to create necessary infrastructure in the sector. Extension of Kisan Credit Card (KCC) scheme to dairy farmers also ensures cash flow and meets the working capital requirement of small farmers. Under this campaign as on 31.03.2024, total 45,08,612 applications received and out of which 44,28,834 applications accepted by banks and 30,56,223 KCCs were sanctioned in the country. As on 31.03.2024, 33.84 lakh fresh KCC were sanctioned for AHD Farmers in the country (Annual Report 2023-24, Dept. of Animal Husbandry and Dairying, GoI).

Under Special Performance Booster Programme for Weaker Dairy Co-operatives, 80 numbers of financially weaker and selected Dairy Co-operatives

**Figure 3.3.5** Details of APCOS and Non APCOS in Kerala



Source: Dairy Development Directorate GoK, 2024

were assisted to improve the milk procurement and other DCS aspects. An amount of Rs 211.2 Lakh was expended as plan fund during the year 2023-24.

### Milk Marketing

Kerala Cooperative Milk Marketing Federation (KCMMF), the apex body of the three-tier dairy co-operatives, implements the Operation Flood Programme in the State. As per the data from Dairy Development Department, in 2023-24, a total of 6780.22 lakh litres per day of milk was procured by the dairy co-operative societies in the State, of which 4573.77 lakh litres were sent to the dairies and 2079.32 lakh litres were marketed locally by the societies. Only 127.13 lakh litres, of the total procurement, was utilized for different product preparation. According to Kerala Cooperative Milk Marketing Federation (KCMMF-Milma), the total milk procured by the dairies in the year 2024 was 3690.5 Lakh Litre (annual) as against 5020.89 Lakh Litre (annual) during 2023. As far as the sales are concerned it was 5201.2 Lakh Litre (annual) in 2024 and 5849.6 Lakh Litre (annual) in the year 2023. Milk

procurement has decreased by 36.05 per cent and sales have decreased by 12.47 per cent. The average milk procured per day by APCOS in 2023-24 was 1276.38 MT against the previous year average of 1404 MT. The procurement per society per day was 384.30 litres in 2023-24. Except in Palakkad and Wayanad, sale of milk exceeded procurement during 2024. The shortfall between milk procurement and sales was met by arranging milk mostly from State Milk Federations of Karnataka, Tamil Nadu and purchase of skimmed milk powder. Along with the sale of fluid milk, the KCMMF produces a wide array of milk products through the units under them. Ghee, butter, curd, ice cream, paneer, chocolates, flavored milk, gulab jamun, lassi, palada mix, peda, tetra pack products, dairy whitener, mango juice and packaged water are some of the products produced and marketed by MILMA. Details on procurement and sale of milk by different dairies of KCMMF, performance of KCMMF and milk procured by APCOS are shown in **Appendix 3.3.12**, **3.3.13** and **3.3.14**. The price revision and price spread of milk from 2010 onwards is given in **Appendix 3.3.15** and **Appendix 3.3.16** respectively. To enhance the

### Box No. 3.3.3. Re-Positioning MILMA 2023

In order to compete with international companies to maintain and expand the market, Milma has undergone a brand image transformation through a project called “Repositioning Milma 2023”, which started with comprehensive changes in the packaging, design and quality of Milma products and introduced the best products in the state-wide market. The financial and technical support of National Dairy Development Board (NDDB) is also obtained for this. While unifying milk variants, the existing names of all variants have been changed for ease of identification and utility. To sort out the possible region wise variation in appearance and consistency, Curd variants have been re-launched ensuring unified characteristics. Launched packaged drinking water by name ‘Shuddhi’ and Milma chocolates in Moulded and Bar variants by name ‘Deliza’ and ‘Chocofull’, 3 new varieties of Premium Dark Chocolates, Milma Osmania Butter Biscuit and Butter drops. By December 2024, almost all Milma products will be available to customers as per the action plan.

dairy farmer’s income, the Government of Kerala has increased the price of milk by Rs 4 to Rs 6 per litre by December 1, 2022.

#### Surplus Milk and Product Diversification

One major lesson learnt from the COVID-19 pandemic in the animal husbandry sector in Kerala is the need to attain greater self-sufficiency in handling animal produce. The pandemic has also reminded Kerala that the State is close to attaining self-sufficiency in milk. Therefore, it is essential to develop the production of value added commodities from milk such as cheese and yogurt. This necessitated the setting up of advanced product diversification facilities in the existing dairy plants. The quality of raw milk at farm-level is of great concern. The cold chain maintenance from farm to fork has to be ensured. The milk procured at the farm-level has to be cooled in a short span of time to reduce the bacterial load. This needs more financial support to ensure cold chain maintenance. Currently, there are only 108 Bulk Milk Cooler Centres (BMCC) in the State, with a capacity of 392.50 KL (Annual Report 2023-24, Dept. of Animal Husbandry and Dairying, GoI) This needs to be increased to suit the milk procurement capacity of dairy cooperatives.

#### Way Forward

The State envisages a holistic development of the Dairy and Animal Husbandry sectors through modernisation and mechanisation, which are crucial to create an environment for farmers to work in the sector with dignity and satisfaction. Dairy farmers should have access to cattle with high genetic potential and good quality fodder and mechanisation for accelerated development of the dairy sector. Five per cent profit margin over and above the net cost may be ensured to attract more

farmers to the APCOS network in Kerala. Fodder development activities of the State need to be scientifically backed by the State Fodder Plan. The promotion of commercial fodder production with an assured market through cooperative societies and by linking fodder cultivation with MGNREGS has much potential. Fodder cultivation in waste lands should be encouraged through Kudumbasree or Self-Help Groups or entrepreneurs. Government should focus on a feed and fodder policy concurrent with the breeding policy in the State.

In Kerala, the demand for protein food is forecasted to increase manifold in the years to come. The State should take a strategic route forward, encompassing changes to improve productivity while maintaining environmental sustainability.

Policies to restructure and revitalise the present institutional set-up in the livestock sector, enhance institution-level efficiency, and promote new institutional models to handle the emerging challenges in the livestock sector development are being put into practice. A growing livestock sector will also contribute towards women empowerment.



## 3.4 FISHERIES DEVELOPMENT

The Fisheries sector plays a significant role in the economy in terms of its contribution to growth and development. The sector provides food and nutritional security as well as employment opportunities to a considerable number of our population. India is the second largest fish producing country in the world and accounts for 8.92 per cent of the global fish production. The sector has been one of the major contributors of foreign exchange earnings, with India being one of the leading seafood exporting nations in the world. In 2023-24, export improved in quantity terms by 2.67 per cent. India is also a major producer of fish through aquaculture and ranks second in the world after China.

The fisheries sector has been recognised as a sunrise sector. The share of fisheries sector in the total Gross State Value Added (GSVA at constant price) in 2023-24 constitutes 0.89 per cent and accounts for 0.8 per cent of Gross State Domestic Product (GSDP). Fisheries and aquaculture contributes 10.77 per cent of the GSVA (constant prices 2023-24 (Q)) from the Agriculture and allied sectors. Details regarding the contribution of fisheries sector in GSVA are given in **Appendix 3.4.1.**

The fish production in India during 2022-23 is estimated at 175.45 lakh MT with a contribution of 131.13 lakh MT from inland sector and 44.32 lakh MT from marine sector (Annual Report 2023-24, Department of Fisheries, Ministry of Fisheries,

Animal Husbandry and Dairying, Government of India). During 2023-24, Kerala recorded a fish production of 8.32 lakh MT with contribution of 5.81 lakh MT from marine and 2.51 lakh MT from inland sector.

### Growth Trends

Kerala with a coastline of 590 km and an Exclusive Economic Zone (EEZ) of 2.18 lakh sq.km has a significant marine fisheries sector. Marine fisheries play an important role in the economy of the State. Kerala recorded 5.81 lakh tonnes of marine fish production in 2023-24 and stood at third position in the country preceded by Tamilnadu and Karnataka. Due to climate change and anthropogenic activities such as juvenile fishing, overfishing, and unscientific fishing the catch of marine fisheries showed a declining trend in the last decade. The Kerala Marine Fishing Regulation Act (KMFRA) was amended and KMFR Rule was introduced for enabling increase in marine capture.

The marine fish production in 2023-24 was 5.81 lakh MT, which is lower than the previous year's production of 6.9 lakh MT. As per district wise fish production of Kerala, the highest marine fish production was registered in Ernakulam followed by Kollam, and Kozhikode districts in 2023-24. The above three districts contributed to 68.7 per cent of the total marine fish production. The production of most of the marine fishes like Chirocentrus, Cat Fish, other carangids, Leiognathids, and Penaeid prawn have shown an

increase in 2023-24. The species wise marine fish landings in Kerala from 2020-21 to 2023-24 are given in **Appendix 3.4.2**.

The inland fish production increased in 2023-24 due to the introduction of diversified and innovative fish farming practices, across the State. The inland fish production in 2023-24 was 2.51 lakh MT which is higher than the previous year (2.29 lakh MT). The Inland fish production recorded highest in Kottayam District followed by Alappuzha and Kollam. The inland fish production in Kerala has increased gradually in the last five years.

The difference in the composition of total fish production in India and Kerala is shown in **Figure 3.4.1** and in **Appendix 3.4.3**. District wise fish production in Kerala is given in **Appendix 3.4.4**.

Kerala is the third largest seafood exporting State in terms of quantity and second in terms of value of exports. The export of marine products from Kerala has shown an increase from 2015-16 onwards. In 2023-24, 1.97 lakh MT of sea food valued at Rs 7,231.84 crore was exported from

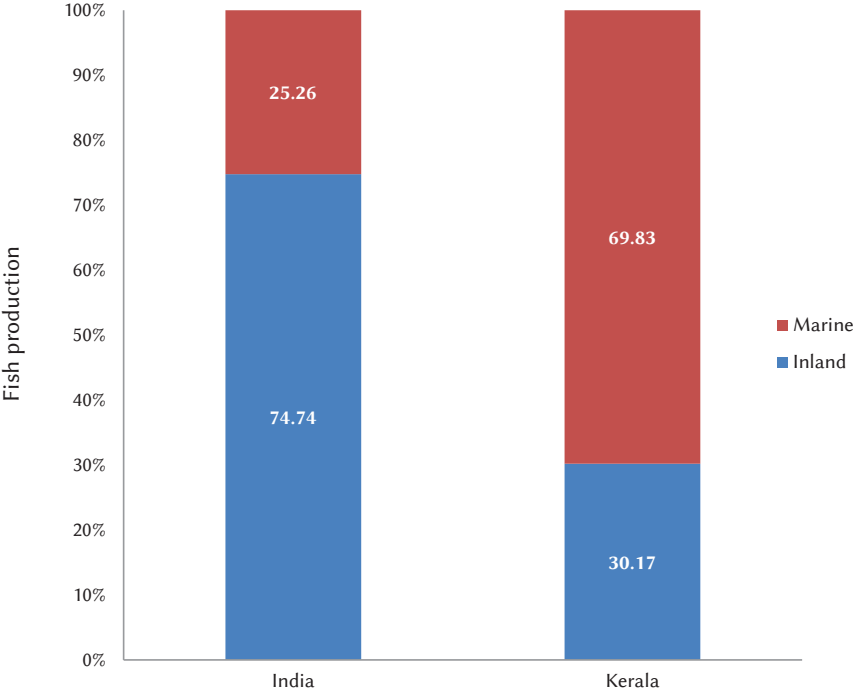
Kerala. During the period, the marine exports from India was 17.81 lakh MT valued Rs 60,523.89 crore. Details are provided in **Appendix 3.4.5**.

**Inland capture and aquaculture**

Fisheries and aquaculture remain an important source of food, nutrition, income and livelihood of millions of people. In the backdrop of declining land and water resources, exploding population and stagnancy in production from capture fisheries sources, the importance of inland capture fisheries and aquaculture has become crucial for meeting the sustainable livelihood approach. The inland water resources supporting about 2.45 lakh fisher folk population provides not only the component of nutritious food but also constitute towards employment generation thereby increasing the standard of living and economic development.

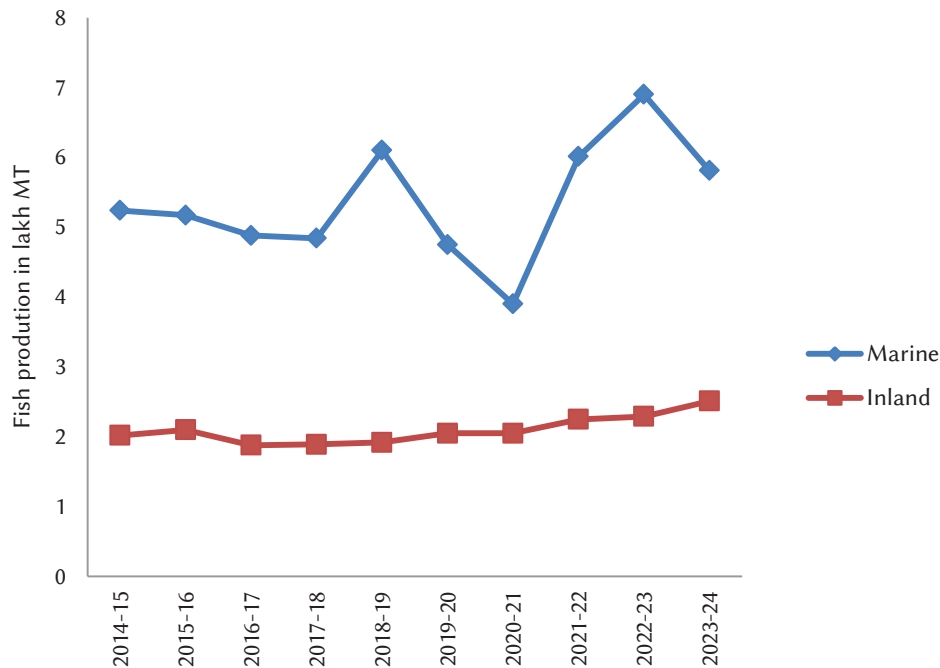
The **Figure 3.4.2** shows a steady growth of inland sector from 2019-20 to 2023-24. Kerala has an estimated inland water area comprising of 41 west flowing and 3 east flowing rivers (85,000 ha), 9 fresh water lakes (1,620 ha) and, 51 backwaters (46,128.9 ha) which provide a wide scope for practising and developing aquaculture practices. Aquaculture is also a sustainable option

**Figure 3.4.1** Fish production in India and Kerala – Share of Marine and Inland fishing



Source: Annual Report 2023-24, Department of Fisheries; Ministry of Fisheries, Animal Husbandry and Dairying, Government of India and Department of Fisheries, Government of Kerala

**Figure 3.4.2** Fish production in Kerala over the past ten years



Source: Department of Fisheries, GoK

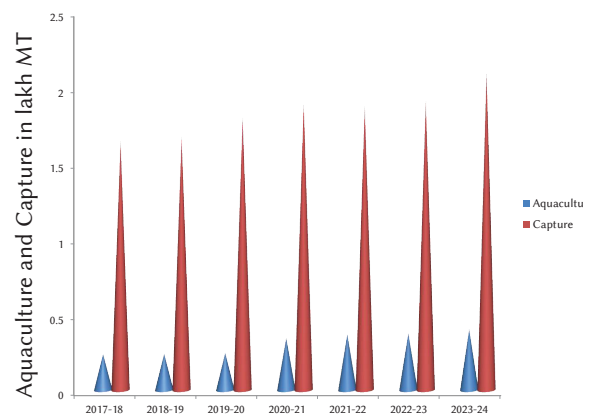
to consumers, especially in comparison to other farmed proteins. Seafood is highly resource efficient and has the highest protein retention.

The fish species that have high potential in Kerala include murrel, Etroplus, cat fish, common carps, catla, *Labeo rohita*, edible oyster, *barbus*, prawn, mullets, crab, mrigal, and mussel. The inland fish production in Kerala has increased gradually during the last five years. Species-wise inland fish production in Kerala from 2020-21 to 2023-24 are shown in **Appendix 3.4.6**. The State has made conscious effort in enhancing the inland fish production.

Aquaculture is the fastest growing segment of fisheries sector. Given that overfishing of our oceans and other natural resources is continuously increasing, humans need alternate sources of seafood. Aquaculture is the tool to fill the gap of seafood supply. Farming fish responsibly and sustainably is the solution for future generations to have access to healthy and environment friendly protein. As part of aquaculture development, pond fish farming was undertaken in 6,554.34 ha, shrimp farming in 2,346.40 ha, and ‘one paddy one fish farming’ in 13,706.14 ha. As part of introduction of innovative farming techniques, 3,173 units of biofloc fish farming system, 5,208 units of fish

farming in *padutha* ponds, 690 units of circulatory aquaculture system, and 245 units of *varals* and *karimeen* has also been established. The aquaculture production in the State in 2022-23 and 2023-24 was 0.38 lakh MT and 0.41 lakh MT respectively (**Figure 3.4.3**).

**Figure 3.4.3.** Contribution from aquaculture and capture to inland sector (in lakh MT)



Source: Department of Fisheries, GoK

The supply of quality fish seed is a key factor for expansion of fish farming. The production of marketable fish begins with the stocking of fry or juveniles into a rearing environment that assures



optimum and rapid growth to allow harvest in the shortest possible time. Fish seed demand is high at present and is expected to expand in the near future. As part of achieving self-sufficiency in fish seed production, a total of 13.39 crore fish seeds were produced in 2023-24, out of which 8.22 crore were from hatcheries and the rest were from various indigenous backyard fish seed production units in the State. In addition to the above number, 403 numbers of back yard seed production units with installed capacity of 77.41 lakh fish seeds were established in the State. The year wise seed production achieved by the Department and the agencies is shown in **Figure 3.4.4**.

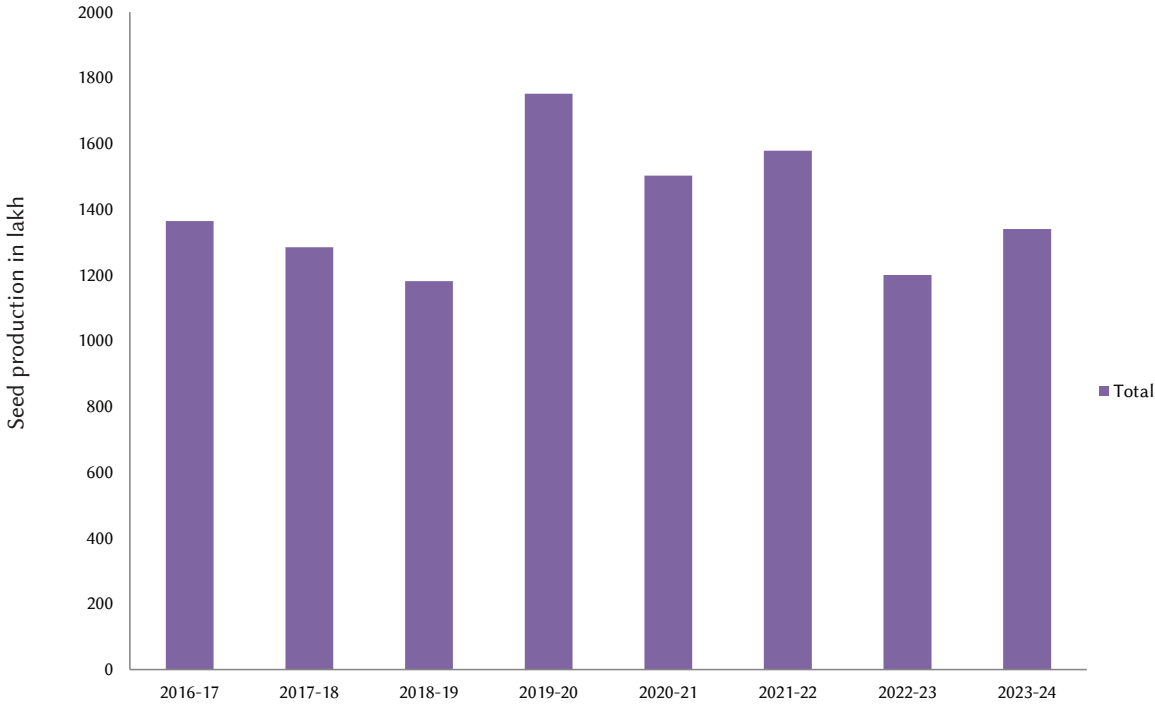
The State fish seed centre established at Thevally, Kollam for ensuring the quality of fish seeds is producing and distributing the seeds in the State for undertaking fish farming and stock enhancement programmes. It also provides the facility for registration of fish seed production centres, hatcheries and seed rearing centres. So far 1,107 numbers of hatcheries and farms were registered. For conserving the fish and shellfishes, fish and shellfish conservation centres were established in 8 districts within the State. The

Kerala Inland Fisheries and Aquaculture Act (KIFA) has been amended in 2021. The KIFA aims to sustainably develop, manage, and conserve the State’s inland fisheries. The act also protects the livelihoods and traditional rights of fishers and ensures the availability of nutritious fish. To ensure prompt diagnosis of fish diseases and to prevent the spread, 10 aquatic animal health centres were established in the State. Disease diagnostics and surveillance programme was also carried out to prevent the economic loss to fish farmers.

**Livelihood and social security**

The fishery-related livelihoods are complex, dynamic and adaptive. The fisherfolk population is estimated to be around 10.65 lakh which is around 3.03 per cent of the total population of Kerala. The total fisherfolk population includes 8.20 lakh belonging to the marine sector and 2.45 lakh belonging to the inland sector. They reside in 222 marine fishing villages and 113 inland fishing villages of the State. The district wise details of fisherfolk are given in **Appendix 3.4.7**. Active fish workers are those fish workers who are engaged in fishing for their livelihood and are registered with the Kerala Fishermen’s Welfare Fund Board

**Figure 3.4.4** Seed production from 2016-17 to 2023-24 (in lakh)



Source: Department of Fisheries, GoK

(KFWFB). The number of active fish workers registered with KFWFB in the State in 2023 was 2.37 lakh. The number of active fish workers registered is highest in Thiruvananthapuram district followed by Alappuzha. In 2023, the number of allied workers in Kerala was 79,598 who are engaged in allied activities related to fisheries and registered with KFWFB. The details of district wise active and allied fish workers is given in **Appendix 3.4.8**.

Government of Kerala implements various schemes to ensure social security and livelihood of fish workers. Apart from the fisheries department, KFWFB and Matsyafed also implement social security and livelihood support schemes. The schemes include those for housing, insurance and pension apart from those which enable fishworkers to earn livelihood on a continuous basis. During the period 2023-24, 2.37 lakh fishworkers and 79,598 allied workers benefitted from the Group Accident Insurance Scheme. A total of 1.42 lakh fishworkers and 13,788 allied fishworkers were provided support under the 'Saving cum Relief Scheme'. Details of the schemes implemented by the KFWFB are provided in **Appendix 3.4.9** and **3.4.10** respectively.

CCTV cameras were installed in all the important harbours of the State with the aim of protecting fish resources, and to ensure safety of fishermen. For the control and co-ordination of the situation, a Master Control Room was set up at the Directorate of Fisheries and the Regional Control Rooms were started at Fisheries Stations of Vizhinjam, Vypin, and Beypore. In order to provide urgent healthcare while at sea, the Government has commissioned marine ambulances for three zones, namely Vizhinjam in Thiruvananthapuram, Vypin in Ernakulam, and Beypore in Kozhikode. The marine ambulances were equipped with all modern facilities required for emergency medical aid for 10 persons at a time. A total of 100 rescue squads were deployed in the 15 harbours of Kerala to rescue the fishers who is in distress at the sea. Further, coastal hospitals were constructed in the health sector.

There are 45,707 registered fishing vessels operating in the marine sector of Kerala, which includes 7 deep-sea vessels, 6,948 motorised vessels, 34,858 non mechanical motorised vessels, 3,894 non-motorised vessels. In order to assist the fishers from their loss in fishing accidents at sea,

2,747 fishing vessels have been insured by the United Insurance Company.

### **Matsyafed**

Matsyafed is an apex federation of 702 primary level fishworkers development welfare co-operative societies, of which 355 are in marine sector, 213 are in inland sector and 134 are women co-operative societies. Total membership in these societies are 4.63 lakh. The authorized share capital of the Federation is Rs 150 crore. The primary societies are clubbed into 52 clusters for administrative convenience based on geographical area. Matsyafed has organized self-help groups (SHGs) within the fishing community and has developed the habit of savings. By providing micro finance and interest free loans, Matsyafed has made an impact in the area of micro credit. In 2023-24, Rs 54.88 crore was distributed to 15,346 beneficiaries as micro finance support to SHGs. In 2023-24, 5,112 women fish vendors were assisted with interest free loan for an amount of 9.90 crore.

Matsyafed started the implementation of Kisan Credit Card (KCC) during the year 2020-21. A total of 790 fishermen were assisted with Rs 930.84 lakh under KCC. Matsyafed has three Fish Net factories at Ernakulam, Kannur, and Thiruvananthapuram with an installed capacity of 1,200 tonnes per annum. In the financial year 2023-24, the sales of webbings recorded a total quantity of 1,071.44 tonnes valued at Rs 5,894.26 lakh. The federation has two fish manure plants at Azheekode and Kozhikode with a manufacturing capacity of 10,000 tonnes of fish manure per annum which achieved sales of 1,356 tonnes worth Rs 262.99 lakh. Matsyafed's "*Anthipacha*" sources fish directly from fisherfolk and transports to spots in and around the Thiruvananthapuram city in temperature controlled van. There are 16 units which deliver fresh and chemical-free fish to the consumers. The sales turnover during 2023-24 was Rs 73,647.99 crore. They also launched five new value added products and relaunched two existing products in three brand names, '*Matsyafed Eats*', '*Matsyafed Treats*' and '*Matsyafed Fresh*'. The sales turnover of value added products during the year 2023-24 was Rs 29.71 lakh.

Matsyafed has three fish farms located at Njarakkal and Malippuram in Ernakulam District and Palaikkari in Kottayam District. Commercial production of pearl spot, milk fish, mullets, prawn, and crab is carried out in these farms. Cage culture

of Pearl Spot is also practiced in Njarakkal and Palaikkari farms and Genetically Improved Farmed Tilapia (GIFT) is being done at Palaikkari farm. Eco-friendly aqua tourism facilities are provided in fish farms at Njarakkal, Malippuram and Palaikkari. There are four prawn hatcheries each with an annual production capacity of 120 million prawn/shrimp seeds situated at Thirumullavaram in Kollam, Kaipamangalam in Thrissur, Veliamcode in Malappuram, and Moplabay in Kannur. The achievement of various programmes implemented by Matsyafed is given in **Appendix 3.4.11**.

### **Kerala University of Fisheries and Ocean Studies**

The Kerala University of Fisheries and Ocean Studies (KUFOS) is the first Fisheries University formed in India which started functioning from April 1, 2011. The University provides high quality instructional programmes in fisheries, ocean sciences and allied subjects. The University has its headquarters at Panangad, Kochi and has research stations at Puduveye, and Payyanur. The University was established for the development of scientific human resources in fisheries and ocean studies and for ensuring proper and systematic teaching, training and research and extension exclusively in fisheries and ocean studies in the State. At the same time, the University is continuously engaged in finding solutions to issues faced by its stakeholders through timely interventions in the form of advisories, capacity building and hand-holding. KUFOS is presently offering two graduate and 25 specialized postgraduate courses in relevant areas thereby creating a pool of professionals and experts. Research in these disciplines has led to successful transfer of technologies to the end users at the grassroot level. The University secured 12B status of the UGC during 2021-22. The strength of students of the University has increased from about 200 in 2011 to over 1,400 in 2024. KUFOS which was ranked 25th by National Institutional Ranking Framework (NIRF) in India among the agricultural and allied sector universities provides an equitable and affordable quality education to all, especially its major stakeholder, the fisher community.

KUFOS serves as a hub for innovation and entrepreneurship. Collaborations with organizations such as the Kerala Startup Mission and the National Institute of Agricultural Extension Management enhance entrepreneurial

networks. KUFOS-Business Incubation Centre, selected to establish Atal Incubation Centre by NITI Aayog, promotes innovation-driven enterprises. This helped the university to increase the number of doctoral research scholars from less than 10 in 2015 to about 386 in 2024. KUFOS has set goals to transform in to a premier institution contributing to the well-being of coastal communities and ecosystem. Scientists at the KUFOS have successfully developed technology for the captive breeding of the Indigo Barb (*Pethia Setnai*) an exquisite ornamental fish native to western India, currently facing the threat of extinction due to rampant overfishing. A MoU was signed between KUFOS and Amala Eco-Clean Pvt. Ltd., Alappuzha & Bhima Environment Technology, Attingal in July 2023 – an experimental project to produce fish meals from organic waste. The project aims to produce the protein required for fish feed production from organic waste using larvae. The University had submitted the final report, of the Vembanadu Wetland System conducted by the Centre for Aquatic Resource Management and Conservation at the KUFOS to the Hon'ble Chief Minister on September, 2023.

### **Kerala Aqua Ventures International Limited (KAVIL)**

The ornamental fisheries is a large livelihood provider for rural and urban population. The requirement of small space and low investment attract many to small scale ornamental fisheries. Kerala Aqua Ventures International Limited (KAVIL) is a Government of Kerala undertaking in the areas of ornamental fisheries with a vision to create a powerful and dynamic interface between ornamental fish farmers and the domestic and international markets. KAVIL has developed convergence in the production, marketing, capacity building and human resources development for the holistic expansion of the ornamental fisheries sector, which has got immense potential for income generation and foreign exchange earnings. KAVIL had given assistance in the form of training, technical and financial support to 534 homestead units in Kerala for the production and rearing of ornamental fish. KAVIL also supports the farmers to sell their fishes in domestic market through wholesale and retail supply chains in different States in India. Financial support is provided for new homestead units, medium scale units and integrated units under PMMSY by the Department of Fisheries.

The KAVIL Aqua Show in 2022 emerged as a highlight, showcasing the vibrant world of ornamental fisheries while providing valuable training for farmers and start-ups, along with internships for students. Furthermore, the project embraced digital marketing strategies, culminating in the development of an online sales platform to enhance buyer-seller interactions. The achievements of the Phase I and II projects focused on the development of ornamental fisheries demonstrate significant progress in various areas from 2022 to 2024. Over this period, total sales reached 18.19 lakh, supplemented by 99 buyer-seller meets, accumulating Rs 97.93 lakh.

### **Women empowerment**

Women play a significant role in the fisheries sector predominantly in post-harvest activities including the construction of fishing gears, fish sorting, fish handling and fish processing. The fisherwomen are the primary players in processing, marketing and selling the catch. The social protection measures which have been instituted by the Government like widow pensions, low interest loans, education grants for the children, and housing have played a very important role in improving the social and economic well-being of fisherwomen. The Society for Assistance to Fisherwomen (SAF), which aims at social and financial empowerment of fisherwomen, has been running capacity building training programmes and skill training to improve the functioning of entrepreneurial ventures by fisherwomen. In the year 2023-24, 852 fisherwomen beneficiaries became entrepreneurs, 1,777 fisherwomen beneficiaries were trained under different Capacity Building programmes, 615 activity groups with 1,774 beneficiaries were assisted with interest free Working Capital Revolving fund. As part of solidarity funding for struggling businesses, 31 units with 91 beneficiaries were given technology improvement assistance. Aid is provided for replacement of old machines and upgrading of technology. Support is also provided for shifting to more profitable businesses if the existing one is loss making. 201 micro enterprises consisting of 604 beneficiaries were given 5 per cent interest subsidy on their bank loan taken for the development of their micro enterprises. As a part of Joint Liability Groups (JLGs) project, 1,033 JLGs covering 5,165 fisherwomen beneficiaries in Thiruvananthapuram, Kollam, Alappuzha, Ernakulam, Thrissur and Kasaragod districts were given interest free revolving fund of Rs 1 Lakh/

JLG up to 6<sup>th</sup> phase. It has also been helping in branding and marketing of the products from these ventures. A total of 1,094 micro enterprises of different categories has been linked to the social media and has benefitted from the society's online marketing and sales system. In the year 2023-24, SAF units, achieved a total sales volume of Rs 1,128.62 lakh exclusively from the current system of online sales. 295 SAF beneficiaries have participated in various *melas* and exhibitions and attained a total sales volume of Rs 40.49 lakh. *Theeramythri* micro enterprise units have achieved a total annual sales volume of Rs 136.52 crore, during 2023-24.

Snehatheeram Project, a micro credit scheme to fisherwomen through Primary Agricultural Credit Society (PACS) in association with Cooperation Department with an aim to wipe off the exploitation of private financiers has been implemented in Kottayam District. SAF has also availed the voice message services of Reliance Foundation to send the information regarding the application invited for the Development of Micro Enterprises (DME) and JLG Projects to wide reach and helping the fishing community to benefit and avail SAF schemes. With the tie up of Additional Skill Acquisition Programme (ASAP)-Higher Education Department, 'Online course on Digital Media, Marketing and Advertising design' was given to 25 educated young women identified from the fisher community. A total of 125 project clinics were conducted so far with the participation of 338 units comprising of 774 beneficiaries. Medical camps and awareness programmes on gender equality, violence, nutrition, hygiene literacy were conducted in selected areas as part of community wellness intervention in coastal areas. The achievement of various programmes implemented by SAF is given in **Appendix 3.4.12**.

### **Infrastructure**

A fishing harbour is a point of convergence between production and trade and it offers enormous opportunity for the promotion of responsible fisheries. The major components of the fishing harbours are breakwaters, wharf, auction hall, loading area, parking area, approach road and internal roads, compound wall, sanitary facilities, water supply and electrification arrangements. Other amenities such as shop buildings, locker rooms, rest sheds, net mending sheds, workshop buildings are also constructed based on the requirements. Kerala state has 25

### Box 3.4.1 some path breaking achievements of Women's Micro Enterprise in Fisheries

JISH Pickle unit is a DME unit established in the year 2018 under the assistance of Society for Assistance to Fisherwomen (SAF) in Kodungalloor Municipality. The group consists of 4 members. The main products of the group are variety of pickles (Fish, Prawn, Lemon, Mango, Garlic, Ginger, Chilly, Bitter gourd) and items such as prawn roast, prawn chutney powder, dry prawns, and dry fish. They are supplying the products to approximately 16 wholesale dealers and 40 retail shops. The unit is actively marketing their products in online platforms. The unit maintains the quality of products and are sold in attractive packing, labelling ensuring hygienic transportation. The unit actively participates in *Melas/Exhibitions*, generating good revenue and increasing marketing opportunities. Students from Michigan University visited the unit in July 2024 as part of their education programme.

With a view to market the Supplyco Maveli Products through *Theeramythri* Supermarkets and Community Provision Stores, Department of Fisheries in association with Department of Civil Supplies coined the concept of *Theeramaveli*. Now Supplyco subsidized products are made available to coastal population through 10 supermarkets and 5 community provision stores across the State. *Theeramaveli* project is intended to achieve sustainability of *Theeramythri* Supermarkets and Community Provision Stores by acting as an outlet for supplyco Maveli products. In the year 2023-24 a total sales volume of Rs 1,437.78 lakh was achieved by *Theeramaveli* units.

Source: Department of Fisheries, GoK

fishing harbours. Among these, 22 fishing harbours are operational and the works of 3 harbours are progressing. The location of fishing harbours in Kerala and their status are given in **Appendix 3.4.13**.

The total revenue collected from fishing harbours and fish landing centres in 2023-24 was Rs 11.84 crore. Highest revenue collection was from Neendakara harbour followed by Kayamkulam fishing harbour. Together, Neendakara, Kayamkulam, and Thangassery contributed about 60 per cent of the total revenue collection from fishing harbours and fish landing centres in Kerala. The details of earnings from fishing harbours are given in **Appendix 3.4.14**.

Apart from the construction of new fishing harbours, borrowing of the State Government from NABARD-RIDF were used for works like modernisation of existing fishing harbours, construction of fish landing centres, roads, bridges, locker rooms and walkways. As part of RIDF XXVI, four projects amounting to Rs 57.44 crore were sanctioned for additional facilities in Thangassery and Neendakara fishing harbour, expansion and refurbishment of Neendakara fishing harbour (Sakthikulangara side) and additional berthing facilities at Kayamkulam fishing harbour. In RIDF XXVII, four projects amounting to Rs 55.55 crore were sanctioned for providing additional infrastructure facilities in

Thanur, Vellayil, Chellanam fishing harbours and in Valiyazheekkal fish landing centre. Under RIDF XXVIII, two projects amounting to Rs 50.94 crore was sanctioned for modernisation of Alappad Azheekal, Karunagappally and modernisation of Azhikal Fishing Harbour, Kannur. In RIDF XIX, two projects amounting to Rs 28.09 crore were sanctioned for Ponnani Fishing Harbour in Malappuram and Development of Chalil Gopalpetta Fish landing centre in Kannur.

#### **Kerala State Coastal Area Development Corporation**

The Kerala State Coastal Area Development Corporation (KSCADC) has brought tangible improvements in the fisheries sector by creating infrastructure amenities like roads, markets and houses for the fisherfolk. For the last 3 years, KSCADC had undertaken State/NABARD funded works worth Rs 94.94 Crore, CSS works worth Rs 172.70 crore, and KIIFB assisted works worth Rs 715.57 crore including ongoing works of previous years. KSCADC designated as Nodal Agency for Establishment of 'Oceanarium & Marine Biological Museum' at Kerala worth Rs 350 crore approximately and completed the first segment installation on geo-tube off the coast of Poonthura coast (first of a kind in the State), which is nationally acclaimed. The corporation successfully deployed 6,610 artificial reef modules off the coast of 42 fishing villages of Thiruvananthapuram district under Central

(PMMSY) and State schemes. KSCADC has been empanelled as national consultant for solar projects including Soura Project of Kerala State Electricity Board. To bolster the livelihoods of the fisherfolk community, KSCADC has been actively developing state-of-the-art fish marketing infrastructure, including modern fish markets, cold storage facilities, and processing units. KSCADC has successfully established 43 fish markets, two major harbours at Parappanangadi (Rs 112.21 crore) and Chethy (Rs 97.43 crore), two fish landing centres at Prayikkara, Alappuzha and Ajanur, Kasaragode worth Rs 2.29 crore. The agency also established a Seafood restaurant and fish processing plant worth Rs 4 crore at Vizhinjam.

### Key Initiatives of the Fisheries sector in 2023-24

- In order to deliver timely weather warnings to the fishers and give information about the productive fishing ground/area to the fishers, 3 LED Display Boards through Keltron were being installed at Vizhinjam, Munambam, and Beypur Harbours as well as Vizhinjam, Vypin and Beypur fisheries stations (regional centres).
- As a part of reducing pollution and reduction of carbon emission from fishing crafts. 500 kerosene OBMs (out board motors in fishing crafts) were converted to LPG fuel under Plan scheme 2023-24.
- Under the centrally-initiated scheme PMMSY the government is implementing Rs 15 crore scheme to provide 10 deep sea fishing boats to fishing groups of 10 members with the aim of conversion of traditional fishermen to safe mechanized deep-sea fishing.
- As a part of *vidya theeram* project 108 fishers students were given free medical entrance training, civil service coaching provided to 11 fishermen students in the year 2023-24. During the last year 20 guidance programme were also organised for coastal fishermen students for SSLC and plus two courses. In the year 2023-24 an amount of Rs 48.02 crores were expended and a total of 32,100 students were benefitted with this project.
- As a part of Adoption Scheme 17 father and motherless fisher's students were adopted and financial assistance of Rs 13.52 lakh was provided for their graduation completion.
- 13 Medical Camps were organized in association

with Health Department and Local Self-Government to promote health care and anti-drug awareness among coastal fishers. About 15,000 coastal residents benefited from this. In order to save fishers from drug addiction a program called "*lahari vimukthi*" was organised in coastal area with the participation of Excise Department.

- As per '*Punargeham* project', 390 flats were handed over to the selected beneficiaries in the Thiruvananthapuram, Kollam, and Malappuram districts and the construction work of 944 flats is progressing in Thiruvananthapuram, Alappuzha, Malappuram, Kozhikode and Kasaragod districts.
- The scientists at the KUFOS have successfully developed technology for the captive breeding of Indigo Barb (*Prethia Setnai*) an exquisite ornamental fish native to western India, currently facing the threat of extinction due to rampant over fishing.
- Fish and shellfish conservation centers were established in 8 districts of the state.
- Matsyafed entered into technical collaboration in aquaculture with Central Institute of Brackish water Aquaculture (CIBA), Chennai for the establishment of brackish water hatchery (pearl spot) at Palaikkari fish farm.
- Administrative sanction obtained under Fisheries and Aquaculture Infrastructure Development Fund (FIDF) for development of Arthungal Fishing Harbour (balance work), Alappuzha for Rs 15073 lakh and works commenced. This is the first and only project sanctioned under FIDF in Kerala state.
- The Government of Kerala has launched an initiative to clean up Vembanad and Ashtamudi lakes with a view towards protecting and conserving the natural ecosystem of brackish water lakes of the State.

The fisheries sector has a great impact on the economic and social aspects of Kerala. With a very lengthy coastline and numerous inland water bodies, the fishery sector in Kerala offers great possibilities. It is of utmost importance to protect the right of fishermen to do their job without any bounds and lead a secure life. This will be possible only through interventions that recognize and address their real problems. Marine fisheries sector across the globe are going through challenging times due to climate change issues,

change in ocean temperature and the current rate of marine biodiversity loss due to the exploitive fishing practices. By promoting responsible fishing practices, enhancing productivity, and creating better economic opportunities, and offering bright futures the government is striving towards a sustainable and prosperous future for the fisheries sector in Kerala.

## 3.5 WATER RESOURCES

Scientific management of water is vital to India's growth and ecosystem sustainability. The appropriate use of water has a crucial role in managing freshwater resources. World Water Day is celebrated every year on March, 22 to raise awareness about the value of fresh water and the wise use of freshwater resources. The theme for World Water Day 2024 was "Water for prosperity and peace" ensuring the availability and sustainable management of water and sanitation for all, aligning with SDG-6.

### River Basin Planning

Around 90 per cent of rainfall in Kerala occurs during the monsoons, from June to August and October to November, leaving the rest of the year dry. River basins or river catchments (the land area between the source and the mouth of a river, including all of the lands that drain into the river) and coastal and marine systems influenced by catchment discharges are important geographical units for considering the management of wetlands and water resources. Wetlands play critical roles in river basin management and conversely, land and water-related human activities within river basins can have very significant influences on the ecological character of wetlands in those basins.

The availability of water varies widely across space. The river basins in Kerala are not equally productive, as the water yield depends on rainfall, catchment characteristics like terrain, soil, drainage pattern, and land use. The catchment character of the drainage basins, rainfall distribution, social and ecological functions vary depending upon

the demographics and ecosystem of the region. To address the water management issues of a densely populated State like Kerala, an Integrated Water Resources Management (IWRM) system is necessary. The State Government has taken a policy decision to constitute a River Basin Conservation Management Authority (RBCMA) for the conservation and management of rivers in Kerala in line with Integrated Water Resources Management. The draft bill is under consideration of the State Government.

During the 14th Five-Year Plan period, the Irrigation Design and Research Board (IDRB) wing of the Irrigation Department has been carrying out works to increase the density of hydro-met network (especially in real time) for assessing the hydrological balance in the river basins of Kerala. This, along with the hydrological analysis and decision support systems, will help the Water Resources Department and Government of Kerala in the identification of infrastructure requirements and soft solutions pertaining to water conservation, flood management, reservoir operations, water quality, basin management, water distribution and governance and so on.

The Irrigation Department has started renovation of tanks and ponds as part of *Haritha Keralam Mission* under *Nava Keralam Karmapadhatthi – II*. The Mission aims to enhance water conservation and ensure the availability of clean drinking and irrigation water. As part of it, the Department has initiated plans to assess and rehabilitate the existing water bodies, improve the capacity to



store monsoon rainwater and enhance agricultural productivity. The renovation efforts of de-siltation, repairing of structures and restoring ecological balance of the water bodies will support to achieve sustainable agricultural practices and rural livelihoods.

The bathymetric study by Kerala Engineering Research Institute (KERI), Peechi shows an average 15 per cent sedimentation in the reservoirs of Kerala. The State Government has issued Standard Operating Procedure (SOP) for de-siltation of Dams and Reservoirs through turnkey and work contract methods. Accordingly 1,55,941 m<sup>3</sup> silt was removed from Mangalam Reservoir in Palakkad District. In addition to this, steps were taken to remove the silt, sand and other debris accumulated near regulators and check dams. The works are in different stages of progress.

**Impact of Climate Change**

Water and climate change are inevitably linked. Climate change has made extreme weather events such as floods and droughts more likely and more severe. Drought and flood risks and associated damages are projected to further increase with every degree of global warming, as stated by the Intergovernmental Panel on Climate Change (IPCC).

The actual rainfall received in the State during the South West Monsoon season 2024 (June 1, 2024 to September 30, 2024) was 1748 mm as

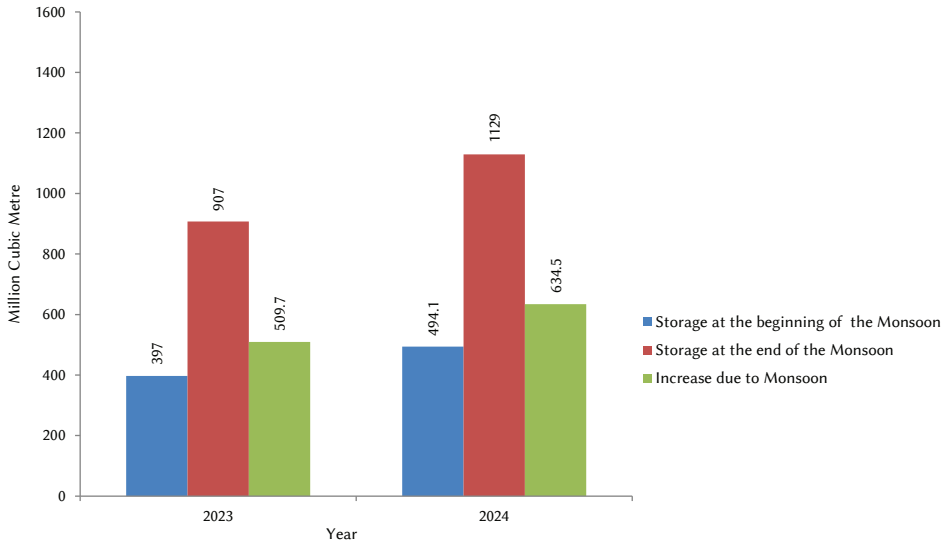
against the normal rainfall of 2019 mm, showing a decrease in (-13 per cent) rainfall. Kannur District has recorded the highest rainfall of 3024 mm and Thiruvananthapuram recorded the lowest rainfall of 866 mm. Alappuzha, Ernakulam, Idukki and Wayanad have recorded deficient rainfall and all other Districts received normal rainfall.

The storage position of dams/reservoirs of the Irrigation Department at the beginning and end of monsoon (June and September) is given in **Figure 3.5.1**. The storage-level at the end of the monsoon is marked at 907 million cubic metres and 1,129 million cubic metres in 2023 and 2024 respectively (up to September 20, 2024). Post monsoon, the storage-level has increased by 509.7 million cubic metres in 2023, whereas the increase is only by 634.5 million cubic metres in 2024 (up to September 20, 2024). Appendix 3.5.1 shows the dam storage status (before and after monsoon) for the period 2023 and 2024.

**Water body census**

The first water body census was conducted across the country by the Ministry of Jal Shakti with reference year 2017-18. In the census, 55,734 water bodies have been enumerated in the State of Kerala, of which majority (49,725) are in rural areas and remaining (6,009) in urban areas. Out of 55,734 water bodies, the information on ‘water spread area’ was reported for 55,725 water bodies, of which 97 per cent of water bodies have water spread area less than 0.5 hectare and 1.9 per cent

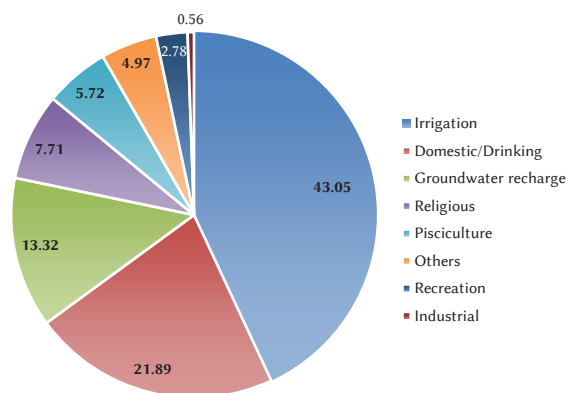
**Figure 3.5.1** Storage Position of Dams/Reservoirs under Irrigation Department, Kerala in 2023 and 2024



Source: Irrigation Department (IDRB), GoK

have water spread area between 0.5 to 1.0 hectares. Water bodies having a water spread area more than 50 hectares account for only 0.1 per cent. The percentage distribution of water-bodies by the type of use is given in **Figure 3.5.2**

**Figure 3.5.2** Percentage distribution of water-bodies by type of use



Source: Report on first census of water bodies, Ministry of Jal Shakti

The Second water body census was started with the reference year 2023-24. It aims to collect information on water bodies across India, including ponds, tanks and reservoirs. These water bodies play a critical role in supporting local ecosystems, groundwater recharge, agriculture, fisheries and biodiversity, while also serving as a key source of drinking water for many communities. The census will map the number, type and condition of water bodies, along with their usage, ownership, and encroachments, if any. It will also assess factors affecting the sustainability of these water resources, such as pollution, siltation, and over-extraction.

### First Spring Census

The First Spring Census is an initiative aimed at documenting and preserving India's natural springs, a crucial water source in many regions, particularly in hilly and tribal areas. Springs provide drinking water, support agriculture, and help maintain ecological balance. However, due to climate change, deforestation, and unsustainable land use practices, many springs are drying up or becoming polluted. The Spring Census seeks to map these springs, assess their condition, and understand their water yield, quality, and recharge patterns. It will involve community participation, scientific data collection, and collaboration with local authorities. This data will be used to formulate policies for the conservation,

rejuvenation, and sustainable management of spring water resources, ensuring long-term water security for affected communities. The Ground Water Department is the Nodal Department for conducting the Spring Census.

### Irrigation Status in the State

As per the assessment of the Directorate of Economics and Statistics, the extent of irrigation in the State in 2022-23 had slightly varied when compared to the previous year. As reported, the net area irrigated in the State in 2023-24 increased to 4.19 lakh ha as compared to the 2022-23 figure of 4.18 lakh ha, showing a marginal increase of 0.23 per cent. The percentage of net area irrigated to net area sown had risen from 19.9 (2021-22) to 21.3 (2023-24).

However, a decline is reflected in the Gross Irrigated area with a fall in the area from 5.61 lakh ha (2021-22) to 5.31 lakh ha (2023-24). This decline is also reflected in the percentage of gross irrigated area to gross cropped area which fell from 22.3 per cent (2021-22) to 21 per cent in (2023-24).

Among the various sources of irrigation, the net area irrigated through wells (including bore wells) leads with 1.83 lakh ha during the review period, whereas the benefitted area was 1.77 lakh ha in 2022-23. The extent of net area irrigated through Government canals also showed a decrease from 0.81 lakh ha (2022-23) to 0.77 lakh ha (2023-24). Details on the net area irrigated (source-wise and District-wise) are given in **Appendix 3.5.2** and **Appendix 3.5.3**.

Crop-wise, paddy and coconut were the crops most benefitted through irrigation. The gross area irrigated under paddy had slightly increased to 1.60 lakh ha (2023-24) from 1.53 lakh ha (2022-23). But the area irrigated under coconut shows a significant increase to 1.63 lakh ha (2023-24) from 1.56 lakh ha (2022-23). Compared to the previous year, the vegetables irrigated area had remained the same 0.29 lakh ha (2023-24). But banana had benefitted through irrigation reaching 0.42 lakh ha (2023-24) from 0.40 lakh ha (2022-23). Details on gross area irrigated and crops benefitted are given in **Appendix 3.5.4** and **Appendix 3.5.5**.

### Status of Major and Medium Irrigation Projects

Agriculture and irrigation are intricately linked, as irrigation plays a crucial role in enhancing crop

productivity and ensuring food security. Both Major and Minor irrigations are vital for optimising agricultural output, particularly, in regions prone to drought or irregular rainfall, thereby sustaining livelihood and promoting economic growth. The implementation progress of Idamalayar, Karapuzha and Banasurasagar irrigation projects are described below:

The main canal of the Idamalayar Irrigation Project, having a length of 32.278 km was completed for irrigating an ayacut of 999 ha. The construction of railway crossing portion of Low-Level Canal (LLC) at ch.13,818.5m in Angamaly Municipality and the construction of tail end discharge at ch.14,623m in Nedumbassery Panchayat has been completed. The construction of flush escape (ch. 14,623) has been started and the portion of Bhoothamkutty branch canal (ch. 3,550m) and its off take point (ch. 909 km) has to be modified as link canal. Out of the total length of 7.500 km, 2.035 km of the link canal was completed. Steps for augmenting the benefit of field channels and natural thodu have been completed and additional 85 Ha ayacut was achieved. For stabilising the existing ayacuts, maintenance of damaged portions of canals were carried out. In 2023-24, 4,270 ha ayacut has been achieved.

The Karapuzha project, originally envisaged as an irrigation project has now transformed into a multi-purpose project with drinking water supply, tourism, power generation and fisheries projects. In the Karapuzha Irrigation project, the entire Left Bank Main Canal (LBMC) up to the tail end (ch. 16,740 m) is now made functional for irrigating an ayacut of 245 ha. Water distribution up to the tail end of LBMC was done on March 15, 2023 on a trial basis. Having completed the rectification works of the breach in the Right Bank Main Canal (RBMC) between ch.7,673m and 7,888m, water distribution up to the tail end (ch.8,805m) is being done in 2023, thereby irrigating 331 ha. Thus, the water distribution through main canals and Arimunda distributary (60.31 ha) helped in achieving a total ayacut of 636.5 ha. Moreover, water distribution through Kolliyil Branch Canal (up to ch. 1,540 m) was also done on a trial basis on March 8, 2023. Thus in 2022-23, both the main canals (25.5 km) and the Kollayil Branch Canal (1.5 km) of the Karapuzha project were made functional for the first time. Water distribution through both the main Canals, Left Bank Main

Canal of 16.7 km length serving an ayacut of 245.2 ha (ch. 0-16,740) and Right Bank Main Canal of 8805 m length serving an ayacut of 330 ha (ch.0-8,805) up to tail end has become possible as rectification works of canal breach at ch.4,800m of Left Bank Main Canal (LBMC) had been completed in 2023-24. The completion of major works at ch.1,800m and the ongoing rectification works of the Padinjareveedu Branch Canal has enabled water availability for 358 hectares of agricultural land. The full commissioning of the Karapuzha irrigation project will benefit the local farmers, particularly, the most populated Tribal/Adivasi people of Wayanad District.

A major constraint of the Banasurasagar Irrigation Project was the bottleneck from ch.1,130m to 1,500m in the Main Canal. The Department has succeeded in overcoming this constraint and 39 per cent works have been completed. Additional 0.56 ha of land is required for the completion of Kappumkunnu distributary. As an initial procedure of land acquisition, peg marking of 0.1 ha of land has been done in Kappumkunnu distributary. In 2023-24, water test was conducted in the aqueduct portion of the Main Canal from ch. 0m to ch. 150m. Completion of 1101m of Kappumkunnu distributary, 585 m of Pearl distributary and 1,190 m of Venniyode branch canal, land acquisition and peg marking of 0.4 ha of land in Kuppadithara distributary and completion of soil investigation for the aqueduct portion of various distributaries are few other project related activities carried out during the period.

### **First Major and Medium Irrigation Projects Census**

The first Major and Medium Irrigation Projects Census aims to systematically collect data on the operational status and performance of major and medium irrigation projects across India. These projects, which play a critical role in supporting agriculture, providing water for drinking and industrial use, and maintaining water security, have faced challenges like aging infrastructure, inefficient water management, and environmental concerns. The census will gather detailed information on water availability, irrigation capacity, project condition, and socio-economic impacts. It will also assess the challenges and potential for modernisation. The data collected will help the Government to develop strategies for better water resource management, improved irrigation efficiency, and sustainable development

of water infrastructure, ensuring better utilisation of water resources and enhanced agricultural productivity. This census marks a significant step toward addressing water scarcity issues and optimising water use in the country.

### Minor Irrigation

Minor irrigation (MI) schemes have contributed substantially to augment the irrigation potential in the State. Minor Irrigation has its own importance due to low gestation, less investment and quick benefit. Kerala's undulating terrain makes major irrigation projects expensive, giving minor irrigation schemes a definite advantage over the Major Irrigation Schemes. The importance given to Minor Irrigation during the 13th Five Year Plan period is being continued during the 14th Plan period.

### Surface Water

During the 13th Five Year Plan period, through various surface water MI schemes, 23,601 ha of ayacut was achieved. The net area benefitted through MI schemes (surface water) in 2023-24 was 4179 ha. Details of physical achievement of MI schemes (surface water) during 2022-23 to 2023-24 are given in Appendix 3.5.6. Details of completed works under different tranches of RIDF are given in Appendix 3.5.7. NABARD has sanctioned 1,631 schemes under various tranches including RIDF XXIX. Of these, 1,364 schemes are completed and 17 are in progress. Remaining schemes are dropped due to non-feasibility reasons.

### Minor Irrigation Census

The Minor Irrigation Census being conducted by the Govt. of India provides detailed information on various parameters such as irrigation sources, Irrigation Potential Created (I.P.C.), Irrigation Potential Utilised (I.P.U.), various energy sources, and devices for lifting water.

As per the 6th Census of Minor Irrigation (MI) schemes with reference year 2017-18, published by the Ministry of Jal Shakti, Kerala has 92,574 MI schemes. This includes 67.5 per cent (62,453) Ground Water (GW) schemes and 32.5 per cent (30,121) Surface Water (SW) schemes. There has been a decrease to the tune of 10.7 per cent with 92,574 schemes in the 6th MI census, when compared to 1,03,657 schemes in the 5th MI census. It is reported that the decline is reflected in GW schemes (24.3 per cent), whereas SW schemes have reported a growth of 42.2 per cent.

Data on the Irrigation Potential Created (IPC) through MI structures show that there is a decrease of 26.9 per cent in the State during 6th MI census as compared to 5th MI Census. IPC during 5th MI Census was 2,48,300 ha whereas it declined to 1,81,611 ha in 6th MI Census. Similarly, Irrigation Potential Utilised (IPU) has also decreased by 23.4 per cent as per the data reflected in the 6th MI census.

**Table 3.5.1** Scheme-wise ratio of IPU to IPC in Kerala

MI structures	IPC	IPU	Ratio of IPU/IPC
Dugwell	27,711	26,929	0.97
Shallow Tubewell	1,313	1,294	0.98
Medium Tubewell	4,143	4,086	0.98
Deep Tubewell	2,179	2,141	0.98
Surface flow	79,499	76,379	0.96
Surface lift	66,766	64,171	0.96

Source: 6th MI Census Report, Ministry of Jal Shakti

The 7th Minor Irrigation Census, started with reference year 2023-24, focuses on collecting comprehensive data about India's minor irrigation structures. Minor irrigation systems are vital for supporting agriculture, particularly in rural and semi-arid regions, as they provide localised water sources to small and marginal farmers. The census aims to capture data on the number, type, and condition of these irrigation structures, as well as information on their water sources, utilisation, and efficiency.

### Groundwater Resources

As per the Dynamic Groundwater Resource Assessment Report for the year 2023, the total annual groundwater recharge for the entire country is 449.08 billion cubic meters (BCM) and the annual extractable groundwater resources for the entire country is 407.21 BCM. Rainfall recharge accounts for about 81.91 per cent of the annual recharge, and the rest contributed from other sources. The overall stage of Groundwater extraction in the country is 59.26 per cent.

In Kerala, the total annual groundwater recharge has been estimated as 5.5 BCM and the annual extractable groundwater resource is 5 BCM. The stage of groundwater extraction for the State is 54.6 per cent. As compared to 2022 assessment,

total annual groundwater recharge of the State has decreased from 5.7 to 5.5 BCM and annual extractable groundwater resources from 5.2 to 5 BCM. The stage of ground water extraction has increased from 52.6 per cent to 54.6 per cent. Out of 152 assessed units in the State, 3 blocks (Chittur and Malampuzha blocks of Palakkad District and Kasaragod block of Kasaragod District) have been categorised as “Critical”; 30 blocks are “Semi-critical” and 119 blocks are in “Safe” category. The number of Semi-critical blocks has increased from 27 to 30. Varkala, Sasthamkotta and Kozhikode blocks have moved from “Safe” to “Semi-critical” blocks. Details on the total annual groundwater recharge, net annual ground water availability and stages of ground water development in the State are given in **Appendix 3.5.8**.

The State Ground Water Department is the nodal agency for groundwater development and management in the State and it extends demand-based services to private individuals and Government agencies. Groundwater conservation and recharge is a major activity being implemented by the Department to sustain groundwater availability. The physical achievement of groundwater development schemes from 2020-21 to 2023-24 is given in **Appendix 3.5.9**.

For ensuring the quality of Groundwater, the Department has initiated measures to formulate a State-wide groundwater quality plan. From each District, one block severely affected by water quality issues will be selected for collection of water samples from observation wells. The samples will be quality tested in the respective regional labs of the department. A total of 860 samples were collected and analysed from Idukki, Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha, Ernakulam and Kottayam Districts. The data thus obtained will help in addressing the issues by suggesting suitable remedial measures and also by making the public aware of the situation. Also, during the period, the Department has initiated the conduct of well census for the collection of ground water abstraction data. Through Kudumbasree Mission, data collection was carried out partially in 39 blocks using mobile app ‘Neerarivu’, thereby completing 45 per cent of data collection. The validated data will be used for accurate budgeting of water resources of the particular block.

The Department has undertaken hydrological/hydrogeological investigation special studies for the proposed underground tunnel construction for railway line connection between Balaramapuram and Vizhinjam. The study was proposed by the Secretary, Fisheries and Ports and Managing Director, Vizhinjam International Seaport Ltd. (VISL) for obtaining clearance from the Ministry of Environment, Forest and Climate Change (MoEF). A special team, constituted by the department had conducted the study and submitted the detailed report to VISL in December, 2021. The project got Environmental Clearance from MoEF in July, 2024.

### **Community Micro Irrigation Projects**

Micro irrigation projects require multidisciplinary engineering expertise, with instrumentation engineering. Each region necessitates a tailored design based on its topography and the crops to be cultivated. The quantity of water required for the crops varies according to the local climate, which necessitates differences in the design of control of units and automation units. The Kerala Industrial Infrastructure Development Corporation (KIIDC) provides necessary technical knowledge to the Irrigation Department for installing automatic control systems and components including filter units for effectively implementing the micro irrigation projects. A pilot study was undertaken at Dasanakara in Pulpally Panchayat. Two other projects have also been initiated at the Community Micro Irrigation Project at Vazhavatta – Cheepram in Muttill Panchayat and ward No.1 of Kuruvilangad Panchayat.

### **Flood Management**

The Department recognises the increasing risk of flooding in Urban areas due to rapid urbanisation and climate change. As part of flood mitigation works, construction of flood bunds, enhancement of drainage systems, and development of small-scale reservoirs to manage excess rainwater are undertaken. In urban areas like Thiruvananthapuram and Kochi, specific strategies to create a resilient urban environment capable of withstanding severe weather events while minimising disruption to daily life will be implemented.

### Box 3.5.1 Flood Forecasting and Early Warning System (FFEWS)

Flood Forecasting and Early Warning System (FFEWS) acts as an end-to-end system for issuing timely warnings to facilitate disaster preparedness. River basins vulnerable to flooding and damages such as Periyar, Manimala, Chalakudy, Pamba and Achenkovil were identified for the initial development of Flood Early Warning System. Of these, flood early warning systems in Periyar and Chalakudy were successfully developed under the National Hydrology Project. The forecast data and bulletins are being disseminated to Kerala State Disaster Management Authority and Inter State Water Cell.

The Resilient Kerala Program for Results (PforR), for implementation in the State during 2021-2026, aims at enhancing Kerala's resilience against the impact of climate change and natural disasters. Pamba Flood Forecasting and Integrated Reservoir Operations System (Pamba FF&IROS) was developed by the Department as part of RK (PforR) DLI-7. This has been approved by the World Bank's independent verifying authority. Specific interventions in Pamba basin such as basin investment planning, formulation of a decision support framework for integrated basin investment planning, environment flow assessment and integrated reservoir operation systems are envisaged as part of this.

The Shoreline Management Plan of DLI-10 is to enhance Kerala's resilience to climate change and natural disasters, particularly along its coastline. The primary objective of DLI 10 is to draft a comprehensive Shoreline Management Plan (SMP) and execute pilot investment to address coastal erosion in vulnerable stretches.

As a separate initiative, Centre for Water Resources Development and Management (CWRDM) has been developing a flood forecasting and early warning system for Meenachil river as part of their Centre of Excellence in water induced disasters.

With the assistance of the Rebuild Kerala Initiative, the Irrigation Department has undertaken various flood-related works, such as post-flood repair and maintenance, enhancement of resilience against the impact of climate change and natural disasters, DPR preparation of 'Room for River', and launch of the Kerala Water Resources Information System. In the context of climate change, the greatest challenge is to forecast hydrologic extremes leading to floods and droughts and salinity intrusion and inundation due to sea-level rise. On this basis, forecasting and flood early warning systems assume importance.

As part of the strategic partnership on water between Kerala and the Netherlands, the officers of the Irrigation Department and other stakeholder Departments were given training on river basin planning. The objective of the first phase of training given by the IHE-Delft Institute for Water Education, Netherlands, in September, 2022 was to identify major problems in the Pamba basin, with a specific focus on floods and water security. The second phase of training by IHE-Delft was held in May, 2023 on stakeholder participation and the effects of climate change.

#### Flood Control in Kuttanad

The flooding in Kuttanad can be controlled to an extent by clearing the obstructions and encroachments in the leading channel and also by protecting both sides of the leading channel, for which Administrative Sanction of Rs 70 crore has been issued. The works are presently in an ongoing stage. For implementing 'Room for the River Project', IIT Chennai has suggested various scenarios through mathematical modelling to alleviate flooding in the Kuttanad region. The activities envisaged through the programme include the construction of flood regulators, construction, renovation and development of bypass channels towards Thottappally, and raising and strengthening the outer bunds along the banks of the leading channel.

As flood control measures, various infrastructural development works such as strengthening of outer bunds, construction of motor thara (platform), motor shed, pile culvert, box culvert, and desiltation of *vachalibodu* (common drain) through the paddy fields are executed for the development of *padasekharams* in Kuttanad, Upper Kuttanad, and Onattukara regions. In 2023-24, 42 works were undertaken, of which four have been completed.

Physical achievements during the period include bund formation for a length of 1,225 m, desiltation works of *thodu* (3,376 m) and renovation of the retaining wall (1,225 m), thereby benefitting an area of 193 ha.

### **Coastal Protection**

Kerala, having a coastline of 576 km, requires efficient coastal management measures with scientific study and site-specific design. The National Centre for Coastal Research (NCCR) was entrusted to undertake site-specific studies for the identified 10 hotspots – Shanghumugham, Kollamkode, Alappad, Ottamassery, Chellanam, Kodungallur, Ponnani, Kappad, Thalassery, and Valiyaparamba. As a priority, the first phase of coastal protection works in Chellanam was done by adopting a hybrid protection system comprising groynes and seawall using tetrapods. The project envisages the reformation of the sea wall for 10 km using tetrapods and the construction of groyne field at Bazaar and Kannamalli in Chellanam Panchayat. In the first phase, reformation work of 7.4 km stretch coastal protection work comprising sea wall along with two series of groynes at Bazar and Kannamaly is 95 per cent completed. Also, a 3 km walkway of Chellanam harbour in Puthenthode area has been completed. This has succeeded in controlling the monsoon effects in 2022 and 2023. The proposal for reformation work of Phase II Chellanam of 3.4 km, from Puthenthodu to Cheriya Kadavu CMS bridge using tetrapod, has been submitted to the Government. The design and Detailed Project Report (DPR) preparation for Kollamkode coastal stretch in Thiruvananthapuram was completed. The project will be implemented through the financial assistance of Kerala Infrastructure Investment Fund Board (KIIFB). The scientific study and design for other vulnerable hotspots will be taken up on a priority basis.

Maintaining and reforming existing coastal protection works is a priority for the department. Planned activities include assessing the structural integrity of sea walls and groynes, followed by necessary repairs and enhancements to withstand climate impacts. The department aims to allocate sufficient funds to ensure these structures remain effective against erosion and flooding, thereby protecting coastal communities and infrastructure.

In order to help to roll out the concept of Integrated Coastal Zone Management (ICZM)

in Kerala, a training needs assessment workshop aiming to identify key factors and their possible training needs to facilitate this integration was held in November, 2023. The main topics identified for possible inclusion in the training program are coastal ecosystems, socio-economic and environmental impacts of coastal interventions, data collection and validation, and the design of soft solutions. These areas are critical for achieving the targets related to coastal management, protection and sustainable development, ensuring compliance with World Bank requirements, facilitating fund disbursement, advancing the objectives of the Resilient Kerala Program, and promoting long-term resilience and prosperity throughout the State.

## 3.6 FORESTRY AND WILDLIFE

The Global Forest Goals Report 2021 by the United Nations states that approximately 1.6 billion people depend on forests for their livelihoods, subsistence, employment, and income. However, deforestation and land degradation are jeopardising these vital ecosystem services, leading to a reduction in the productivity of 23 per cent of global land areas. The United Nations Environment Programme (UNEP) emphasises that limiting the global temperature rise to 1.5°C will only be possible by halting deforestation, enhancing forest management practices, and increasing reforestation efforts. The World Bank's 2022 Report, State of the World's Forests, identifies three interconnected pathways to halt deforestation and preserve forests. These pathways include: restoring degraded lands and expanding agroforestry, promoting the sustainable use of forests, and developing green value chains. By pursuing these approaches in a balanced way, countries can generate sustainable economic and social benefits for rural communities, meet the growing global demand for forest produce, and address critical environmental challenges.

### Forest cover

According to the India State of Forest Report (ISFR) 2021, of Forest Survey of India's (FSI), India's forest cover extends over 7.1 lakh sq km, which shares about 21.7 per cent of total countries' geographical area. The tree cover is estimated at 95,748 sq km, which constitutes 2.9 per cent of the total area. The total forest and tree cover in the country spans 8.09 lakh sq km, accounting for 24.6 per cent of the nation's geographical area. The

report highlights a 0.3 per cent increase in forest and tree cover at the national level between 2019 and 2021. The National Forest Policy of 1988 aims to bring 33 per cent of the country's land under forest and tree cover.

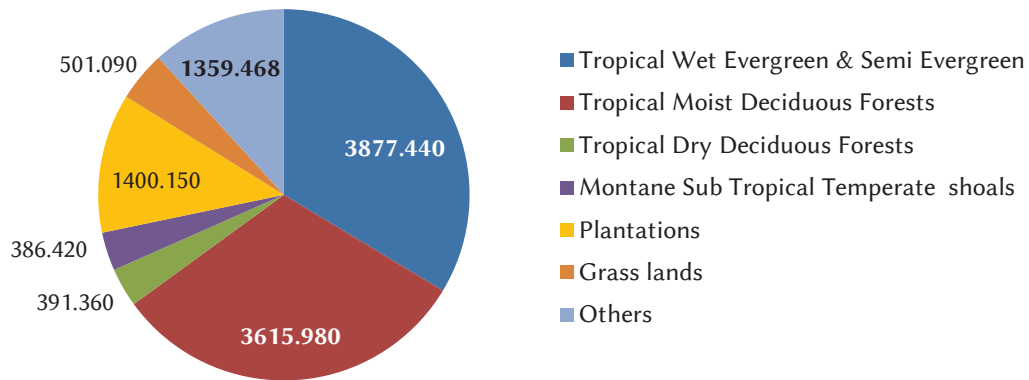
Though Kerala's land area constitutes 1.2 per cent of India's total area, its forest cover (based on ISFR figures) accounts for 2.98 per cent of the national forest area. The recorded forest area in the State is 11531.9 sq km, which is approximately 29.7 per cent of Kerala's total geographical area (38,863 sq km) (Kerala Forest Department, GoK). The types of forest in Kerala are shown in **Figure 3.6.1**.

However, the actual forest area, including regions outside reserved forests, is significantly higher. According to the 2021 assessment by the Forest Survey of India (FSI), the total area under forests, including plantations, is 21,253 sq km, covering 54.7 per cent of the State's geographical area. While Kerala has a relatively high percentage of forest cover, the State's dense population puts greater pressure on its forest resources. According to FSI data, Kerala's forest cover grew by 0.5 per cent between 2019 and 2021, adding 109 sq km. The **Figure: 3.6.2** shows the growth of forest in Kerala.

As per FSI estimates, the total carbon stock in Kerala's forests, including trees outside forests covering more than 1 hectare, is 205.5 million tonnes (equivalent to 753.6 million tonnes of carbon dioxide), constituting 2.8 per cent of India's total forest carbon stock.



**Figure 3.6.1** Types of forest in Kerala



Source: Forest and Wildlife Department, GoK

Among the districts in the State, Idukki has the highest forest cover of 3,155 sq km, followed by Palakkad with 2,104 sq km, and Malappuram with 1,984 sq km. While considering forest area as a percentage to geographical area, Wayanad districts has 74.2 per cent of forest cover, followed by Pathanamthitta with 73.5 per cent. **Figure: 3.6.3** shows district-wise forest cover. Details are in **Appendix 3.6.1**.

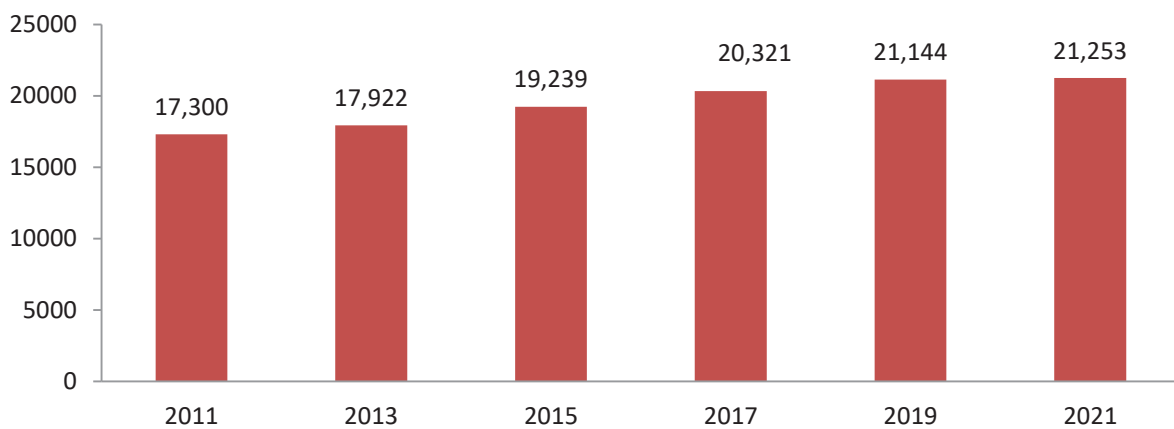
In the face of current water scarcity and climate change, forests play an increasingly vital role in mitigating ecological and economic vulnerabilities. The 14th Five-Year Plan emphasises forest management for public benefits, with a focus on water security, biodiversity conservation, local livelihoods, and social objectives. In 2023-24, key priorities included improving water security, mitigating human-animal conflicts, safeguarding the lives and livelihoods of forest-dependent communities, and preserving forests as a defence against climate change.

### Major initiatives of the Forest Department in 2023-24

#### Management of natural forests

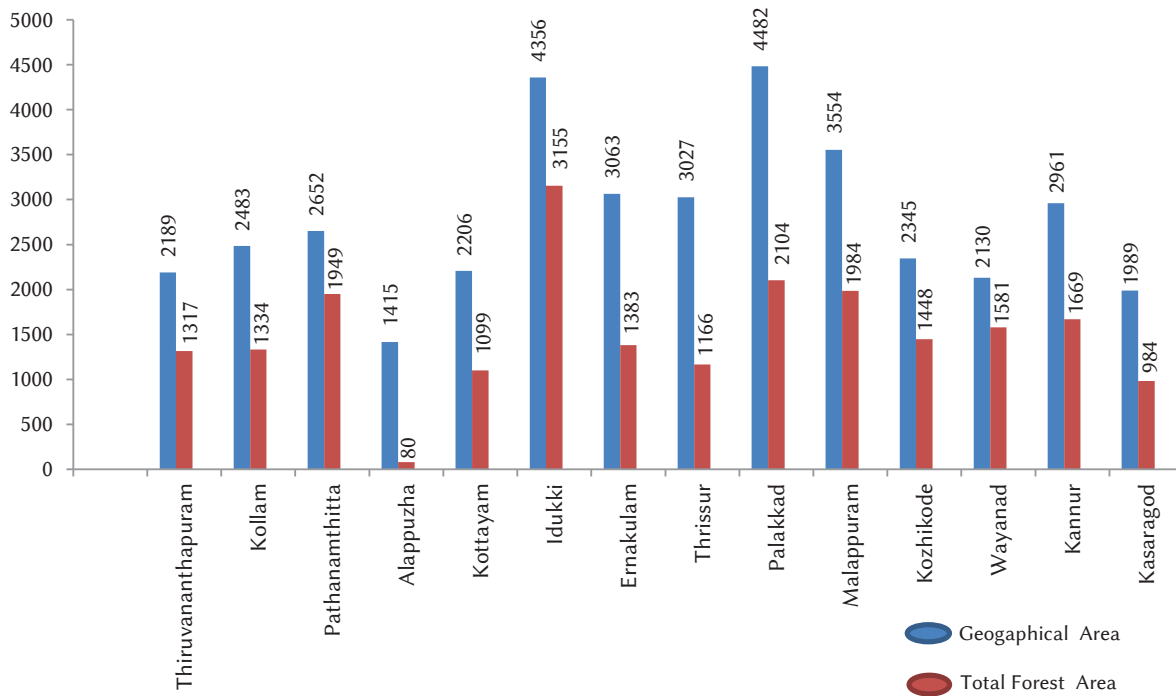
Kerala's natural forests are crucial for maintaining ecological balance and also for their significant cultural, environmental, and economic contributions. The management of natural forests in the State involves conducting surveys and demarcating forest boundaries, safeguarding against encroachments and illegal activities, implementing forest fire prevention measures, conserving soil and moisture, and protecting special habitats. Additionally, it covers strengthening Rapid Response Teams (RRT) and Elephant Driving Teams to support forest-dependent communities. The programmes implemented aim at protection from encroachments, poaching and tree felling, protection from biotic interference and fire, river bank protection, enhanced involvement of tribal communities in forest management, rehabilitation

**Figure 3.6.2** Forest Cover growth (sq.km) in Kerala



Source: Forest and Wildlife Department, GoK

**Figure 3.6.3** District-wise Forest Cover (sq. km)



Source: India State of Forest Report (ISFR)-2021

of degraded forest areas and protection of fragile eco-systems, and participatory forest management. In 2023-24, major activities of the Forest Department included forest protection, safeguarding special ecosystems, ganja cultivation, and protecting sandalwood areas. A total of 567.58 km of fire lines were created and maintained during this period as part of fire protection efforts. Fire protection efforts were carried out through Vana Samrakshana Samithis (VSS) and Eco-Development Committees (EDC). Along with the improvement of degraded forest, special attention was given to protection of fragile and unique ecosystems like shola forest, wetlands, mangroves, sacred groves, etc. To effectively tackle issues such as organised encroachment and smuggling, one unit of the Rapid Action Force (RAF) has been established in Nilambur in the Northern Region, and another in Konni in the Southern Region. The consolidation of forest areas and permanent demarcation of forest boundaries are essential for effective management forest areas. The construction of boundary walls is an effective measure in reducing human-wildlife conflict. Establishing clear boundaries through the installation of permanent cairns and the construction of stone walls in sensitive regions

can protect forests and deter encroachment. In support of these boundary consolidation efforts to prevent encroachment, a total of 1,528 permanent cairns were built during 2023-24. The maintenance of forest roads plays a crucial role in forest protection. In 2023-24, the Forest Department maintained around 5,130.1 km of roads. Community participation in forest management is facilitated through 427 VSS and 213 EDC, promoting sustainable forest conservation and local involvement.

### Improving the Productivity of Plantations

The department is actively involved in creating new plantations to enhance future income. In 2023-24, a total of 430.5 hectares were planted under various schemes. Additionally, around 21.3 lakh seedlings were raised and distributed to the public. A system aimed at enhancing productivity through the application of scientific management practices has been adopted. Forest plantation management has been streamlined to focus on high-productivity areas, ensuring that intensive management is applied to improve soil conditions and yield. Species-wise area under forest plantation is provided in **Appendix 3.6.2**.

### Management of human-wildlife interface

One of the primary challenges in wildlife management is the issue of negative interactions between humans and wildlife, commonly referred to as human-wildlife conflict. This conflict often manifests in various forms, including human injuries and fatalities, crop destruction, livestock predation, and damage to property. It has been increasing year after year. Several factors have been identified as contributors to human-wildlife conflict, including population growth, habitat loss and fragmentation, declining forest quality, changes in cropping patterns, and issues related to climate change. Human-wildlife conflict has been reported across the State from almost all divisions, but it is especially severe in areas like Wayanad.

Elephants cause most damage to lives and crops in the fringe areas of Kerala's forests. Other wildlife such as tigers, leopards, monkeys, wild pigs, and peacocks, also cause significant threats to people living near the forest. To effectively reduce human-wildlife conflict, a comprehensive strategy incorporating both long-term and short-term solutions, along with prevention and mitigation efforts is needed. The rise in human-wildlife conflicts has led to a significant increase in the number of compensation claims. In 2023-24, 8,438 compensation claims for victims of wildlife attacks were settled, with an amount of Rs.21.79 crore distributed as compensation. Details are given in **Table 3.6.1**.

**Table 3.6.1** Details of adverse incidents of human-wildlife interface reported and compensation paid in 2023-24

Incidents	Total Incidents (in number)	Compensation paid (in Rs lakh)
Human Death	94	709.26
Human Injured	1603	603.41
Cattle Death	633	230.11
Crop Damage & Property Loss	6108	637.02
<b>Total</b>	<b>8438</b>	<b>2179.80</b>

Source: Forest and Wildlife Department, GoK

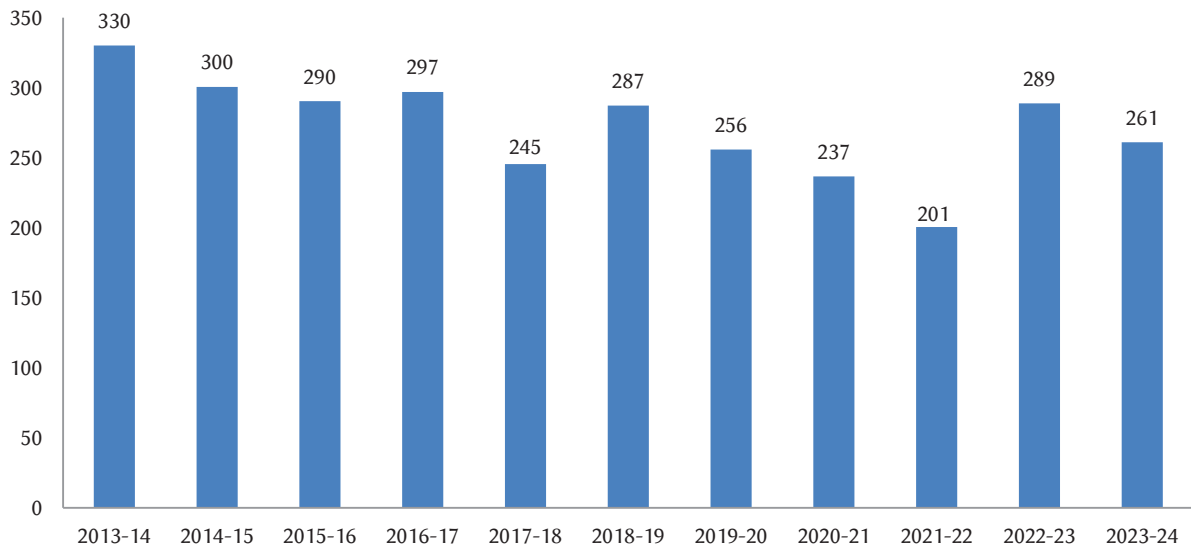
Navakiranam, launched in 2019 under the Rebuild Kerala Initiative and KIIFB, is a key government project aimed at voluntarily relocating non-tribal settlements from forest areas. The initiative addresses issues such as severe human-

wildlife conflict, frequent natural disasters, and limited access to essential services. Under the KIIFB and Rebuild Kerala Development Programme(RKDP) schemes, 783 families have benefited from the voluntary relocation initiative, with a total of Rs. 103.8 crores allocated for the process. In return, the eligible families have surrendered 155.5 hectares of land to the Kerala Forest Department. The department is implementing measures to reduce human-wildlife conflict by increasing the construction of solar-powered fences, hanging fences, and elephant-proof trenches. Rapid Response Teams (RRT) have been formed to address human-animal conflicts in Malappuram, Kannur, Palakkad, Wayanad, Pathanamthitta, Peppara, Kozhikode, and Mannarkkad. The residential enclosures of Rosemala and Kattilappara in the Shenduruny division have been secured with solar fencing. In the Thiruvananthapuram Wildlife Division during 2023-24, necessary measures were taken to maintain trenches over a length of 950m, and hanging solar fencing was installed over a distance of 900m from Puravimala to Njarakavu. In 2023-24, under the scheme 'measures to reduce human-animal conflict,' the maintenance of elephant-proof trenches in 1.17 km was completed, solar power fencing in 138.559 km was constructed, 1.5 km of elephant-proof wall was built, and 59.2 km of solar hanging fencing was constructed. Twenty-eight Rapid Response Teams (RRTs) have been established across the State. The Forest Department, with the support of Jana Jagratha Samithis (JJS), Vana Samrakshana Samithis (VSSs), and Eco Development Committees (EDCs), and in collaboration with LSGs and line departments, manages conflict-related issues in the fringe zone.

### Forest Revenue

The Forest Department makes a significant contribution to the State's non-tax revenue. In 2023-24, the department generated Rs 261 crore through the sale of timber and other forest products. The majority of this revenue came from timber sales, which amounted to Rs 234.5 crore, accounting for 89.8 per cent of the total forest revenue. The production of sandalwood rose by 10,083.2 kg during 2023-24. Additionally, teak production also saw an increase, with a growth of 4,059.2 cubic meters compared to the previous year. The production of major forest product in 2022-23 and 2023-24 are given in **Appendix 3.6.3**. The forest revenue over the past decade is shown in the **Figure 3.6.4**.

**Figure 3.6.4** Forest revenue over the past decade (Rs. in crore)



Source: Forest and Wildlife Department, GoK

Trends in revenue from timber and other forest products during 2021-22 to 2023-24 are given in **Appendix 3.6.4**. In 2021-22, the net revenue from forest products was Rs 200.6 crore. This increased to Rs 288.6 crore in 2022-23. However, in 2023-24, the net revenue declined to Rs 261.04 crore, primarily due to a decrease in timber revenue.

**Figure 3.6.5** shows the trend in total forest revenue and timber revenue between 2019-20 and 2023-24. Both total forest revenue and timber revenue experienced a declining trend from 2019-20 to 2021-22, but surged up in 2022-23, before falling slightly in 2023-24.

The share of forestry and logging in total GSVA at base prices was 0.87 per cent in 2023-24, whereas it was 0.86 per cent in 2022-23. Similarly, the share of primary sector in GSDP which was 9 per cent in 2022-23 has declined to 8.78 per cent in 2023-24. Contribution of forestry sector in GSVA is shown in **Appendix 3.6.5**.

### **Biodiversity conservation and management of protected areas**

Kerala's forests are part of one of the 36 global biodiversity hotspots, protected through a well-established network of conservation areas. The Wildlife Wing of the Forest Department, created in 1985, plays a vital role in conserving and managing these protected areas as well as

other key biodiversity areas outside protected areas. Currently, the Wildlife Wing oversees 3,441.2 sq km of forest under its protected area network, which includes national parks, wildlife sanctuaries, and a community reserve. Kerala is home to six national parks, 18 wildlife sanctuaries, and one community reserve, which collectively cover about 30 per cent of the State's forest area. The State has organized its conservation efforts through three Wildlife Circles and 11 Wildlife Divisions. Habitat improvement initiatives include developing water sources, eradicating invasive species, maintaining and constructing trekking paths, improving communication facilities, and implementing fire protection measures. Details of Kerala's wildlife sanctuaries, national parks, community reserves, and biosphere reserves are provided in **Appendix 3.6.6**.

During 2023-24, the key initiatives under the Project Elephant Scheme focused on strengthening protection measures and enhancing elephant habitats, acquiring crucial elephant corridors, establishing and maintaining anti-poaching camps, and clearing protective pathways.

In addition to regular habitat improvement and wildlife management activities, the main activities proposed in Tiger Reserves would include special eco-development programs and tiger monitoring initiatives, among others.

**Figure 3.6.5** Trends in forest revenue and revenue from timber 2019-20 to 2023-24 (Rs. in crore)



Source: Forest and Wildlife Department, GoK

During 2023-24, 246 eligible families were voluntarily relocated from the Wayanad Wildlife Sanctuary.

### Sustainable Ecotourism

With rapid changes in society and cities growing quickly, eco-tourism is becoming more popular. For the past 25 years, the Kerala Forest Department has been providing ecotourism services. Currently, there are 71 ecotourism centres in Kerala, each offering various tourism packages. These include trekking, accommodation, sightseeing, boating, and cycling. The Forest Department operates these centres in collaboration with VSS and EDCs. In 2023-24, the sector directly employed about 2,172 people. This initiative makes a significant contribution to indirect employment opportunities for local communities. During 2023-24, revenue of Rs 67.76 crore was generated from ecotourism.

### Social Forestry and urban forestry

The Forest Department has recently launched a program called “Mission Forestry Clubs” to revive and expand the activities of Forestry Clubs in Kerala. One of the key initiatives under this mission is the creation of miniature forests, known

as VidhyaVanam (educational forests), on the premises of schools and colleges. These green plots serve as demonstrative spaces for environmental education. In 2023-24, the Social Forestry Wing successfully established 44 VidhyaVanam across various institutions.

Forestry clubs were established in schools to raise awareness among children about the importance of forest conservation, offer them opportunities to connect with nature, and nurture environmentally conscious citizens for the future. Currently, 1,131 forestry clubs are registered across the State. In 2023-24, 245 forestry clubs which were inactive were revitalised.

Fifty schools in 14 districts have been selected for the ‘School Nursery Yojana’ scheme so far. This project, initiated by the Government of India, aims to provide an environment for students to understand and appreciate the significance of plants in maintaining and sustaining the natural ecosystem under the concept of ‘Plant and Grow Seedlings.’

Kerala’s urban-rural growth has reduced public green spaces, prompting the Kerala Forest

Department to launch the Nagara Vanam project, creating five urban forests during 2023-24.

The Social Forestry wing provides technical support to the Local Self Government Department (LSGD) in raising, planting, and maintaining seedlings under the Vriksha Samridhi scheme. In 2023-24, the LSGD planted 30.15 lakh seedlings, with the technical support of the Forest Department. The Social Forestry Wing raised 21.31 lakh seedlings for planting and distribution on World Environment Day, Vana Mahotsavam, and for institutional planting. Details of seedlings distributed over the years through social forestry are given in **Appendix 3.6.7**.

### **Home gardens**

The total area of tree cover outside of forests is estimated to be around 14,394 sq km, which constitutes 37.1 per cent of the State's geographical area. Home gardens and rubber plantations play a major role in wood production, together contributing 82 per cent of the State's wood supply, while forests provide only 1.6 per cent (Forest Department data). Despite this, the full potential of these resources remains untapped.

To enhance wood production in home gardens, the Forest Department implements programmes with the active involvement of Local Self-Governments, supported by the technical expertise of various relevant institutions. In 2023-24, under the cash incentive scheme for farmers, the department spent Rs 4.061 lakh on planting sandalwood, mahogany, jackfruit, teak, rosewood, bamboo, kumbil, kuthiravala, and tamarind trees. As part of the protection and conservation of sacred groves, 51 sacred groves were selected for incentives in 2023-24. The owners of mangroves were also awarded incentives at the rate of Rs 4,000 per acre for conservation efforts and ensuring ecosystem services. Vanamitra awards are instituted under the biodiversity conservation programme and 15 applications were selected for 2023-24.

To combat global warming and enhance carbon sequestration, afforestation efforts were expanded beyond traditional forest areas by planting seedlings along key roads, institutions, and avenues. Additionally, the stabilisation of major river bank was supported through bamboo planting, promoting the growth of bamboo along the banks of streams, rivulets,

and rivers. District Permanent Nurseries (DPN) have been implemented since 2021-22 in Thiruvananthapuram, Pathanamthitta, Alappuzha, Kottayam, Palakkad, Wayanad, Kozhikode, and Kasaragod. These nurseries aim to produce high-quality seedlings by adhering to standard silvicultural practices. They focus on raising seedlings of essential, rare, and endangered species while promoting awareness about the importance of tree species and the environmental services provided by trees.

Nagar Van Yojana, a flagship initiative of the Government of India, focuses on expanding tree cover outside forest areas and developing green spaces in cities. Presently, the project is progressing at 25 sites through 18 Forest Development Agencies (FDAs) for the establishment of Nagar Vans and Nagar Vatikas.

### **Recognition of Forest Rights Act**

The Forest Rights Act, 2006 acknowledges the rights of forest-dwelling Scheduled Tribes, empowering them with the responsibility and authority for the sustainable use, conservation, and maintenance of the ecological balance within their dependent communities, both through individual and community rights. In Kerala, the Scheduled Tribes Development Department serves as the nodal agency responsible for the implementation of the Forest Rights Act, with the Revenue and Forest Departments providing essential support and assistance. During 2023-24, a total of 26,867 individual titles (Record of Rights) were issued, covering an area of 35,521.2 acres. Additionally, 183 community rights were granted, and 495 development rights were issued, covering an extent of 181.3 hectares.

### **Livelihood of forest-dependent communities**

Recognising the strong connection between forest-dependent communities and forests, the Forest Department, in collaboration with various other departments and agencies, has been working to implement programmes aimed at enhancing the livelihoods of forest-dwelling tribal communities considering their needs and aspirations. Efforts are being made to enhance diverse employment opportunities in the forestry sector, including improving the collection and value addition of non-wood forest products, while also developing alternative livelihoods and prioritizing essential amenities, particularly in education and healthcare,

for tribal settlements. Non-Timber Forest Products (NTFPs) gathered by tribal communities in Kerala are sold under the brand name Vanasree. This initiative supports improved livelihoods for forest-dependent communities. Currently, 71 Vanasree units, including 2 mobile units, are operating across the state.

The National Forest Policy of 1988 emphasizes the need for collaborative forest management involving forest-dependent communities, particularly tribal populations. In 1998, Participatory Forest Management (PFM) was launched, establishing grassroots institutions such as Vana Samrakshana Samithies (VSS) in territorial forest divisions and Eco-development Committees (EDC) in wildlife divisions. Each of the Vana Samrakshana Samithis (VSS) and EDC have memberships of 200 to 300 forest dependent families. The VSS and EDC used to function under the guidance of Forest Development Agencies (FDA); which is the federation of VSSs and EDCs at forest division level to support forest dependent communities through various PFM programmes. Presently there are 213 EDCs and 427 VSSs formed across the State under 36 Forest Development Agencies (FDAs). Several schemes implemented by the Government of India and the Government of Kerala are implemented through the FDAs.

The Minimum Support Price (MSP) for Minor Forest Produce (MFP) aims to ensure fair compensation for forest gatherers for their efforts in collecting and adding value to MFP as part of their livelihood. In 2023-24, 26 MFPs available in the State, including honey, were supported under the project.

The Van DhanVikas Kendras (VDVK) is a nationwide initiative of the Ministry of Tribal Affairs (GoI) aimed at establishing marketing hubs for Minor Forest Products (MFPs) collected by forest-dependent communities, with the goal of improving their livelihoods. This initiative emphasises increasing the income of tribal communities through value addition, branding, and commercialisation of Non-Timber Forest Products (NTFPs). The State Forest Development Agency has set up 31 VDVKs to support the marketing of 44 distinct products.

To lessen the dependence of local communities on forest resources, alternative livelihoods were introduced, including the provision of high-

yielding cattle, sewing machines, and training in ecotourism activities. Key initiatives under the eco-development programme encompassed village development, particularly in tribal areas, alternative livelihood projects, handicraft skill development, promotion of renewable and alternative energy sources, solid waste management, organic farming, drinking water projects, and infrastructure improvements in tribal schools and hostels.

The Green India Mission project was implemented in Kerala to combat deforestation, restore degraded forests, and create employment opportunities for communities that rely on forest resources. The project aims to enhance forest cover, improve the quality of forests, reduce dependency on forest resources, and improve the livelihoods of forest-dependent communities. As part of human resources development, 870 officials in various cadres were imparted training. As part of the forest fire management efforts, a comprehensive fire management plan was developed by the Forest Department. Fire control room for 24 hours was started and forest control operations were made more efficient by pre-deployment of defence teams including EDC/VSS members.

The Periyar Tiger Reserve (PTR) has been honoured with the prestigious India's Best Managed Tiger Reserve Award for 2023-24. In 2023-24, the Periyar Tiger Conservation Foundation, an autonomous body of the Forest Department, developed the "Ayyan Android App" to support pilgrims during the Sabarimala pilgrimage. The app offers information on drinking water facilities, medical services, accommodation, routes, emergency contact numbers, and alerts on human-wildlife conflicts. During the pilgrimage season, it was downloaded and utilized by 20 lakh of pilgrims (Forest Department data).

The 24th consecutive butterfly survey was conducted during 2023-24, resulting in the discovery of two new species, while the 23rd consecutive bird survey was held in the Aralam and Kottiyoor Wildlife Sanctuaries.

The Kerala Forest Department's newly launched e-service to apply for Free Nature Camps is set to simplify the process of exploring the State's vibrant wildlife and stunning natural landscapes. This user-friendly platform allows participants to easily register, discover available camps, and manage

### Box 3.6.1 Snehastham Programme

The State Forest Development Agency (SFDA) launched the “Snehastham Programme” to provide high-quality medical care to tribal communities in interior forest areas. The program was launched by the Hon’ble Forest Minister in the presence of Hon’ble Minister for ST Development on January 31, 2024. This is being implemented in collaboration with the Department of Health Services, Scheduled Tribes Development Department, and Indian Medical Association (Kerala Chapter). So far, the Snehastham project has successfully delivered healthcare services to 4,572 individuals in 179 tribal villages. The camps provided a range of free medical services, including general medicine, general surgery, orthopedics, obstetrics and gynaecology (OBG), dermatology, ophthalmology, cancer screening, ENT, pulmonology, and psychiatry, directly to tribal villages. Eminent medical professionals volunteered their services, conducting diagnoses and providing treatment. Additionally, awareness programs on hygiene, sanitation, and disease prevention were also provided as part of the initiative.

Source: Forest and Wildlife Department, GoK

their bookings seamlessly. Such initiatives not only promote eco-tourism but also foster a stronger bond between individuals and nature.

A three-day workshop titled Jyolsana was organized by the State Forest Development Agency of Kerala in collaboration with the Indian Institute of Space Science and Technology and the Chalakudy Forest Development Agency to introduce tribal students to the wonders of astronomy. Around 40 students from local tribal communities participated in the event.

The Plan expenditure under the forestry sector for 2023-24 was Rs 188.4 crore, representing 62 per cent of the total plan outlay. Of this, Rs 162.8 crore was spent on State schemes, while Rs 25.6 crore was on Central schemes. Outlay and expenditure details of the sector from 2020-21 to 2023-24 are shown in **Appendix 3.6.8**.

#### **Kerala Forest Development Corporation (KFDC)**

The Kerala Forest Development Corporation (KFDC) was founded on January 24, 1975, as a collaborative effort between the Government of India and the State Government. KFDC mobilises institutional funding to develop man-made forests in Kerala, meeting the domestic and industrial needs for forest resources. In addition, it plays a crucial role in rehabilitating degraded forest areas and transforming them into productive land. Eco-tourism is a core initiative that aligns with KFDC’s mission to promote sustainable forest management and conservation.

During 2023-24, KFDC achieved its highest-ever turnover of Rs 8.4 crore (excluding taxes) from ecotourism. In 2023-24, KFDC received

organic and wildlife certification for cardamom. Additionally, the process for obtaining organic certification for coffee is currently underway. Cardamom, coffee powder, and sandalwood products from KFDC are now available on various online platforms such as Flipkart, Amazon, Kerala e-market, and Open Network for Digital Commerce (ONDC- Paytm, Meesho). Their availability through these platforms has boosted retail sales of these products. KFDC secured a trademark license for sandal and cash crop products under the brand name *Vanopabar* and is currently in the process of obtaining an export license for these products.

In 2023-24, KFDC partnered with Uravu to provide training for selected workers in basic skill development in bamboo product making. This training emphasised the use of locally available bamboo varieties and required minimal machinery. Furthermore, KFDC has initiated the establishment of a bamboo handicraft unit. During this period, a total of 262 hectares of indigenous species were planted.

Kerala’s forests are essential in preserving ecological balance and protecting biodiversity. The wildlife within these forests plays a crucial role in ecosystem services including pollination and seed dispersal. Moreover, Kerala’s forests serve as significant carbon sinks, helping to combat climate change. Promoting sustainable forest management and wildlife conservation is critical to ensuring that these natural treasures endure for future generations. The ecological significance of Kerala’s forests and wildlife extends far beyond the region, contributing as they do to global environmental stability.





## 3.7 ENVIRONMENT

Climate change poses a significant threat to the environment and directly impacts the well-being of people worldwide, affecting everything from health and livelihoods to food security and access to clean water. The Intergovernmental Panel on Climate Change (IPCC) affirms that human activities, particularly the burning of fossil fuels, deforestation, and industrial processes, are the primary drivers of global warming since the mid-20th century. Many of the IPCC's reports have stressed the critical importance of staying within the 1.5°C warming limit to prevent severe consequences for both people and nature. According to various IPCC reports, protecting and restoring natural ecosystems, such as forests and wetlands, is considered as one of the most cost-effective ways to mitigate climate change

The World Bank Report, "Nature's Frontiers: Achieving Sustainability, Efficiency, and Prosperity with Natural Capital," indicates that significant efficiency gaps exist in nearly every country. Closing these gaps can help address many of the world's pressing economic and environmental challenges, including economic productivity, health, food and water security, and climate change.

India has placed special emphasis on environmental protection and conservation in its Constitution. The Directive Principles of State Policy and Fundamental Duties reflect the country's commitment to environmental sustainability. Prominent environmental issues in India include air and water pollution, deforestation,

desertification, and waste management. These challenges pose significant threats to public health, biodiversity, and the country's natural resources.

Kerala is rich in biodiversity, with a wide range of unique ecosystems, including forest, wetland, mangrove and marine ecosystems. However, climate change poses a serious threat to Kerala's environment and has become a significant concern in development planning in recent years. The combination of increasing population, rapid urbanization, industrialization, and rising consumerism—often pursued without adequate consideration for environmental sustainability—has contributed to the environmental challenges faced by Kerala today. These issues are further exacerbated by the state's vulnerability to extreme weather events such as floods, landslides, and sea-level rise, making it critical for Kerala to integrate climate resilience into its development strategies. Climate change mitigation activities involve either reducing the emission of Green House Gases (GHG) or enhancing carbon sequestration processes through various means. In Kerala, 80 per cent of GHG emissions come from energy sectors such as electricity generation, transportation, industries, agriculture (energy use), and buildings. Establishing power generation projects based on renewable energy sources; improving energy efficiency in the electricity sector, enhancing electricity transmission and distribution systems, and increasing the adoption of Electric Vehicles (EVs) are steps that will help reduce GHG emissions.

## Climate Change

Climate change is accelerating, and its impacts are widespread, affecting ecosystems, economies, and communities worldwide. According to the Intergovernmental Panel on Climate Change (IPCC), the average global temperature could rise by 1.5°C above pre-industrial levels by as early as 2030, if current emission trends continue. Climate change is projected to have substantial economic impacts on all nations, with lower-income countries being especially vulnerable to its risks. The United Nations Environment Programme's (UNEP) "Global Climate Litigation Report: 2023 Status Review" highlights the significance of establishing an environmental rule of law to address the intertwined crises of climate change, biodiversity loss, and pollution.

Climate change poses significant challenges for India, one of the world's most populous and diverse nation. With a rapidly growing economy and a large population, India is highly vulnerable to the impacts of climate change, including rising temperatures, erratic monsoons, and increasing frequency of extreme weather events like floods, droughts, and cyclones. These changes threaten India's agricultural productivity, water security, and overall economic development. The National Action Plan for Climate Change (NAPCC) was released in 2008 and it sets eight national missions to respond to climate change include national mission on solar energy, enhanced energy efficiency, sustainable agriculture, sustainable habitat, water, sustaining Himalayan eco-system, Green India Mission and strategic knowledge for climate change covering range of actions including adaptation and mitigations.

Climate change in Kerala is likely due to the combined effect of geography, land-use change, urbanization, development activities and population density of the state. In recent years, Kerala has faced a relentless barrage of heavy rains, floods, landslides, and droughts. The environment department serves as the nodal agency for coordinating climate change-related efforts in Kerala. The State's First Action Plan on Climate Change (SAPCC) was developed by the Directorate of Environment and Climate Change (DoECC) in collaboration with various stakeholder departments, agencies, and research institutions. This comprehensive plan was endorsed by the Government of India in 2014, marking a significant step in Kerala's efforts to address the

impacts of climate change. In accordance with the revised guidelines of the Ministry of Environment, Forest and Climate Change (MoEFCC), the Climate Change Cell (CCC) revised SAPCC and it was approved by the State Government in January 2023. The SAPCC is envisaged as the pivot of climate action in the state by establishing linkages at national and international levels, and serves as a conduit for coordination between various stakeholders. It address the issue of climate change vulnerability and build resilience, particularly in sectors such as agriculture, livestock, fisheries, health, water resources, forests, and biodiversity. The strategies and interventions for adaptation and mitigation are devised for the 2023-30 period.

## Major initiatives of the Department of Environment and Climate Change (DoECC) in 2023-24

The Climate Change Cell (CCC) has prepared the revised State Action Plan on Climate Change (SAPCC) and received its approval from MoEF&CC. Greater emphasis will be placed on implementation of projects that strengthen the resilience of vulnerable sectors that are most affected by climate change. In accordance with the Carbon Neutral Initiative of Government of Kerala to achieve carbon neutrality by 2050, the DoECC has prepared draft Carbon Neutral Pathway for the State. Accordingly, mechanisms are developed for the continuous measurement of GHG emissions. A web portal has also been developed to host all datasets.

A web portal and a mobile app were developed and launched to enhance the efficient management of programs under the plan scheme 'Environmental Awareness and Education.' 107 *Bhoo Mithrasena Clubs* are given revolving capital in 2023-24. Financial assistance was provided to 23 selected clubs for organizing events to observe both UN-declared and non-UN-declared days of environmental importance.

The State Wetland Authority of Kerala (SWAK) is taking proactive steps to include four additional wetlands in the Ramsar list. As part of this effort, draft Ramsar Information Sheets (RIS) have been completed for Aakkulam-Veli, Vellayani Lake, Kottuli, and the Kattampally-Valapattanam-Kuppam Wetland Complex. Catchment conservation measures for the three Ramsar wetlands, led by the Soil Survey and Soil Conservation Department, have been initiated

and are progressing successfully. The project “Sustainable Clam Cultivation and Enhanced Livelihood for the Vembanad Estuary” has been successfully completed. Major achievements of the project include the clam relaying initiative, installation of bamboo barriers, raising awareness, providing training on clam value addition, and collecting and re-cycling plastic waste from the estuary’s bottom sediment.

Another significant initiative of the DoECC is the Climate Change Knowledge Resource Platform (CCKRP), designed as an interactive hub with a centralized Repository System. The primary goal of the CCKRP is to provide policymakers, development practitioners, and civil society with a valuable resource for exploring and analysing climate-related data. It serves as a unified platform for climate data, information, and tools, aimed at enhancing decision-making and improving understanding of future climate trends and risks.

Climate change is accelerating, and its impacts are widespread, affecting ecosystems, economies, and communities worldwide. Urgent action to reduce greenhouse gas emissions and implement adaptation strategies is crucial to mitigate its worst effects and protect the earth for future generation.

### **Biodiversity**

Biodiversity, the variety of life on earth, plays a vital role in maintaining ecosystem balance and supporting human existence. It includes the diversity of ecosystems, species, and genetic resources, all of which are crucial for the resilience and sustainability of natural systems. India, one of the world’s 17 mega diverse countries, is home to nearly 8 per cent of the planet’s biodiversity. Our country hosts a vast range of ecosystems such as tropical rainforests, deserts, wetlands, and grasslands, all teeming with a rich array of flora and fauna. Kerala, situated in the south-western region of India, is particularly famous for its remarkable

#### **Box 3.7.1 Carbon Neutral Kerala 2050: GHG Inventory of the State and Development of Carbon Neutral Pathway**

Climate change presents an unprecedented challenge to the sustainability of social and economic development, community livelihoods, and environmental management in Kerala. In response, the State Government has set an ambitious goal of achieving Carbon Neutrality by 2050 and is eager to develop an action plan to reach this target. The State Climate Change Cell is leading the initiatives for the formulation of the Carbon Neutral Framework for the State in coordination with all the major stakeholder departments/agencies. Except for a few regional-level GHG emission assessments, GHG emissions at the State level have not been quantified comprehensively. A comprehensive dataset on GHG emissions of Kerala, based on internationally accepted methodologies is necessary to plot an emission curve for the coming decades and to identify the areas of targeted action which can lead to carbon neutrality. A web portal has also been developed to host all datasets and for its periodical update. The GHG inventory has been prepared for the period 2005 to 2021, accounting carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) emissions. This inventory covered all four sectors - Energy, IPPU (Industrial Processes and Product Use), AFOLU (Agriculture, Forestry & Other Land Use) & Waste, and all relevant sub-sectors in the State that contribute to GHG emissions, as given in the methodology guidelines developed by the Intergovernmental Panel on Climate Change (IPCC). The key sub-sector contributing to Kerala’s energy sector emissions was the transport subsector. The fossil fuel combustion emission associated with transportation activities alone accounted for 10.61 MtCO<sub>2</sub>e (Million Tonnes Carbondioxide equivalent) in 2021, constituting approximately 62 per cent of the total energy sector emissions, and 49 per cent of the gross emissions of Kerala. The second highest contributor to the energy sector emissions was the residential category emissions emerging from consumption of LPG and Kerosene, with total emissions of 3.19 MtCO<sub>2</sub>e in 2021, constituting 19 per cent of the State’s total energy sector emissions, and approximately 15 per cent of the gross emissions. This assessment identifies the waste sector as the second largest emitter of GHG (1.75 MtCO<sub>2</sub>e) in the state. Domestic wastewater along with solid waste is identified to be the main source of emissions in the sector. Agriculture has emerged to be the third largest emitting sector (1.56 MtCO<sub>2</sub>e) in the order of emissions; however, its contribution is at least ten times less than the lead emitting sector. Industrial emissions are the fourth largest contributor (1.32 MtCO<sub>2</sub>e) to GHG emissions in the state. Based on GHG inventory, a draft Carbon Neutral Pathway 2050 for Kerala has been prepared, and the DoECC is currently in the process of finalizing the pathway.

Source: - Directorate of Environment and Climate Change, GoK

**Table 3.7.1** Biodiversity Profile of Kerala

Biodiversity rich areas	India	Kerala
Biodiversity hotspots	4 (Himalayas, Western Ghats, North east part of Indom Burma, Nicobar islands)	Western Ghats Region
Agro biodiversity hotspots	22	Malabar region
Natural world heritage site – Western Ghats	7 including Western Ghats 39 serial sites	19 serial sites (Agasthyamalai Periyar, Anamalai, Nilgiri Thalakkavery Sub Clusters)
Endemic centres	3 megacentres (Eastern Himalayas, Western Ghats, Western Himalayas)	3 (Agasthyamala, Anamalai- high ranges and Silent Valley- Wayanad).
Globally important agricultural heritage systems	10	1 ( Kuttanad below sea level farming)
UNESCO World network of Biosphere Reserves	10	1 (Agasthyamala Biosphere Reserve)

Source: - Kerala State Biodiversity Board, GoK

**Table 3.7.2** Details of conserved area networks in Kerala are given below

Protected areas	Kerala
Wildlife sanctuaries	17
National parks	5
Biosphere reserves	2 (Agasthyamala and Nilgiri Biosphere reserve)
Community reserves	1 (Kadalundi-Valikkunu)
Tiger reserves	2 (Periyar, Parambikulam)
Elephant reserves	4 (Wayanad, Nilmbur, Anamudi, Periyar)
Amsar sites	3 (Ashtamudi wetlands, Sasthamkotta, Vembanad-Kole wetlands)
Important Bird areas	33
Wetlands under National Wetland Conservation Programme	5 (Ashtamudi, Sasthamkotta, Kottuli, Kadalundi, Vembanad kole)
Medicinal Plants Conservation Areas	7 (Athirapally, Eravikulam, Wayanad, Kulamavu, Peechi, Silent valley, Triveni)

Source: - Kerala State Biodiversity Board, GoK

biodiversity and unique ecosystems. It falls within the Western Ghats, one of the eight “hottest hotspots” of biodiversity in the world. Among the UNESCO World Heritage list inscribed 39 sites of the Western Ghats, 19 are located in Kerala. Around 95 per cent of the flowering plants and 90 per cent of the vertebrate fauna in the Western Ghats are found in Kerala. The state is characterized by its tropical forests, wetlands, coastal ecosystems, and extensive backwaters. This makes the state a critical hub for biodiversity conservation in India. Biodiversity profile and conserved area networks of Kerala are given in **Table 3.7.1 and 3.7.2.**

The Aichi Biodiversity Targets, part of the Strategic Plan for Biodiversity 2011-2020,

outlined 20 global targets aimed at conserving and sustainably using biodiversity. These targets were organized under key goals, including preventing the extinction of known threatened species, reducing the rate of habitat loss and degradation, and eliminating harmful subsidies and incentives that negatively impact biodiversity and ecosystems. UNEP’s ‘Intergovernmental Platform on Biodiversity and Ecosystem Services’ (IPBES) assessment report on invasive alien species and their control find that more than 37,000 alien species have been introduced by human activities to regions and biomes around the world.

The National Mission on Biodiversity and Human Wellbeing is an Indian initiative aimed at comprehensively documenting the country’s

biodiversity. It focuses on cataloging and mapping all life forms in India while assessing their distribution and conservation status. This mission seeks to provide a deeper understanding of India's biodiversity and its connection to human wellbeing, ensuring informed conservation efforts and sustainable use of natural resources. The biological diversity Act 2002 was amended in 2023 with the objective of widening the scope of levying access and benefit sharing with local communities and conservation of biological resources. The Kerala SAPCC and Kerala State Biodiversity Strategies and Action Plan 2022-32 have emphasized the impact of climate change on biodiversity.

In line with the provisions of the National Biological Diversity Act of 2002, the Kerala State Biodiversity Board (KSBB) was established in 2004, and the corresponding biodiversity rules were subsequently framed. The KSBB is committed to the conservation and protection of the State's agro, plant, and fish diversity.

#### Major Achievements in 2023-24

- 1. Strengthening of Biodiversity Management Committees (BMCs):** During 2023-24, the primary focus was on building upon the necessary follow-up actions required for the establishment of Biodiversity Management Committees (BMCs) in 1,200 local bodies (941 Grama Panchayats, 152 Block Panchayats, 14 District Panchayats, 87 Municipalities, and 6 Municipal Corporations). As part of this initiative, select BMCs were empowered financially and technically to undertake biodiversity conservation programs. During the period, a total of 335 BMC meetings were held across various local bodies with the goal of monitoring biodiversity conservation projects and incorporating action plans into the local planning process. A comprehensive campaign was undertaken to update and verify the People Biodiversity Register (PBR) in 227 Biodiversity Management Committees (BMCs). During this period, three People Biodiversity Registers (PBRs) were updated in three Ramsar sites/local bodies, namely Sasthamcotta Lake, Ashtamudi Wetland, and Vembanad-Kol Wetland
- 2. Research/Access and Benefit Sharing (ABS) Mechanisms:** Access and Benefit Sharing (ABS) can play a crucial role in conserving biological resources, promoting their sustainable use, and contributing to the economic development of local communities. Selected 25 Biodiversity Management Committees (BMCs) were provided

with training and support for the preparation of Local Biodiversity Strategy and Action Plans (LBSAP), following the guidelines set by KSBB for this purpose. Native inland fish diversity of major rivers of Kerala has been reduced drastically in numbers over the years and many of them are at the verge of extinction. In this context, KSBB implemented a project during 2023-24 as spill over which aims to conserve the migrating fishes during Monsoon Floodplain Fishery (MFF) and thereby enhancing their population in rivers, its tributaries and allied water bodies. The project was implemented in five districts viz., Pathanamthitta, Alappuzha, Kottayam, Ernakulam and Thrissur because of the presence of major rivers (include Pampa, Meenachil, Moovattupuzha and Chalakkudy rivers), high number of native fish species and the existing practice of MFF. The first phase of Butterfly Garden Project at Asramam Biodiversity Heritage Site, Kollam has been completed. Two-year project of "Ecological impact and value addition assessment for sustainable management of invasive Nymphaea species in the wetlands of Kerala" was initiated by KSBB with the aim to evaluate its environmental impacts, phytochemical profiling and to find out mechanisms to control them through exploring the possibility to utilize them for livelihood enhancement. During 2023-24, KSBB is supporting three doctoral fellows in conducting research on various aspects of biodiversity, while also offering an internship scheme for postgraduate students to gain practical learning outcomes as part of their curriculum. The KSBB has selected 11 institutions for the ex-situ conservation of plant species that are listed as threatened in the red list. This project aims to create a human-made forest, which will naturally develop and evolve through the process of natural succession over time.

- 3. Biodiversity Awareness and Education:** During 2023-24, 228 new biodiversity clubs constituted in schools and colleges across the State and were registered with KSBB. Important commemorative days such as International Biological Diversity day and World Environment day were celebrated. Biodiversity awards in different categories were distributed during the period. KSBB organized a State-level livelihood enhancement program on "Terrarium Making" for students and teacher coordinators of Biodiversity Clubs at SN College, Kollam.

Kerala is facing serious challenges due to global warming. It would trigger changes in the growth and regeneration capacity of many species of flora, and also result in significant loss of

## Box 3.7.2 Special Initiatives

### (i) Youth Ideation Challenge

The project aims to provide a platform for college students, start-ups, and the general public to develop innovative solutions for key challenges in the areas of Forest Diversity, Agro-Biodiversity, and Aquatic Biodiversity. In this context, novel ideas and concepts were invited, resulting in 86 applications across these themes. Of these, 30 applications were shortlisted for the second stage, with 20 applicants submitting detailed proposals. These 20 finalists were invited for the final presentations, and the list of winners was published on the KSBB website. The winners of the Biodiversity Ideation Challenge 2023 will receive Rs 25,000 for first place, Rs 15,000 for second place and Rs 10,000 for third place. Additionally, winners in each category—agro-biodiversity, forest biodiversity and aquatic biodiversity—will be awarded a memento and a certificate of merit.

### (ii) Green Auditing in schools and colleges

Green auditing is a rigorous and methodical procedure that encompasses a thorough evaluation of an organization's environmental performance, scrutinizes its adherence to environmental regulations, and assesses its commitment to sustainable practices. It helps to establish accountability, foster transparency, and promote sustainability across diverse sectors, including industries, organizations, and institutions. It consists of biodiversity audit, energy audit, waste management audit, water audit and carbon audit. Kerala State Biodiversity Board conducted green auditing at 12 schools at Thiruvananthapuram District, Kerala. Green auditing studies conducted in schools are first time in our State.

Conducted a 'Green campus audit' at Chittur Government College, Palakkad on August 3-5, 2023. This is the first time that KSBB is joining hands together with a college for a green audit project. The audit team audited various aspects such as carbon sequestration, waste management, water quality, biodiversity, and energy audits of the campus.

### (iii) *Avasatheeram*

This project aims to Mangrove afforestation and management along the banks of backwater regions in Kadinamkulam, Mangalapuram, Azhoor and Andoorakonam Grama Panchayats of the Pothencode Block Panchayat in Thiruvananthapuram District. A total of 75,000 saplings were planted in this area. Total sanctioned amount is Rs 5 lakhs.

Source: - Kerala State Biodiversity Board, GoK

biodiversity, leading to a shift in boundaries of tropical evergreen forests, sholas, and mangroves. Altered weather patterns can disrupt ecosystems, threaten species, and affect agricultural practices, ultimately impacting local livelihoods. In the changing climate scenario, Kerala is expected to face several challenges, including an increased intensity of forest fires, vulnerability and extinction of flora and fauna, the disappearance of traditional fish species in marine ecosystems, a reduction in mangrove forest habitats, competition from exotic species, and a rise in human-wildlife conflicts.

Preserving biodiversity is crucial for maintaining ecological balance and ensuring the survival of diverse species and ecosystems. This can be achieved through sustainable practices, conservation efforts, and active community engagement, all of which play a vital role in protecting our earth natural heritage for future generations.

### Pollution Control

Pollution is one of the most urgent global challenges, posing serious risks to human health, ecosystems, and the climate. It endangers not only the environment but also the health and survival of all life on earth. The World Meteorological Organization's "Air Quality and Climate Bulletin 2023" highlights that global warming is not the only threat; the impacts of resulting pollution, which are often overlooked, are equally harmful. UNEP's "Beat Pollution report" warns that by 2025, cities worldwide will generate 2.2 billion tonnes of waste annually, more than three times the amount produced in 2009. Tackling pollution is not just an environmental necessity but also crucial for achieving the Sustainable Development Goals (SDGs).

India, one of the world's fastest-growing economies, is responsible for nearly seven per cent of global Green House Gas (GHG) emissions, ranking third after China and the

United State. The State of India’s Environment Report 2023, published by the Centre for Science and Environment, raises alarming concerns: air pollution shortens the average lifespan by four years and 11 months, over 30,000 water bodies have been encroached upon, and the country generates 1.5 lakh tonnes of Municipal Solid Waste (MSW) daily-more than half of which is either dumped in landfills or left unattended.

The Kerala State Pollution Control Board (KSPCB), as the statutory authority for pollution prevention and control in the State, is responsible for protecting air, water, and the environment in line with Central Government Acts and Rules. The Board monitors ambient air and water quality across the State using both manual and digital methods. Key components implemented through annual plan schemes include infrastructure upgrades, public awareness initiatives, environmental monitoring and management, and capacity building.

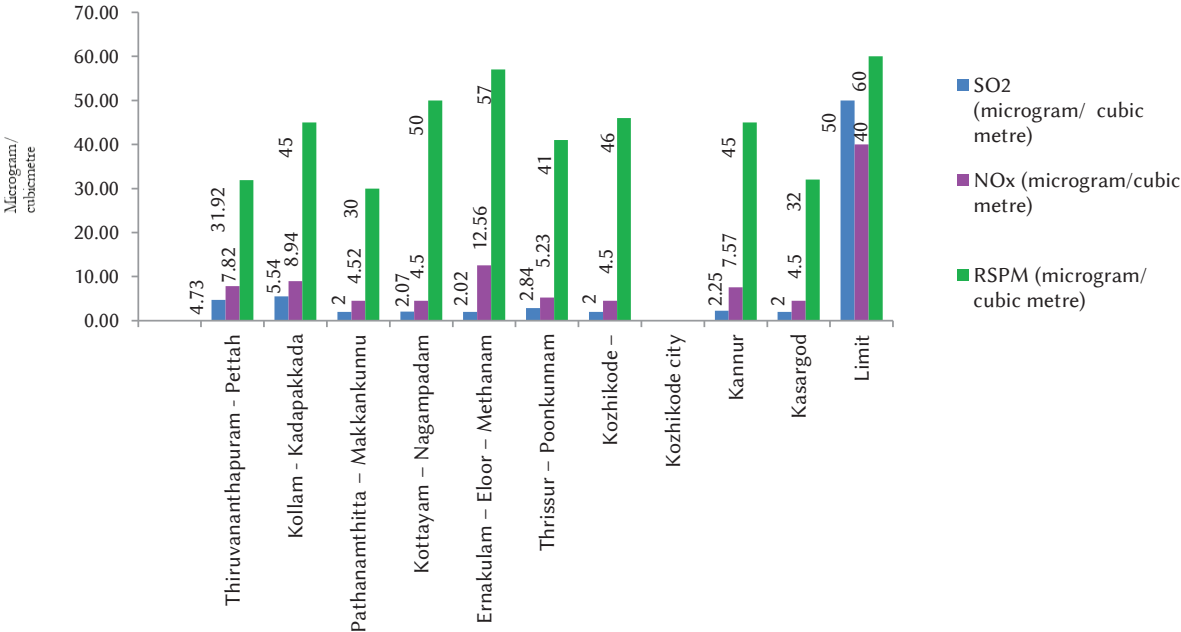
**Major Achievements in 2023-24**

In 2023-24, 35,970 consents were issued by the KSPCB for the establishment and operation of

industrial and non-industrial units, ensuring that appropriate treatment systems are in place. The KSPCB is monitoring ambient air quality in 39 manual stations all-round the state, of which 33 stations come under the National Ambient Air Quality Monitoring Programme (NAMP). The average values of air pollutants at major monitoring stations in residential areas, in sensitive areas and industrial areas of Kerala in 2023 are shown in **Figures 3.7.1, 3.7.2 and 3.7.3** respectively.

There are 363 water quality monitoring stations under National Water Quality Monitoring Programme (211 NWMP) and State Water Quality Monitoring Programme (152 SWMP) in the State. It includes 65 water bodies like 44 rivers (major, medium and minor rivers), six in reservoirs, three in fresh water lakes, seven in estuarine lakes, three in canals and two in ponds. During the Sabarimala festival season, several environmental concerns arise, prompting continuous monitoring of drinking water quality in the region. To bolster surveillance along the Periyar river, particularly in the industrial corridor, night vision cameras have been strategically installed along its banks.

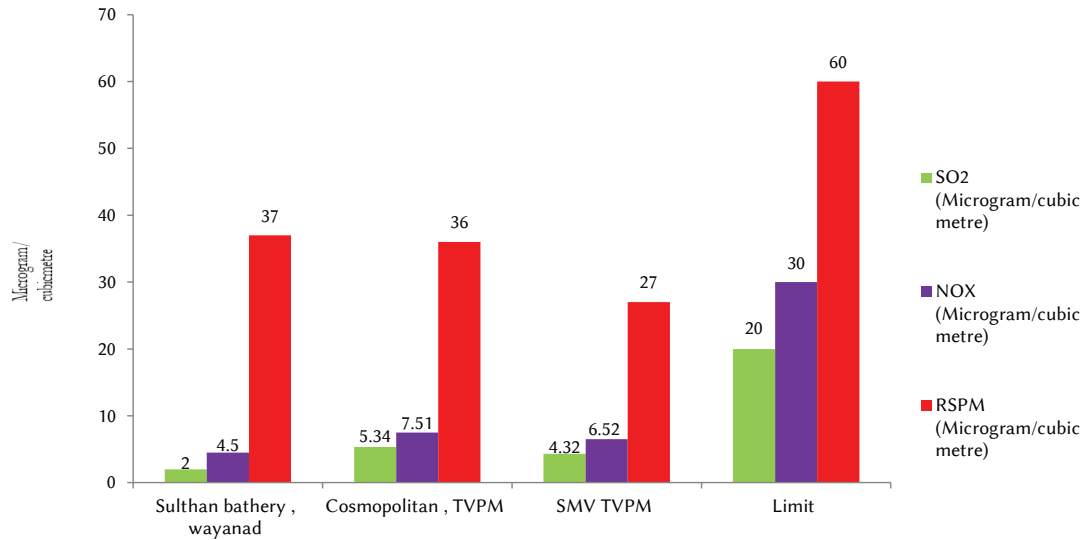
**Figure 3.7.1** Annual average values of air pollutants at major monitoring stations in residential areas of Kerala, 2023



Source: Kerala State Pollution Control Board, 2024

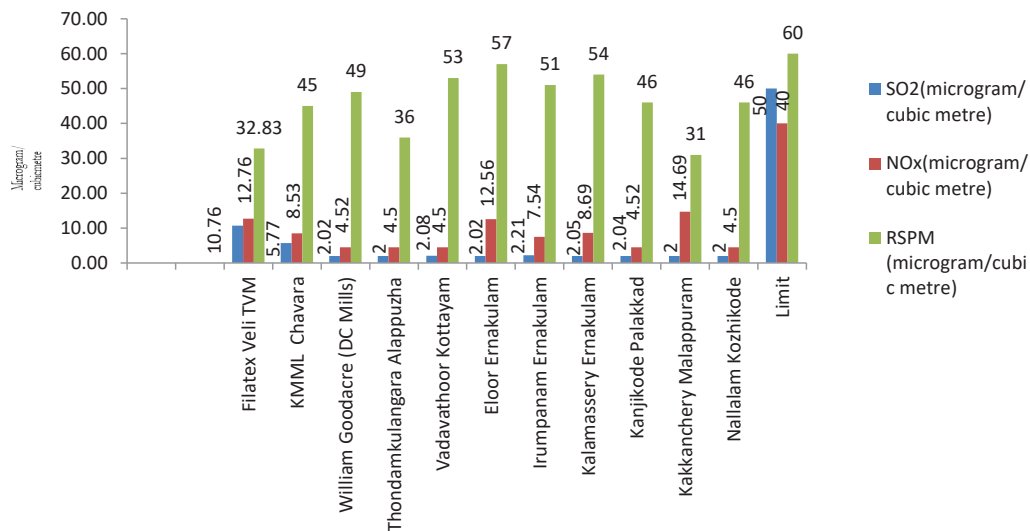


**Figure 3.7.2** Annual average values of air pollutants at 3 major monitoring stations in Sensitive areas of Kerala 2023



Source: Kerala State Pollution Control Board, 2024

**Figure 3.7.3** Annual average values of air pollutants at major monitoring stations in Industrial areas of Kerala 2023



Source: Kerala State Pollution Control Board, 2024

KSPCB has initiated steps to conduct environmental audit of common/captive Treatment, Storage, and Disposal Facility (TSDF) and captive incinerator for hazardous waste in the State.

KSPCB has launched initiatives to implement the Kerala Antimicrobial Resistance Strategic Action

Plan (KARSAP) in the state. As part of this effort, the board established a State-level Anti-Microbial Residue Monitoring Laboratory at its Central Laboratory in Ernakulam on August 25<sup>th</sup> 2023. The laboratory is dedicated to monitoring antimicrobial resistance and antibiotic residue. An Integrated Web portal for KSPCB for pollution assessment and monitoring that covers information

on water quality, air quality, industrial and non-industrial units, different type of waste treatment facilities had been developed. The unified dashboard in the web portal enables monitoring, evaluation and reporting of air and water quality data.

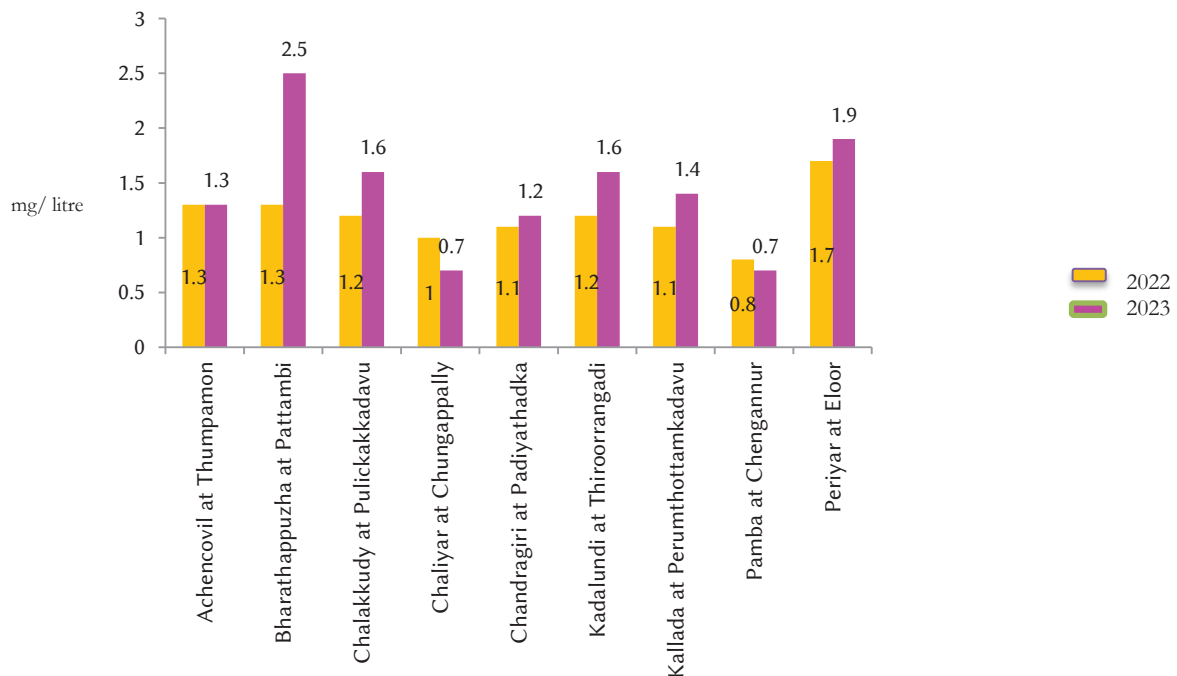
**Figure 3.7.4** depicts Biochemical Oxygen Demand (BOD) levels at selected river stations in Kerala. BOD is a crucial tool in monitoring and managing water quality, helping to ensure the protection of aquatic ecosystems and human health. Compared to 2022, BOD levels were high in Bharathappuzha, Periyar, Kadalundi, Chalakkudi, Chandragiri and Kallada in 2023.

During this period, as a part of Government’s Ease of Doing Business – the Integration of the services with K-SWIFT was completed.

**Initiatives under the 14th Five Year Plan**

The expert sub-group formed under the 14th Five Year Plan has recommended key focus areas for environmental management, including the enhancement of environmental monitoring, water and air quality measures, the establishment of noise monitoring networks, solid waste management, the expansion of Common Biomedical Waste Treatment Facilities (CBMWTF), and promoting environmental awareness and education. Focus areas in climate change and coastal management

**Figure 3.7.4** BOD levels at selected river stations in 2022 and 2023



Source: Kerala State Pollution Control Board, 2024

**Box 3.7.3 Phoenix**

The Kerala State Pollution Control Board (KSPCB) has introduced a new centralized digital platform called “Phoenix” for managing consent applications. This platform is used by the board to process applications for consent under the Water Act, Air Act, and Environment Protection Act, as well as for handling authorizations and registrations under various related rules. The system also includes features for online fee payments, e-filing of grievances, submission of periodic returns and reports, a dashboard for tracking, and third-party verification of clearances, all in accordance with the Government’s IT Policy. The integration of the Phoenix software with K-SWIFT has been completed. Additionally, a new module for submitting Hazardous Waste Manifests and Annual Returns has been introduced on the Phoenix portal.

### Box 3.7.4 Restoration of polluted river stretches

Based on a study by the Central Pollution Control Board (CPCB), 21 river basins in Kerala were included among the 351 polluted river basins identified in India in 2018. Priority I included severely polluted and priority V is least polluted. The categories shift from Priority I to Priority V based on the reduction in pollution levels. The section of the Karamana River in Thiruvananthapuram district, from Melekkadavu to Thiruvallam, was classified under Priority I category in 2018. Details of polluted river stretches in the state in the year 2018 are given below:-

Sl. No	River stretch	District	Priority
1	Karamana - Melekkadavu to Thiruvallam	Thiruvananthapuram	I
2	Bharathapuzh- along Patambi	Palakkad	IV
3	Kadambraya Manckakadavu to Brahmapuram	Ernakulam	IV
4	Keecheri - Puliyanor to Keechery	Thrissur	IV
5	Manimala- Kallloopara to Thondra	Alappuzha	IV
6	Pamba - Mannar to Thakazhy	Pathanamthitta	IV
7	Bhavani- along Elachivazhy	Palakkad	V
8	Chitrapuzha-Irumpanam to Karingachira	Ernakulam	V
9	Kadalundi-along Hajirappally/ Hajiyarpalli	Malappuram	V
10	Kallai - Thekepuram to Arakkinar	Kozhikode	V
11	Karuvannoor - along Karuvannur	Thrissur	V
12	Kavvai-along Kavvai	Kannur	V
13	Kuppam-Thaliparamba to Velichangool	Kannur	V
14	Kuttiyadi-along Kuttiyadi	Kozhikode	V
15	Mogral-along Mogral	Kasargod	V
16	Periyar-Alwaye- Eloor to Kalamassery	Ernakulam	V
17	Peruvamba-along Peruvamba	Kannur	V
18	Puzhakkal-Olarikkara to Puzhakkal	Thrissur	V
19	Ramapuram -along Ramapuram	Kannur	V
20	Tirur - Naduvilangadi to Thalakkadathur	Malappuram	V
21	Uppala-Poyya to Mulinja	Kasargod	V

However, with the support of the Local Self-Government Department, Kerala Water Authority, Irrigation Department, Groundwater Department, Pollution Control Board, and the Industries Department, an action plan was formulated to control the extent of water pollution in water bodies and improve the quality of water bodies. As a result of continuous efforts in control of pollution of water bodies the water quality of rivers has improved.

As per CPCB report on Polluted River Stretches for restoration of water quality 2022, 11 river stretches were delisted from the list of polluted river stretches. 8 new river stretches were newly added, but in lowest priority level (Priority V). Total number of polluted river stretches is reduced to 18: Karamana river stretch (Priority I to III), Kadambayar (Priority IV to V), and Manimala (Priority IV to V) are shifted to lower priority, 2 rivers are added in priority IV and 6 rivers in priority V. As per the new list there is no river in Priority I and II. Details of polluted river stretches in the state in the year 2022 are given below:-

Sl. No	River stretch	District	Priority
1	Karmana-along Aruvikara and along Moonnattumukku	Thiruvananthapuram	III
2	Neyyar-Aruvipuram to Amaravila	Thiruvananthapuram	IV
3	Vamanapuram-along Vamanapuram	Thiruvananthapuram	IV
4	Ayroor-along Ayroor	Pathanamthitta	V
5	Mamom-along Mamom	Thiruvananthapuram	V
6	Pamba-along Pamba And along Mannar	Pathanamthitta	V
7	Manimala-along Thondra	Pathanamthitta	V
8	Chithrapuzha-along Irumpanam	Ernakulam	V
9	Kadambayar-Manckakadavu To Brahmapuram	Ernakulam	V
10	Periyar-along Aluva-Eloor-Kalamassery, along Purappallikavu,	Ernakulam	V
11	Periyar-along Aluva-Eloor-Kalamassery, along Purappallikavu,	Ernakulam	V
12	Chalakyady-along Pulikkakadavu	Thrissur	V
13	KalpathiPuzha-along Kalpathi	Palakkad	V
14	Korayar-along Kanjikode	Palakkad	V
15	Thirur-along Thirur	Malappuram	V
16	Kadalundy-along Tirurangadi	Malappuram	V
17	Kallai-along Kallai	Kozhikode	V
18	Pullur-along Pullur	Kasaragod	V

Based on the quality of water in the river stretches, PCB has already submitted request to CPCB for delisting/exempting 7 out of the 18 river stretches namely: Ayroor, Chalakkudy, Kalpathipuzha, Korayar, Neyyar, Pullur and Tirur.

Sources: - Kerala State Pollution Control Board, GoK

include integrated coastal zone management, research and development, and integrated wetland management.

The Kerala State Pollution Control Board has planned to upgrade the laboratories in all district offices to National Accreditation Board for Testing and Calibration Laboratories (NABL) standards for physical, chemical, and biological testing. The ultimate aim of up-gradation/modernization of the laboratories is to improve the quality as well as the accuracy of the analytical results. To prioritize the

monitoring of water resources, Real-Time Water Quality Monitoring Stations (RTWQMS) have been installed. The board has installed two Real-Time Noise Monitoring stations (RTNMS) for continuous monitoring of the ambient air quality in the state. In the area of Solid Waste Management, the KSPCB has issued 69 authorizations to urban local bodies so far.

The Working Group on Environment and Biodiversity, established under the 14th Five Year Plan, recommended decentralizing and enhancing

the skills of Biodiversity Management Committees (BMCs). Key recommendations include ecosystem conservation, rejuvenation, and management; promoting access and benefit sharing; enhancing livelihoods; strengthening the scientific foundation for biodiversity conservation; raising awareness through communication, education, and public outreach on biodiversity; and securing the necessary financial, human, and technical resources.

### **Haritha Keralam Mission**

Haritha Keralam Mission is one of the four development missions spearheaded by the Government of Kerala for implementing the Nava Keralam Karma Padhathi II, aimed at fostering eco-friendly and sustainable development in key domains such as agriculture, water conservation, waste management, environmental preservation, and climate-resilient disaster management. Aligned with the broader objective of sustainable development, the Mission's guiding motto, "Water, Hygiene, and Harvest," summarises its focus areas.

The Mission has three core sub-missions: (i) sanitation and waste management, (ii) water conservation, and (iii) agricultural development. Leveraging a large-scale participatory approach, the Haritha Keralam Mission emphasises mobilising community involvement through coordination, converging various departments and agencies at LSGs, and integrating State and Union government schemes.

Major initiatives of the Haritha Keralam Mission include the Mapathon project, the Carbon Neutral project, the Pachathuruthu afforestation programme, river and stream rejuvenation projects, and watershed reclamation. The Mission also undertakes water budgeting alongside water quality testing facilities. Other notable projects include

Green Campus and Green Legal Literacy, each contributing to Kerala's long-term sustainability agenda.

### **Sanitation and Waste Management**

The Mission has made significant strides in promoting the adoption of environmentally friendly practices in daily life. As a result, the majority of the LSGs in the State have attained the 'Suchitwa Padavi' status. The Haritha Karma Sena Self-Help Groups (SHGs) have played a pivotal role in collecting and segregating waste. Notably, initiatives like the Green Law Awareness Campaign have raised public awareness about eco-friendly practices.

In its ongoing waste management efforts, the Mission, in collaboration with Local Self-Governments, is systematically working to convert schools, colleges, offices, and office complexes across all districts in Kerala into model green institutions. As of August 31, 2024, a total of 1,233 Material Collection Facilities (MCFs) are operational across the State. Additionally, there are 19,112 Mini MCFs currently operational. There are 197 operational Resource Recovery Facilities (RRFs).

- The Harithamitram App, an online platform for monitoring non-organic waste collection, has been implemented in 1,019 LSGs,
- A total of 37,765 Haritha Karma Senas have been deployed in 1,034 LSGs for doorstep collection of non-organic waste.
- Haritha Karma Sena efficiently manages door-to-door waste collection services for approximately 66.8 lakh households across all LSGs in Kerala.
- A total of 94.8 lakh buildings are enrolled through the Haritha Mithram App, as of October 31<sup>st</sup> 2024.

### **Box 3.7.5 Agricultural Initiatives**

The Tharishu Rahitha Gramam (fallow-free village) campaign, with the aim of cultivating any suitable crop in all the cultivable land, including fallow lands in a Grama Panchayat, was initiated by the Haritha Keralam Mission with the support of Department of Agriculture. A total of 164 Grama Panchayats were selected for this programme. So far 8 Grama Panchayats have been declared as Tharishu Rahitha Gramam.

Devaharitham project, which aims at cultivation and greening in the vacant lands of temples and other places of worship, 126 sites have been identified, and farming is done in 119 acres.

For Institutional Farming, another major activity of the Mission, 62 industries have been selected, and the work is progressing in 140 acres.

- In terms of earnings, 17,143 Haritha Karma Sena members earn between Rs 5,000 and Rs 10,000, 15,896 earn between Rs 10,000 and Rs 25,000, and 585 HKS members earn above Rs 25,000.

A total of 8,518 institutions have been selected for conversion to green institutions in 2023-24, and in 2024-25 (till September 2024), 2,329 institutions have been declared green institutions. So far, a total of 10,847 institutions have been declared as green institutions

### **Agriculture Development**

The Haritha Keralam Mission, under the leadership of the Department of Agriculture and in collaboration with LSGs, implemented a set of initiatives to promote agricultural development in the State. These include the promotion of agriculture on fallow lands, assisting LSGs in designating Haritha Samriddhi wards, encouraging activities like paddy farming and dry land rice cultivation, fostering organic vegetable production, promoting vegetable cultivation on school grounds and institutional premises, and advancing integrated farming practices.

### **Pachathuruth project**

Pachathuruth, the project to make ‘green islets’ across the State, is an innovative venture by the Haritha Keralam Mission and has been widely appreciated. The project aims to protect natural forest specimens by planting unique trees and indigenous plants with specified density and diversity in patches of land identified in public places and the premises of public institutions. This programme has attracted public attention and support as a practical intervention to reduce the adverse effects of climate change due to global warming. There are 3,518 Pachathuruths in the state, covering a total area of 1,059.8 acres. In 2023-24, 424 new Pachathuruth have been established in the State, covering a total area of 206.52 acres.

### **Soil and Water Conservation**

In recent years, the Haritha Keralam Mission has implemented various water conservation initiatives, including extensive river revitalisation projects across Kerala, and systematic restoration and replenishment of wells and ponds. These water conservation efforts have had a marked positive impact on the agricultural sector. Key activities of the Mission in this realm involve monitoring water levels in various water bodies by installing water-

level scales, conducting Mapathon exercises to pinpoint water sources digitally, and establishing water quality testing laboratories to assess water standards.

The Ini Njan Ozhukatte (Now, Let Me Flow) campaign, aimed at rejuvenating streams across all districts, has achieved notable progress. Since between April 2021 to and September 2024, a total distance 35,874.76 km of streams have been rejuvenated. In 2023–24 alone, 13,966.2 km of streams were rejuvenated. In 2024–25 (as of September 2024), an additional 5,965.3 km of streams were rejuvenated.

### **Water Quality Testing Labs**

To ensure the purity of drinking water, water quality testing laboratories are being set up in the higher secondary schools of all LSGs. In LSGs across the State, there are 321 laboratories for testing water quality. They analysed 19,396 samples in 2023-24. Until September 2024, 2,507 water samples were tested.

### **Water Budget**

The Haritha Keralam Mission is pioneering the formulation of water budgets for Local Self-Governments. The primary objective of the water budget is to ensure water security for local communities. This initiative estimates scientifically using extensive regional water availability and demand data. Subsequently, it develops potential interventions by mobilising the masses on a large scale through participatory campaigns and coordination of the LSGs, relevant departments, and agencies, integrating Union and State government schemes.

The water budgets for 305 LSGs in the State have been completed, while work is actively progressing in another 35 Grama Panchayats.

Other major initiatives

### **1. Net Zero Carbon Efforts**

Under the Nava Keralam Karma Padhathi, the Haritha Keralam Mission spearheads the “Net Zero Carbon Keralam” campaign to make Kerala carbon-neutral by 2050. This initiative focuses on reducing greenhouse gas emissions and achieving a carbon balance. To realise the Net Zero Carbon Kerala project through community engagement, various energy conservation projects are planned in collaboration with the Energy Management Centre.

### Box 3.7.6 Achievements in Soil and Water Conservation

- The year 2023–24 saw the revival of 1,678 ponds, construction of 1,519 new ponds, recharging of 2,110 wells and creation of 5,057 new wells.
- A total of 229 permanent and 26,085 temporary check dams were also constructed during the year 2023–24.
- In 2024–25 (up to September 2024), 465 ponds were revived, 478 new ponds were constructed and 1,367 new wells were constructed, and 639 wells recharged. During the same period, 128 permanent and 7,991 temporary check dams were also constructed.

Net Zero Carbon Keralam campaign is progressing in 130 Panchayats and Municipalities. The activities of this campaign include the Angan Jyoti scheme to enhance energy self-sufficiency and efficiency in Anganwadis, energy audits in homes and government institutions, technical support for electric vehicles purchased, and training programmes for students, teachers and volunteers. The Net Zero Carbon Project Angan Jyoti is set to be implemented in 2,211 Anganwadis across 85 different LSGs. These selected Anganwadis will receive electric induction cookers, cookware, LED bulbs, BLDC fans, and electric vehicle charging systems from the EMC.

brought about positive and sustainable changes in agriculture and allied sectors, sanitation and waste management, and water conservation. It has been able to harness the activities of various agencies working in these sectors.

### 2. Surakshithamakkaam Paschima Ghatam

As the second phase of the Ini Jan Ozhukatte campaign, Haritha Kerala Mission has launched ‘Surakshithamakkaam Paschima Ghatam’. The campaign intends to reduce the chance of soil erosion and landslides in the Western Ghats region by reviving the watercourses. The initial phase involves the scientific mapping of watersheds, a process known as ‘Mapathon’. Mapathon activities have been completed in 215 out of the targeted 230 Grama Panchayats. The second phase of activities to reduce landslides has been initiated in 153 Panchayats covering nine districts.

### 3. Green Tourism

Implementing green protocols, specifically, the code of conduct, has become essential in popular tourist destinations. Tourist centres and access routes must adhere to the green code of conduct. In collaboration with the Haritha Keralam Mission and relevant LSGs, efforts are underway to transform 118 selected tourist destinations in Kerala into model green tourism destinations, focusing on environmental sustainability.

Through diverse and innovative projects, activities, and campaigns undertaken under these three sub-missions, Haritha Keralam Mission has

## 3.8 FOOD SECURITY AND PUBLIC DISTRIBUTION SYSTEM

Food security is ensuring adequate access to food, in terms of both quality and quantity. According to UN Committee on World Food Security, food security is said to exist when all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The four main dimensions of food security are availability of food, stability of food supply, and access to food and utilization of food.

The report of the State of Food Security and Nutrition in the World 2024 by Food and Agriculture Organisation of the United Nations, estimated that in 2023, 28.9 per cent of the global population – 2.33 billion people were moderately or severely food insecure, meaning they did not have regular access to adequate food. These estimates include 10.7 per cent of the population or 864 million people who were food insecure at severe levels, posing grave risks to their health and well-being.

In Asia, 24.8 per cent of the population (1.18 billion people) were moderately or severely food insecure in 2023 and 9.8 per cent (467.3 million) faced severe food insecurity. In the Global Food Security (GFS) Index 2022, India ranked 68th out of 113 countries with an overall score of 58.9 points.

The National Food Security Act of 2013 (NFSA) “provides for food and nutritional security in human life cycle approach, by ensuring access

to adequate quantity of quality food at affordable prices to people to live a life with dignity.” The Act covers the Public Distribution System (PDS), the mid-day meals program in schools, integrated services related to child development and nutritional support to pregnant women and lactating mothers.

The 2024 Global Hunger Index (GHI) report ranks 127 countries based on their hunger levels. India ranks 105th out of 127 countries in the 2024 Global Hunger Index, with a score of 27.3, classified as “serious”. This ranking indicates that India still faces significant hunger and malnutrition challenges. Some key indices that determine India’s ranking are Child Wasting Rate (18.7 per cent), Child Stunting Rate (35.5 per cent), Prevalence of Undernourishment (13.7 per cent), and Under-Five Mortality Rate (2.9 per cent).

The Public Distribution System (PDS) evolved as a system for managing scarcity through the distribution of food grains at affordable prices. In pursuance of the Essential Commodities Act 1955 by the Government of India, the Public Distribution System formally came into existence on July 1, 1965. It has since grown into a universal rationing system across India. Over the years, PDS has become an important part of the government’s policy for managing the food economy in the country. The PDS is managed jointly by the Union Government and the State Governments. The Union Government, through the Food Corporation of India (FCI), procures, stores,



transports, and allocates food grains to the State Governments. The State Governments identify eligible families, issue ration cards, operate a chain of Fair Price Shops (FPSs) owned by private vendors, allocate food grains, manage, supervise, and operationalise the PDS system within their territory.

### **The Public Distribution System in the State**

Kerala has one of the most effective and best-run public distribution systems in India and has marked pioneering achievements in implementing the Universal Rationing System. Prior to 1997, the year of introduction of targeted system, Kerala was the only State in India that had an almost universal coverage of Public Distribution System. The origins of the public distribution of food grains in Kerala can be traced back to the period of the Second World War. Later, the State government introduced its own system of distribution of rice at subsidy rates to the lower-income groups in 1957. The State introduced the Targeted Public Distribution System (TPDS) in 1997, based on policy changes made by the Government of India. The Department of Food and Civil Supplies discharges the important responsibilities of ensuring the availability of essential commodities through the network of PDS outlets, enforcing market discipline, promoting consumer awareness, and protecting their interests. The Kerala State Civil Supplies Corporation (SupplyCo) takes charge of lifting the food grains from Food Corporation of India godowns and Custom Milled Rice (CMR) mills and delivering them to FPS. They also own and manage intermediary godowns for food grains across the State.

The coverage of PDS under NFSA was determined by the erstwhile Planning Commission by using the NSS Household Consumption Survey data of 2011-12. Corresponding to the all-India coverage of 75 per cent and 50 per cent in the rural and urban areas, the coverage in Kerala is limited to 52.63 per cent in rural area and 39.50 per cent in urban area. Accordingly, 1,54,80,040 people are eligible for the PDS in Kerala.

Kerala has implemented various food security programs to ensure access to nutritious food, particularly for vulnerable populations. Some initiatives include 1) *Public Distribution System* (PDS); subsidised food grains, sugar, and kerosene, 2) *Antyodaya Anna Yojana* (AAY): highly subsidised

food grains for the poorest households, 3) *Annapurna Scheme*: free food grains for senior citizens (65+ years), 4) *Pradhan Mantri Garib Kalyan Anna Yojana* (PMGKAY): additional free food grains during COVID-19 pandemic, and 5) *National Food Security Act* (NFSA): legal entitlement to subsidised food grains.

### **Distribution of Ration Cards**

The State Government is responsible for identifying households eligible for food subsidies under the TPDS. Eligible households are issued ration cards, which serve as official documents to access essential commodities from Fair Price Shops under the TPDS.

In accordance with the provisions of the National Food Security Act (NFSA), eligible households are categorised into two:

1. *Antyodaya Anna Yojana* (AAY) (Yellow Card): This category is designed for the poorest of the poor, aiming to provide food security to the most vulnerable sections of society.
2. Priority Households (PHH) (Pink Card): This group includes other eligible households that do not fall under the AAY category. In addition to these NFSA-mandated categories, the State also recognises two types of ration cards:
  3. Non-Priority Subsidy (NPS) (Blue Card): Households that are not covered under NFSA but are eligible for certain subsidies.
  4. Non-Priority Non-Subsidy (NPNS) (White Card): Households that are neither eligible under NFSA nor entitled to subsidies but are issued ration cards.

As of March 31, 2024, the State has a total of 94,31,027 valid ration cards.

The Government of Kerala took professional measures to identify eligible households, including the use of a highly effective “mark based” system. The popularisation of a complaint cell number was a successful initiative which ensured public participation in detection and renewal of ration cards in line with the statutory provisions for priority and non-priority categories.

Families without a stable income are identified as Antyodaya families and issued AAY cards. There are 5.92 lakh AAY cards in the State as of March, 2024. Each AAY cardholder family is eligible for 30 kg of rice and 5 kg of wheat per month.

Previously, the Government of India supplied food grains to State at a subsidised rate of Rs 3 per kg for rice and Rs 2 per kg for wheat. The State Government further subsidised these costs, providing the food grains free of cost to beneficiaries. Since 2023, the Government of India has been supplying food grains free of cost to AAY card holders.

Families identified as priority households, but not covered under the AAY scheme, are issued PHH cards. There are 35.96 lakh PHH cards in the State. Each PHH cardholder family is eligible for 5 kg of food grains per month.

The Government of India supply rice at an amount of Rs 8.30 per kg for non-priority cardholders (NPS and NPNS). However, the Government of Kerala provides rice to NPS cardholders at a subsidised rate of Rs4 per kg.

In addition to the four cards, the Department also issues Non-Priority Institution (NPI) cards for institutions such as destitute homes. The department has also succeeded in continuing the non-priority institutional (NPI) card scheme by issuing PDS rations to various welfare institutions, including destitute homes; 794 NPI cards have been distributed to welfare institutions in 2023-24. There were 17 and 20 new ration cards issued to transgenders and street dwellers respectively in 2023-24.

Priority cards, both AAY and PHH cards together constitute 44.4 per cent of the total cards in the State. The category-wise number and share of cardholders in Kerala, as on March, 2024 is detailed in **Table 3.8.1**.

### Distribution of PDS Supplies

The grains and other supplies are distributed through the Fair Price Shops (FPSs) – shops licensed to distribute essential commodities by an order issued under section 3 of the Essential Commodities Act, 1955, to the ration card holders under the Targeted Public Distribution System. There are 14,157 Fair Price Shops in the State, as of October 2024. The total food grain distribution through PDS in the State in 2023-24 is 13,42,408 MT, including 2,19,770.02 MT of grains to AAY card holders, 7,23,107.92 MT of grains to PHH card holders, 3,99,530.4 MT to non-priority card holders. An amount of Rs 9846.05 lakh was spent on non-priority card holders as subsidy in 2023-24. The category-wise card holders and subsidy amount spent by the Government of Kerala for the distribution of food grains are given in **Table 3.8.2** and further details are in **Appendix 3.8.1**.

The Annapoorna scheme provides 10 kg of food grains per month, free of cost, to destitute individuals above the age of 65 years who lack sufficient means of subsistence. There are 44 card holders under Annapoorna scheme.

Antyodaya Anna Yojana (AAY) families are entitled to get sugar at subsidised rate and kerosene at non-subsidised rate through PDS. The State Government is incurring the differential cost and the implementation cost for the supply from the Government of India. In 2023-24, a total of 3794.16 MT of sugar were distributed in the State, compared to 7133 MT in 2022-23. As of August 2024, a total of 0.91 MT of sugar had been distributed from the quota of 2024–25. The Central Government limited the distribution of sugar to AAY card holders from 2018. The sugar

**Table 3.8.1** Category-wise cardholders in Kerala, as on March, 2024

Sl No	Scheme/Item	Number of card holders	Per cent
1	ANNAPPOORNA	44	0.0005
2	AAY	592139	6.28
3	PHH	3596226	38.13
4	NPS	2272107	24.09
5	NPNS	2942034	31.20
6	NPI	28477	0.30
<b>Total</b>		<b>9431027</b>	<b>100</b>

Source: Civil Supplies Department, Government of Kerala

**Table 3.8.2** Subsidy spent by Government of Kerala for various categories of card holders, Rs in lakh

Sl. No.	Category	Grains Distribution in MT		Subsidy Amount Spent by Government of Kerala (Rs in lakh)	
		2022-23	2023-24	2022-23	2023-24*
1	Antyodaya Anna Yojana (AAY)	240227.27	219770.02	5097.75	-
2	Priority (PHH)	756427.08	723107.92	4504.23	-
3	Non-Priority (NPS)	399530.37	399530.4	8048.27	9846.05
<b>Total</b>		<b>1396184.72</b>	<b>1342408.34</b>	<b>17650.3</b>	<b>9846.05</b>

Source: Civil Supplies Department, Government of Kerala

\* Since 2023, the Government of India has been supplying food grains free of cost to AAY card holders.

allotted for each card is one kg per month at Rs 21. In the case of the kerosene allotment, there exists a wide gap between the actual requirements and the allotment received by the State. The fisheries and agriculture sector depends on kerosene supply. The supply of kerosene was 15552 KL in 2022–23 and received a decreased allocation of 7663.12 KL in 2023–24. As of August 2024, the State had received 798.96 KL of kerosene from the allotment for 2024–25.

In addition to the supply of grains, the Government of India has permitted converting a specified amount of wheat supply to *atta* for the Above Poverty Line (APL) cardholders and distributing through FPS since 2006. This was extended to AAY and PHH cards in 2020. The details of the distribution of rice, wheat, kerosene and sugar through the PDS in the State from 2015–16 to August, 2024 is given in **Appendix 3.8.2**.

The allocation of food grains is highest in Thiruvananthapuram and lowest in Pathanamthitta. The State average off-take of food grains from FPS is 105 per cent, varying between 80 and 112 per cent across districts. The opening balances are also accounted for in the off-take figures. The District-wise distribution of food grains under the AAY scheme is given in **Appendix 3.8.3 and 3.8.4**. The District-wise food grain distribution under PDS among PHH in Kerala is given in **Appendix 3.8.5 and 3.8.6**

The Government of Kerala distributing Onam food kits through Fair Price Shops to AAY card holders and the all the card holders of the landslide areas of Wayanad in 2024. Thirteen essential

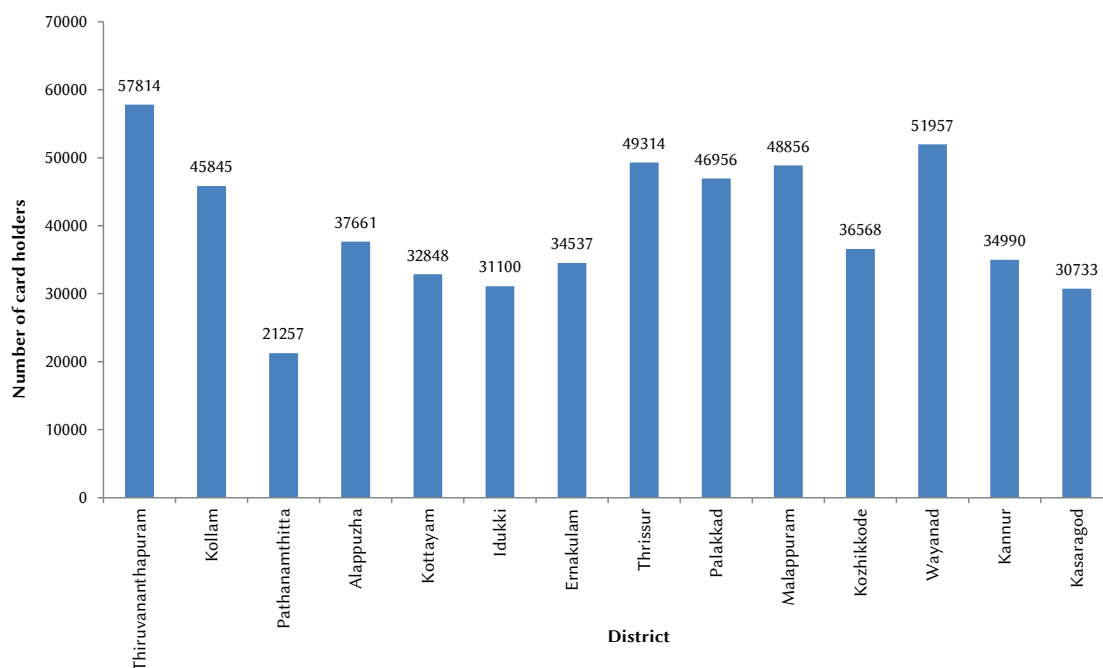
items were distributed to them at free of cost. An amount of 34.29 crore was allotted for distribution of Onam food kit.

**Figure 3.8.1** shows the District-wise distribution of Onam food kits among AAY cardholders in 2024. A total of 5.60 lakh Onam food kits with 13 essential items including pulses, tea, curry powders, salt, cashew nut, ghee, semiya payasam mix, edible oil have been distributed to AAY card holders. The details of the District-wise distribution of Onam food kits in 2024 are given in **Appendix 3.8.7**.

### Price Stabilisation and State Intervention in the Retail Market

The scope of artificial price inflation of essential commodities by private retailing is very high in Kerala as it is consumer-oriented State. The Kerala State Civil Supplies Corporation, also known as Supplyco, has been effectively involved in stabilising the price of 13 essential commodities including pulses, grains, rice, *atta*, and sugar, which are sold at a price that is 30 per cent lower than in the open market. Supplyco is engaged in the retailing of more than 6,000 fast-moving consumer goods items at an average price that is 20 per cent lower than in the open market. Supplyco markets its own branded products under the name “Sabari” which includes curry powder, coconut oil, tea, and coffee. It also operates 87 medical stores and 5 wholesale divisions, offering medicines at an average discount of 15 per cent. Additionally, Supplyco organises special fairs during festival seasons to cater to increased consumer demand. It is also a dealer of petroleum products, including kerosene, petrol, diesel, and LPG, through 12 petrol bunks, 3 LPG outlets, and 1 kerosene

**Figure 3.8.1** District-wise Distribution of Onam Food Kits among AAY beneficiaries in 2024, in numbers



Source: Civil Supplies Department, Government of Kerala

wholesale depot. Supplyco owns 56 depots, 5 medical wholesale divisions, and 1,630 retail outlets. In 2023–24, 3 maveli stores and one petrol bunk were established, while 3 existing stores were upgraded to super markets and two were upgraded into Maveli super stores. Details of the operational outlets are given in **Appendix 3.8.8**.

### The Success Trails of Public Distribution System in Kerala

**Process Upgradation and Improvements in Service Delivery :** The State Government succeeded in modernising and digitising service delivery of PDS, including the renovation and automation of ration shops in a unified pattern, the implementation of the E-Ration Card Project, the issuance of ATM-sized ration cards, and the introduction of the One Nation One Ration Card for easy accessibility of ration from anywhere. E-PoS machines, 14,149 in number, were installed in all fair price shops in the State and enforcement mechanisms have been strengthened to ensure the supply of food grains in the right quantity. The entitlement to rations for each card in each month is communicated to them through SMS. Ration Rights Cards were issued to migrant labourers 5,192 in number from other States to extend food security cover to those migrating into the State in search of livelihood.

### Mobile Ration Shop/Any time anywhere ration shop:

Mobile ration shop is a scheme initiated to deliver ration items to the tribal families living in isolated tribal areas directly to their residences. Hence, the tribals living in isolated areas can avoid the hassle of traveling for kilometres through difficult roads to reach the ration shops to buy ration and ensure that they get their rightful ration share. The scheme is currently implemented in 146 tribal hamlets of 5200 families in 10 Districts, viz. Thiruvananthapuram, Pathanamthitta, Ernakulam, Idukki, Malappuram, Palakkad, Kozhikode, Kannur, Wayanad, and Thrissur.

**FPS mobile app** has been introduced in the State, which is the first of its kind in the country and makes all inspections speedy and transparent in nature. The inspection information of each shop is available to the superior officer in real time. Through this, immediate action can be taken by the higher officials against those who illegally store food grains, hoard, or sell in the market.

### Milestones in Implementation of NFSA

The Government of Kerala has achieved universal coverage for ration supply, even for families beyond the scope of National Food Security Act (NFSA). The NFSA Act 2013, entitles 75 per cent of rural and 50 per cent of urban populations to receive subsidised food grains. But the coverage

in Kerala is limited to 52.6 per cent in rural area and 39.5 per cent in urban area. In pursuance of the National Food Security Act 2013, Government of Kerala decided to implement NFSA in the State with effect from November 1, 2016 and Kerala State Civil Supplies Corporation (Supplyco) is entrusted with the task of door step delivery of PDS articles. Keeping in line with the NFSA, the Government of Kerala took measures to identify eligible households. As mandated in the NFSA, “priority” and “non-priority” ration cards have replaced the BPL and APL cards respectively. A State-wise ranking of the beneficiaries was also conducted.

Ration is being delivered at the doorsteps of remote tribal hamlets, and places of natural calamities. There is also an efficient grievance redressal mechanism in the State and the State Food Commission, as per the provisions of the Act. The NFSA was effectively implemented in the State by setting up end-to-end computerisation, a grievance redressal portal, supply chain management from the Food Corporation of India to the authorised ration dealers level, GPS tracking of vehicles carrying food grains, CCTV installation for efficient and transparent service delivery, quality infrastructure and connectivity, social auditing of Fair Price Shops, Information, Education and Communication activities, and setting up intermediary godowns. In line with other government departments, the Civil Supplies department also shifted to the e-Office file system, which expedites file movement and helps in speedy settlement of cases.

The NFSA Act 2013 envisages the Fair Price Shops as the final public interface unit of the public distribution chain. The transparency and social benefit of the entire system depends on the quality of their service. Therefore, the act advocates for far-reaching progressive reforms in the existing Public Distribution System by giving preference to public institutions or public bodies such as Panchayats in opening FPSs by self-help groups and co-operatives, especially those run by women and women collectives. As a first step towards the enactment of this provision in the Act, the Department moved ahead with the setting up of model Fair Price Shops in all local governments from the reference year onwards.

**Hunger Free Kerala Scheme:** Hunger Free Kerala is a scheme introduced in the period of

the 13th Five Year Plan to achieve Sustainable Development Goal 2 of Zero Hunger. The main objective of the scheme is to eliminate hunger from our State. As part of the hunger-free Kerala scheme, *Subhiksha* Hotels were introduced which provide affordable meals at Rs 20 per meal. The Government of Kerala provides a subsidy of Rs 5 per meal. Other food items are also sold at subsidised rates in these hotels. The beneficiaries of the scheme are beggars, and the needy people. Government of Kerala allot 600 kg of rice @ of Rs. 10.90 per kg per month as subsidy for the scheme. Around 47 *Subhiksha* hotels are currently functioning. During the year 2023-24, four new *Subhiksha* hotels were started in 4 segments (LACs) of Kollam, Thrissur, Palakkad and Kozhikode. The Government of Kerala intends to start *Subhiksha* hotels in more places. More than 3.5 lakh people benefit from *Subhiksha* hotels every month.

**E-office** has been established in 102 offices coming under the Food, Civil Supplies & Consumer Affairs Department. This includes 1 State Consumer Redressal Commission Office, 1 District Consumer Disputes Commission, 2 Deputy Controller of Rationing Offices, 14 District Supply Offices, 77 Taluk Supply Offices and 6 City Rationing Offices.

**K-Store** was introduced to revamp the Fair Price Shops using modern technology and diversification of services. Supply of subsidised essential commodities, Chottu gas, Supplyco’s own sabari products, MILMA, Selling products of various PSUs, delivery of information technology based services are provided through K-Store. It envisages to convert Fair Price Shops into a lifeline for the general public providing an array of public utility services under one umbrella.

Due to the increased role of the Department through the enactment of the NFSA Act, it can now undertake the procurement and sale of various crops through the vast network of Fair Price Shops spanning across the State. Procurement of crops like bananas, tapioca, and vegetables, for which the government has already fixed minimum support prices, can be procured and sold locally through these shops under the Public Distribution System. This can be extended to various value-added products of these crops as well. At present 1,201 K-stores are operational. The Government of Kerala aims to set up 2000 K-stores by December 31, 2024.

**Project OPPAM** - Ration articles are delivered to the doorsteps of families with bedridden patients, with the unpaid voluntary help of auto rickshaw drivers. The auto rickshaw drivers will deliver their ration items to their homes free of charge before the 10th of every month. The Oppam project was started in Thrissur on February 13, 2023 has implemented in all the districts of the State. Currently, 849 beneficiaries are receiving ration items at their homes under the Oppom Project. The District-wise details of beneficiaries of Oppom Project is given in **Table 3.8.3**.

**Table 3.8.3** District-wise details of beneficiaries of Oppom Project.

Sl No	District	No. of Beneficiaries
1.	Thiruvananthapuram	20
2.	Kollam	76
3.	Pathanamthitta	20
4.	Alappuzha	9
5.	Kottayam	34
6.	Idukki	38
7.	Ernakulam	24
8.	Thrissur	434
9.	Palakkad	35
10.	Kozhikkode	55
11.	Malappuram	24
12.	Wayanad	18
13.	Kannur	26
14.	Kasaragod	36
<b>Total</b>		<b>849</b>

Source: Civil Supplies Department, Government of Kerala

**A social media lab** was created to disseminate the developments in the sector among the general public in the State. Out of the 14,157 Fair Price Shops, 14,149 runs with E-POS connected machines, reducing the number of manual transactions at the FPS level.

**Distribution of ragi through FPS:** - The Food and Agriculture Organisation of the United Nations (FAO) declared 2023 as the International Year of Millets to raise awareness about the health and nutritional benefits of millets. The

Government of India directed to celebrate 2023 as the Year of Millets. Government of Kerala took steps to include ragi in the Public Distribution System and distributed ragi through ration shops from June, 2023.

Ragi obtained from FCI was converted into ragi flour and distributed to AAY and PHH categories through ration shops in packets of 1 kg. Each packet was priced at Rs 8 for the AAY category and Rs 10 for the priority category. The distribution of ragi powder was mainly targeted at tribal areas in the State.

**Redressal Commissions** One State-level Consumer Dispute Redressal Commission and 14 District level Consumer Redressal Commission are functioning meticulously to ensure speedy, low-cost redressal of consumer grievances as envisaged under the Consumer Protection Act.

**Smart PDS** is a scheme to consolidate the already accomplished goals of NFSA 2013 with the help of modern technology to make the public distribution system efficient and transparent. An agreement was executed with the GOI for the execution of the project.

**Thelima Project** is conducted from 15th November to 15th December of every year to give the opportunity to the ration card holders to correct the mistakes made while making the data entry by RCMS in connection with the renewal of the ration card. The complaints include details of unauthorized holders of priority cards, objections regarding the quality of food grains, the conduct of licensees/salesmen, and comments and suggestions regarding the management of ration depots. Public opinion is also taken to make ration distribution more efficient as a consumer.

**Operation Yellow** is a screening program, to find out the ineligible in the priority category and transfer the cards to the general category with the help of the public and to include the eligible families in the priority category. As per the NFSA 2013, 1,54,80,040 people are eligible for the priority card in Kerala. To ensure that the beneficiaries are properly identified, the government called for a voluntary surrender of priority cards from ineligible people. As part of Operation Yellow, the public is given an opportunity to call the department's 24x7 mobile number (9188527301) and toll-free number

**Table 3.8.4** Sales revenue (Rs) from Sujalam project in 2024.

Sl.No	District	Sales Revenue upto 30.11.2024
1	Thiruvananthapuram	2073660
2	Kollam	851400
3	Pathanamthitta	622290
4	Alappuzha	1961840
5	Kottayam	388410
6	Idukki	1663680
7	Ernakulam	375630
8	Thrissur	148112
9	Palakkad	784830
10	Malappuram	39600
11	Kozhikkode	0
12	Wayanad	0
13	Kannur	0
14	Kasaragod	126230
<b>Total</b>		<b>9035682</b>

Source: Civil Supplies Department, Government of Kerala

(1967) to report the details of ineligible priority card holders. Complaints received in this way are conveyed from this office to the concerned District/Taluk/City Rationing Officers. Within 48 hours of receipt of complaints, steps are being taken to collect fines from those ineligibly holding priority cards and transfer the cards to the general category. Also complaints received directly at Taluk Supply Office/City Rationing Office are investigated and action taken accordingly.

**Sujalam Project** - “Hilly Aqua Drinking Water” is a product of KIIDC, Kerala Water Resource Department. Hilly Aqua Drinking water bottles are available with 500 ml, one litre, and 20 litres. The distribution of Hilly Aqua Drinking water through Fair Price Shops is known as the Sujalam project. The cost of one litre bottle is Rs 10. The Sujalam project is initially implemented in Ernakulam, Kottayam, Pathanamthitta, Idukki, and Kollam District and extended to other district except Kozhikkode, Wayanad and Kannur. Through the implementation of the Sujalam Project, sales revenue of Rs.90,35,682 was generated in 2024. The details of sales revenue from Sujalam project is given in **Table 3.8.4**.

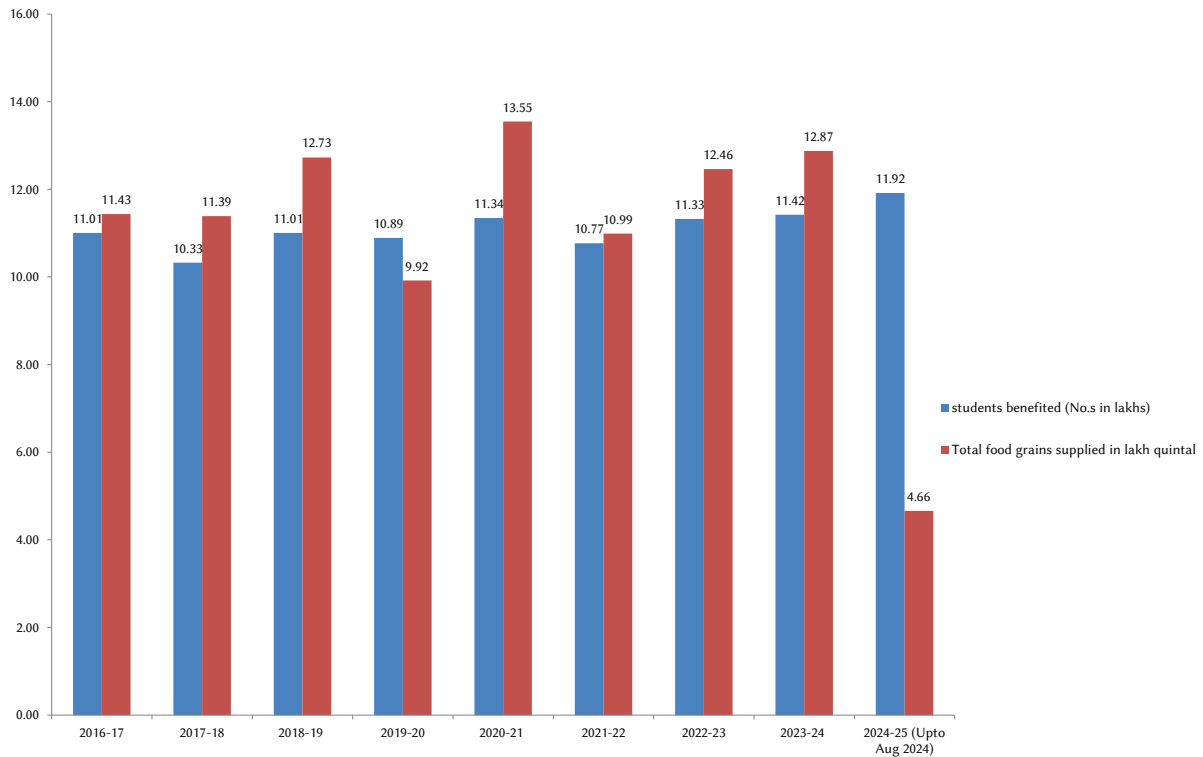
**PM Poshan (Mid-Day Meal Programme)** – Kerala is a pioneer having launched the Mid-day

Meal Scheme in 1984 well before it was introduced by the Central Government. The Mid-day Meal programme in schools has been implemented in the State with the financial support of the State and Central Government since the Government of India launched the Scheme as a centrally sponsored scheme in 1995. Supplyco is entrusted with the responsibility of providing commodities to the Mid-Day Meal programme in the State. In 2023–24, the FCI supplied 6.52 lakh quintals of rice, benefiting 27.54 lakh students, as against 7.61 lakh quintals of rice and 27.31 lakh students in 2022–23. In 2024 –25 (as of August 2024), 2.84 lakh quintals of rice were supplied to 12,327 schools. The details of the supply of food grains for the Mid-Day Meal Programme from 2016-17 to 2024-25 (as on 31.8.2024) are given in **Appendix 3.8.9**. The details of food grains supplied and the students benefited from Mid-day Meal Programme is detailed in **Figure 3.8.2**.

**Centre for Price Research Kerala** was established by Government of Kerala in 2022. The main objective of the Centre is to monitor the fluctuation in the prices of 13 essential commodities in the State of Kerala and at the source of production. Its key functions include:

1. Monitoring prices at the state level to ensure effective oversight of essential commodities.

**Figure 3.8.2** Mid-day Meal Programme 2016-17 to 2024-25



Source: Supply Co, Government of Kerala

2. Assisting the government in formulating policies to regulate and control prices.
3. Providing recommendations to the government and relevant agencies to establish rules and measures for controlling market prices, thereby safeguarding consumers' rights.

Weekly Price Analysis Report is published since January, 2023 onwards incorporating the wholesale and retail prices of 13 essential commodities across more than 70 markets in the State. These prices are being collected from the market by the data entry operators and analysed by the Centre.

**Price Monitoring Cell:** The Price Monitoring Cell was constituted by the Central Government for monitoring the fluctuation in the prices of essential commodities. It was set up in the Civil Supplies Department in 2017. The activities of the cell include monitoring retail and wholesale prices and spot and future prices of twenty-two essential commodities on a daily basis. An amount of Rs 13,59,506 has been utilised for the strengthening of the Price Monitoring Cell in 2024.

### Council for Food Research and Development (CFRD)

The Council for Food Research and Development (CFRD) was formed in 2005 with its headquarters at Konni to uphold the uniqueness of Kerala food items and to ensure the quality of these food items to compete in the international market. The Food Quality Monitoring Laboratory (FQML), Food Processing Training Centre (FPTC) and College of Indigeneous Food Technology (CFT-K) have been established and steps are being taken to set up a cold storage /Dehydration Unit for Fruits and Vegetables, schools of Food Business Management.

**Paddy procurement** – Kerala State Civil Supplies Corporation (SupplyCo.) is the implementing agency for paddy procurement, processing, and distribution on behalf of the State. SupplyCo procures paddy directly from registered farmers and the price is transferred to their bank accounts. The agency then converts the paddy into rice, which is distributed through the State's PDS. The paddy procured within the State is deducted from State's share of food grain stock given from Food Corporation of India to the PDS in the State.



The procurement price of paddy, declared by the State Government, includes the Minimum Support Price (MSP) set by the Central Government based on recommendations from the Commission for Agricultural Costs and Prices, along with an additional State Incentive Bonus (SIB) provided by the State Government.

The department procures paddy directly from the registered farmers. The Central Government transfers the MSP amount only after paddy is distributed as rice through the PDS. To protect the farmers from this delay, the department issues Paddy Receipt Sheets (PRS) to the farmers at the time of procurement, which can be used to avail loans from banks. The State government repays this loan with interests when the Government of India provides the MSP amount.

Supplyco has signed contracts with 59 Modern Rice Mills to procure paddy. The procurement rate is Rs 28.20 per kg in 2023-24, of which Rs 21.83 is the MSP and Rs 6.37 is SIB. SupplyCo procured 6.13 lakh MT of paddy in 2023-24 and 3.00 lakh MT of paddy in 2024-25 up to July 2024.

#### **Assistance to State Agencies for Intra-state Movement and handling of food grains, and FPS Dealer's Margin under National Food Security Act 2013**

As per the National Food Security Act, 2013, the Government of Kerala, receives food grains from FCI godowns and paddy processing mills and stores them in NFSA intermediary godowns. These food grains are delivered to the Fair Price Shops and distributed to eligible beneficiaries.

The Central Government provides 50 per cent of the financial assistance for the intra-State movement and handling of food grains and FPS dealer's margin under the National Food Security Act, 2013. The Central Government provides only for the expense of priority card holders. The cost of distributing one quintal of food grains to priority card holders fixed by the Central

Government is Rs 65. Fifty per cent of this cost, Rs 32.50, is funded by the Central Government.

However, the average cost of distributing one quintal of food grains at door-to-doorstep delivery is Rs 185 in Kerala. This includes vehicle rental, loading and unloading charges, godown rent, employee salaries, and other related expenses. It includes the expense of distribution of food grains to priority and non-priority card holders. The remaining amount of Rs 152.50 is funded by the State Government. The State government spends a monthly average of Rs 21 crore through Supply Co. for the monthly doorstep delivery of food grains to FPSs. The details of transportation handling costs of door step delivery of food grains in 2022-23 and 2023-24 is given in **Table 3.8.5**

Food grains are distributed to the beneficiaries through the authorised ration shop dealers. The commission amount for ration shop dealers is calculated according to the quantity of food grains distributed through each ration shop.

The Central Government provides 50 per cent of the FPS Dealer's Margin. The cost of distributing one quintal of food grains fixed by the Central Government is Rs 107 (FPS Dealer's basic Margin of Rs 90 and FPS Dealer's Additional Margin of Rs 17). The Central Government provides only for the expense of priority card holders.

However, the average cost of distributing one quintal of food grains for the doorstep delivery is Rs 320 in Kerala. It includes the expense of distribution of food grains to priority and non-priority card holders. The Central Government provides Rs 53.50. The remaining Rs 266.50 is funded by the State Government. The Government of Kerala spends around Rs 34 crore per month for the ration shop dealers as commission. The details of commission for ration shop dealers for the year 2022-23 and 2023-24 is given in **Table 3.8.6**

**Table 3.8.5** Transportation handling costs of door step delivery of food grains, 2022-23 and 2023-24, Rs in crore

year	Amount spent by the State Government	Central Assistance	Total amount expended in the State	Pending assistance from Central Government (as on March 31, 2024)
2022-23	217.46	31.81	249.27	Nil
2023-24	226.16	25	251.16	7.04

Source: Civil Supplies Department, Government of Kerala

**Table 3.8.6** Commission for ration shop dealers, 2022-23 and 2023-24, Rs in crore

year	Amount spent by the State Government	Central Assistance	Total amount expended in the State	Pending assistance from Central Government (as on March 31, 2024)
2022-23	477.36	49.17	526.53	Nil
2023-24	402.15	38.60	440.75	19.27

Source: Civil Supplies Department, Government of Kerala

**Modernisation of Supplyco** : The department is in the process of revamping 241 outlets and other activities including depot management systems, outlet management systems, software development, and mechanisation of tea blending operations. Construction of two godowns, one each at Thiruvananthapuram (Valiyathura) and Kollam (near the railway station) has been completed, and the work on two godowns, one each at Thiruvalla and Kochi is progressing.

#### **Way forward**

The lack of scientifically constructed godowns and limited storage space of ration shops (FPS) are significant obstacles hindering the effective implementation of the TDPS as envisaged in the NFSA 2013. Construction of scientifically designed intermediary godowns has materialised in only one out of 77 Taluks in the State. Therefore, necessary steps must be taken to ensure the successful implementation of the scheme.

To facilitate the receipt and resolution of beneficiary complaints at the District level, the establishment of District Grievance Redressal Offices is essential. Supply Co needs to be modernised for making it more attractive and efficient.



CHAPTER

04

MANUFACTURING SECTOR



# MANUFACTURING SECTOR

## 4.1 KERALA'S INDUSTRIALISATION

A robust industrial sector along with a buoyant and resilient infrastructure play a decisive role in determining the overall growth of an economy. As per the provisional estimates (PE) of Annual National Income by the Central Statistics Office (CSO), the share of secondary sector in India's total Gross Value Added (GVA) (at basic prices, at 2011-12 prices), in 2023-24 is about 28.7 per cent.

The secondary sector has played an important role in economic growth in Kerala. Industry sector holds a prominent position in Kerala economy, accounting for 27 per cent of GSVA (at constant prices) in 2023-24 (QE). Within industry, construction contributes the highest share of 52.2 per cent to the industry GSVA, followed by manufacturing with 42.7 per cent in 2023-24 (QE). "Construction" and "Manufacturing" contribute about 14.1 per cent and 11.5 per cent respectively in the total GSVA of the state in 2023-24(QE). As per the Periodic Labour Force Survey (PLFS) 2023-24, about 9.9 per cent of total workers of the State were engaged in the manufacturing activities.

Micro, small, and medium enterprises (MSME) are the key drivers of economic growth in Kerala. The Government of Kerala has launched "Year of Enterprises 1.0" in 2022-23 to boost MSMEs development. Subsequently, 'Year of Enterprises 2.0' (2023-24) and 'Year of Enterprises 3.0' (2024-25) has been rolled out to further strengthening and scaling up MSMEs units. Under the campaign a total of 3,30,309 units have been established in Kerala up to November 2024. It has led to

investment to the tune of Rs 20,961.75 crore and created employment opportunities for 7,00,263 people. The 'Year of Enterprises' campaign was recognized as the best practices model at the National Conference on Micro Small and Medium Enterprises 2023. The Industries Department also monitors enterprises under 'Year of Enterprises' campaign through its sustainability survey.

Kerala launched Mission 1000, for scaling up MSMEs. The Mission aims at turning 1000 MSMEs into ventures with an average turnover of Rs. 100 crores each in four years. The One Local Body One Product (OLOP) is another innovative scheme under which 456 Local Governments have identified products. One of the key initiatives is the appointment of 1,153 Interns (designated as Enterprise Development Executives) to support the entrepreneurship drive.

### **A Revival in Manufacturing in Kerala**

The manufacturing sector in Kerala is relatively small in size, accounting for 11.52 per cent of Kerala's GSVA (at constant 2011-12 prices) in 2023-24 (Quick Estimates). Manufacturing plays a predominant role in industrial development in Kerala. As per the Annual Survey of Industries India and Kerala 2019-20, Kerala's share in Gross Value Added by India's factory sector has increased from 1.2 per cent in 2014-15 to 1.5 per cent in 2019-20. Traditional industries, including coir, cashew and handloom share a significant part of Kerala's manufacturing workforce. Resource based industries including food products and

**Table 4.1.1** Comparison of the factory sector in India and Kerala, based on major types of industries, 2019-20

Industries	Kerala's total factory sector		Shares in Kerala's total factory sector		India's total factory sector		Shares in India's factory sector	
	Employment (No's)	Total Output (Rs. Lakh)	Employment (%)	Value added (%)	Employment (No's)	Total Output (Rs. Lakh)	Employment (%)	Total Output (%)
1	2	3	4	5	6	7	8	9
Food Products and beverages (10, 11)	102306	3474733	29.53	15.88	20,32,625	13,36,01,635	12.23	14.87
Tobacco products (12)	13274	13736	3.83	0.06	4,47,064	42,42,699	2.69	0.47
Textiles (13)	22045	383538	6.36	1.75	16,29,101	3,97,44,643	9.80	4.42
Garments (14)	14147	132621	4.08	0.61	12,60,628	1,60,36,338	7.58	1.79
Footwear (15)	6187	179591	1.79	0.82	4,26,093	66,87,321	2.56	0.74
Wood and wood products (16)	9636	304084	2.78	1.39	95,269	28,38,114	0.57	0.32
Paper and paper products (17)	4378	93201	1.26	0.43	3,23,629	1,36,94,335	1.95	1.52
Printing and reproduction of recorded media (18)	6798	208957	1.96	0.95	1,53,914	42,49,223	0.93	0.47
Refined petroleum products (19)	7546	6939832	2.18	31.71	1,55,030	10,87,57,631	0.93	12.11
Chemical products and pharmaceuticals (20, 21)	26621	1136891	7.68	5.20	17,39,707	11,41,75,367	10.46	12.71
Rubber and plastics products (22)	29428	1213150	8.49	5.54	8,43,562	3,35,21,363	5.07	3.73
Other non-metallic mineral products (23)	20831	579232	6.01	2.65	10,54,127	3,26,24,987	6.34	3.63
Basic metals (24)	5592	390761	1.61	1.79	12,04,877	11,94,79,836	7.25	13.30
Fabricated metal products (25)	6020	172594	1.74	0.79	7,05,038	2,31,39,983	4.24	2.58
Electronic, computer and optical Products (26)	9918	280044	2.86	1.28	2,83,470	2,15,27,624	1.71	2.40
Electrical Equipment (27)	6051	163590	1.75	0.75	6,35,006	3,19,29,192	3.82	3.55
Machinery and equipment (28)	3704	88358	1.07	0.40	9,35,811	3,92,31,342	5.63	4.37
Motor vehicles (29)	529	5661	0.15	0.03	10,82,076	6,28,42,564	6.51	7.00
Other transport equipment (ships and boats (30)	7415	402707	2.14	1.84	4,21,386	2,34,11,876	2.53	2.61
Furniture, jewellery, medical and dental instruments, toys (31, 32)	10581	4873945	3.05	22.27	5,22,830	2,50,39,572	3.14	2.79

Repair and installation of machinery and equipment (33)	3094	59135	0.89	0.27	34,384	14,31,684	0.21	0.16
Waste Collection, treatment and disposal activities; materials recovery (38)	55	5597	0.02	0.03	21,124	11,08,912	0.13	0.12
Publishing activities (58)	2484	69968	0.72	0.32	23,431	6,82,544	0.14	0.08
Others	27809	709936	8.03	3.24	5,94,109	3,83,31,344	3.57	4.27
All Industries	3,46,449	2,18,81,862	100.00	100.00	1,66,24,291	89,83,30,129	100.00	100.00

Note: Figures in brackets refer to the divisions (in two digits) to which each of these industries belong according to National Industrial Classification (NIC)-2008

Source: Annual Survey of Industries India 2019-20, MOSPI, GoI & Annual Survey of Industries Kerala 2019-20, DES, GoK

beverages (including cashew processing), beedi manufacturing, and textiles (which include coir processing and handlooms) accounted for significant share of workers in Kerala's factory sector. A comparison of the factory sector in India and Kerala, based on major types of industries for 2019-20 is provided in **Table 4.1.1**.

Over the years, the size of workforce participation in traditional industries in Kerala has been declining whereas that in modern industries are growing. This top value-added industry includes chemicals, refined petroleum products, rubber and plastic products, electronic products, and pharmaceuticals and medicinal botanical products. Emergence of Private Industrial Estates are new development in manufacturing sector in Kerala. Developer permit has been issued to 31 Private Industrial Estates till date.

### Turnaround in Performance of Public Sector Units

One of the unique features of Kerala's industrial landscape is the presence of large number of State and Central public sector units and strong State Government support to state PSUs. The state PSUs are engaged in diverse areas of manufacturing, including chemicals, engineering and electronics. PSUs like Travancore Cochin Chemicals (TCC) and Keltron have been pioneers in the country in their respective fields of production (caustic soda and electronics respectively). The State Government is actively pursuing steps to improve the performance of PSUs. However, the performance of many of the PSUs in Kerala had not lived up to the expectations. A major highlight of the improved performance of Kerala's manufacturing sector

since 2016-17 has been the turnaround in the performance of some of these PSUs, engaged mainly in the production of chemicals and electrical machinery.

Out of 51 PSU's under Industries Department, in 2023-24, about 18 units have reported operating profit. In 2023-24, the PSUs under Industries Department have reported a total turnover of Rs 4,452.85 crore with a net loss of Rs 405.54 crore. The volume of loss has increased compared to the previous year. The major profit-making PSUs during the year includes Kerala Minerals and Metals Ltd (KMML), Transformers and Electricals Kerala Ltd, Steel Industrial Kerala Ltd, Kerala State Electronics Development Corporation Ltd, Kelton Component Complex Ltd, and Kerala State Industrial Enterprises Ltd. PSUs under Electronics Sector generated a net profit of Rs.34.54 crore. Government of Kerala has taken over the erstwhile Hindustan Newsprints Limited, Kottayam central PSU. It has been renamed the Kerala Paper Products Limited (KPPL) and is being revived and has started commercial production. The state has also taken over the central PSU BHEL – EML, at Kasargode. It is also being revived as KEL-EML and has started commercial production. Government of Kerala has also established the Kerala Rubber Limited, a Private Public Partnership (PPP) company based on CIAL Model for promotion of value addition in Natural Rubber Sector in Kerala.

### New Opportunities in Modern Industries

The emergence of few modern industries in the State is another positive development in Kerala's industrial landscape. Industries in electronics, medical devices and supplies are



**Table 4.1.2** Employment in selected major industries, Kerala and India, 2019-20

Industries	Kerala	India	Kerala's share in India
Rubber products (221)	18,190	2,50,445	7.26
Refined petroleum products (192)	7,233	1,32,542	5.45
Chemical products (201, 202)	13,913	8,52,867	1.63
Manufacture of electronic components (261)	7,500	1,02,683	7.30
Pharmaceuticals, medicinal chemical and botanical products (210)	12,707	8,07,279	1.57
Footwear (152)	5,962	2,96,183	2.01
Garments (141)	13,739	8,63,560	1.59
Plastic products (222)	11,238	5,93,117	1.89
Printing and services related to printing (181)	6,798	1,53,914	4.41
Ships and boats (301)	6,447	13,294	48.4
Electric motors, transformers and generators (271)	4,828	2,17,779	2.21
Medical and dental instruments and supplies (325)	5,863	74,297	7.89
Furniture (310)	3,311	86,844	3.81

Source: Annual Survey of Industries India 2019-20, MOSPI, GoI & Annual Survey of Industries Kerala 2019-20, DES, GoK

some of them. The number of workers engaged in the manufacture of electronic components in Kerala rose from 2930 only in 2012-13 to 7,500 by 2019-20. Workers engaged in the manufacture of medical and dental instruments and supplies increased from only 1023 in 2012-13 to 5,863 in 2019-20. Details regarding employment in some major industries are provided in **Table 4.1.2**.

Large demand within the State for medicines and healthcare products means that pharmaceuticals, biotechnology, life sciences, and medical-equipment manufacturing industries have great growth potential in Kerala. The large numbers of hospitals, doctors and nurses in Kerala are factors conducive for these industries.

The IT and electronic sectors and software and hardware production are witnessing growing integration at the global level. The IT sector itself going through fundamental changes and the state has to be prepared in this direction. Kerala can make inroads by diversifying into hardware manufacturing. There exists the potential to build a large electronics hardware manufacturing sector. The State should build on the unique advantages of the IT sector in the State and also make good use of the skill sets of its professionally qualified workforce.

Modernising the traditional sector will also bring

new opportunities to the state. The Government is taking steps to modernise the traditional industries in the State, including coir, cashew, handloom and the Khadi and village industries. Modernisation of traditional industries includes (but not limited to) mechanisation of production processes in these industries. Such modernisation will be undertaken by retaining the existing workers in these industries. Kerala's traditional industries are encouraged to diversify into new products and evolve effective marketing and distribution strategies. Steps are on to develop greater synergy among the traditional, food and agro-based industries, feeding on each other to create a globally recognised niche for the State in these sectors.

### **Industrial Promotion and Investment Facilitation Activities**

Given the unique situations in Kerala, the park model of industrial development is being pursued by the State Government. At the forefront of these activities include Kerala State Industrial Development Corporation (KSIDC) and Kerala Industrial Infrastructure Development Corporation (KINFRA), they come up with a number of innovative schemes to facilitate industrial investment and ensure Ease of Doing Business. This has simplified and made it easier for investors to start a business.

The State strongly believes in having sound policy backing for efforts to develop industries in the state. Time bound review of policies is also being pursued seriously by the Government of Kerala. The state has brought out the new Kerala Industrial and Commercial Policy in 2023. Among others, the policy has initiatives and incentives for fostering entrepreneurship, developing enabling infrastructure, developing high tech industries, building futuristic employment skillsets for employment, nurturing business environment, creating sectoral ecosystem and enhancing 'Kerala' brand equity.

To promote industries and facilitate investment, the State Government has made business friendly amendments to the relevant laws and regulations. The state has played a pivotal role in enhancing the ease of doing business through the implementation of various digital and legislative reforms. These reforms are part of the State Business Reforms Action Plan (SBRAP), which aims to streamline government-to-business service delivery. SBRAP has been in effect since 2016, following guidelines from the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India. The state has made significant progress in implementing business reforms, with the percentage of reforms executed increasing from 22.8 per cent in 2016 to 91 per cent in 2022. Kerala has been recognized as the Top Performer in SBRAP 2022, earning the 'Top Achiever' title in nine out of 30 reform areas the highest number of such recognitions among all states and Union Territories. This remarkable achievement reflects a significant turnaround, with Kerala improving its ranking from 28th in 2019 to 15th in 2020 (Aspirer Category). This progress underscores the positive impact of the state's business-friendly reforms.

The state now operates a highly efficient single-window system called K-SWIFT (Kerala Single Window Interface for Fast and Transparent Clearance), through which businesses can obtain 113 state-level/ national-level approvals across 22 departments. Additionally, K-SWIFT is integrated with the National Single Window System (NSWS), allowing businesses to secure necessary central approvals as well, streamlining the entire approval process.

The state has implemented the Kerala Centralized Inspection System (K-CIS), an online platform

designed to schedule departmental inspections, ensuring greater transparency and objectivity in the process. K-CIS is used by departments such as Labour, Factories & Boilers, the Pollution Control Board, and Legal Metrology to manage and conduct compliance inspections. A total of 22,885 inspections have been carried out through this system.

As part of its ongoing efforts to reduce the compliance burden, Kerala has successfully eliminated 632 business-related compliances across 21 departments and reduced 1,303 citizen-related compliances across 15 departments. Additionally, the state has decriminalized eight clauses under the Abkari Act, further streamlining regulatory processes.

The state has repealed 46 redundant and age-old acts and 59 Amendment Acts which had become obsolete and no longer needed through The Kerala Repealing and Saving Act, 2022 (Act No. 12 of 2022). A total of 105 Acts have been repealed through this act.

In order to strengthen the sector, the Government of Kerala has come up with the Kerala Investment Promotion and Facilitation Act, 2018 which envisages mandatory approval within a period of 30 days if applications are submitted with necessary documents. The Act seeks to avoid delays in granting various licenses, permissions, approvals and clearances required under the various enactments and make the State investor friendly.

The Kerala Micro Small Medium Enterprises Facilitation Act, 2019; The Kerala Micro Small Medium Enterprises Facilitation (Amendment) Act, 2021; and the 'Kerala Industrial Single Window Clearance Boards and Industrial Township Area Development (Amendment) Act, 2022' (Grievance redressal mechanism) are significant changes which have facilitated the growth of manufacturing in Kerala. Industrial promotion and investment facilitation activities of the state have started showing encouraging results. The state seeks to consolidate the momentum that the industrial sector has garnered in recent years. The industrial landscape in Kerala is now well placed for significant achievements in the near future.



## 4.2 MANUFACTURING SECTOR

### Manufacturing Sector in India

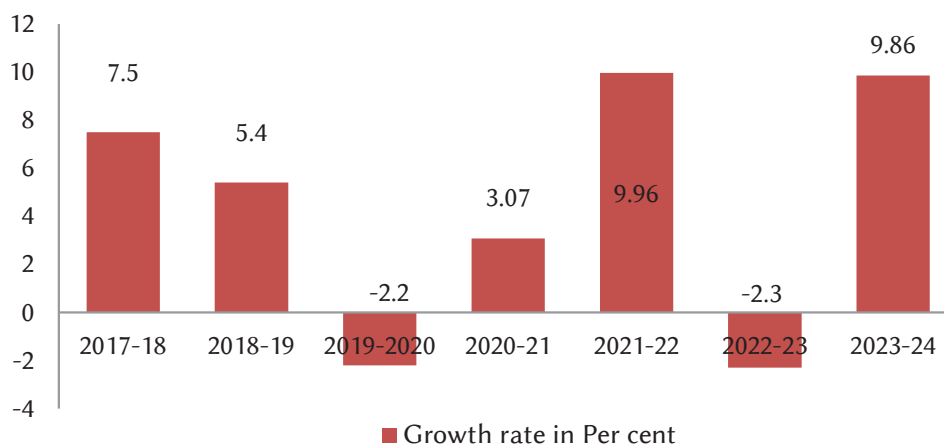
Manufacturing play important role in economic growth in India. According to Provisional estimate of Central Statistics Office (CSO, May 2024), the growth rate of Gross Value Added (constant price) from India's manufacturing sector declined from 10.0 per cent in 2021-22 to -2.3 per cent in 2022-23. However, sector grow significantly at 9.86 per cent in 2023-24. **Figure 4.2.1** displays year on year growth rate of Gross Value Added (GVA) by the manufacturing sector in India, at constant prices from 2017-18 to 2023-24.

### Manufacturing Sector in Kerala

There has been a steady increase in the size of Kerala's manufacturing sector. Kerala has achieved remarkable progress in modernising and diversifying its industrial sector.

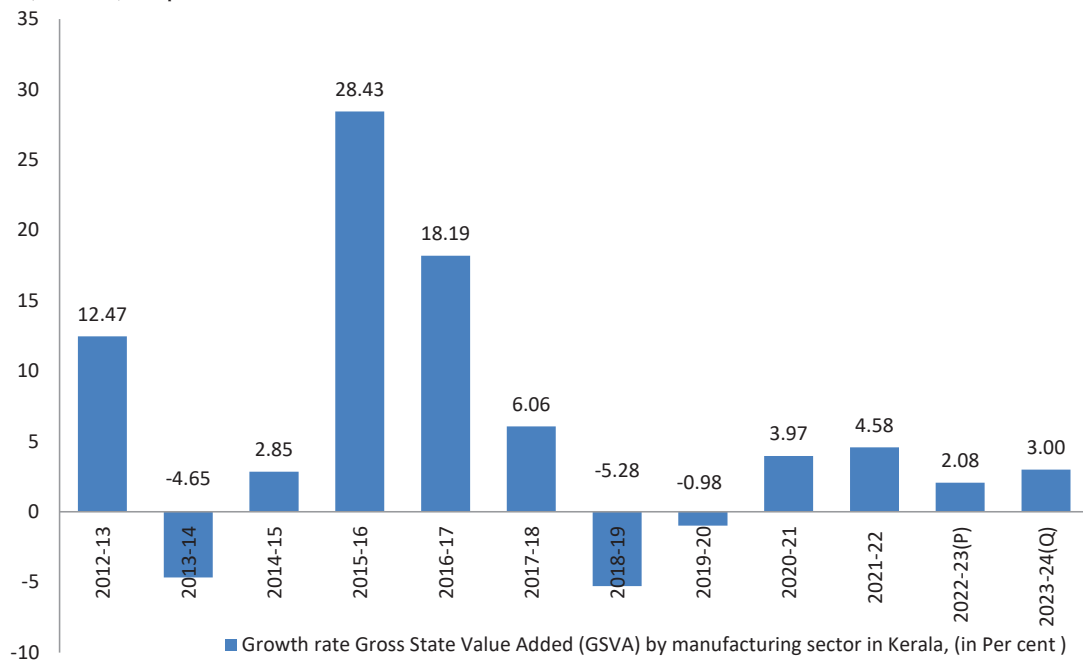
As per the quick estimates by Department of Economics and Statistics, Government of Kerala, the GVA of manufacturing sector at constant prices (2011-12) increased by 3.0 per cent in 2023-24 over the previous year. It is Rs 65,134.45 crore in 2023-24 (Quick Estimate), compared

**Figure 4.2.1** Growth rate of Gross Value Added by the Manufacturing Sector in India, at constant prices



Source: Central Statistics Office, MOSPI

**Figure 4.2.2** Growth rate of Gross State Value Added (GSVA) by manufacturing sector in Kerala, at constant prices (2011-12), in per cent



Source: Directorate of Economics and Statistics

to Rs 36,680.87 crore in 2013-14. In 2023-24, the shares of manufacturing sector to GSVA of Kerala at constant and current prices were 11.5 per cent and 7.9 per cent respectively. For details on the manufacturing sector's growth in Kerala from 2013-14 to 2023-24, please refer to **Appendix 4.2.1**.

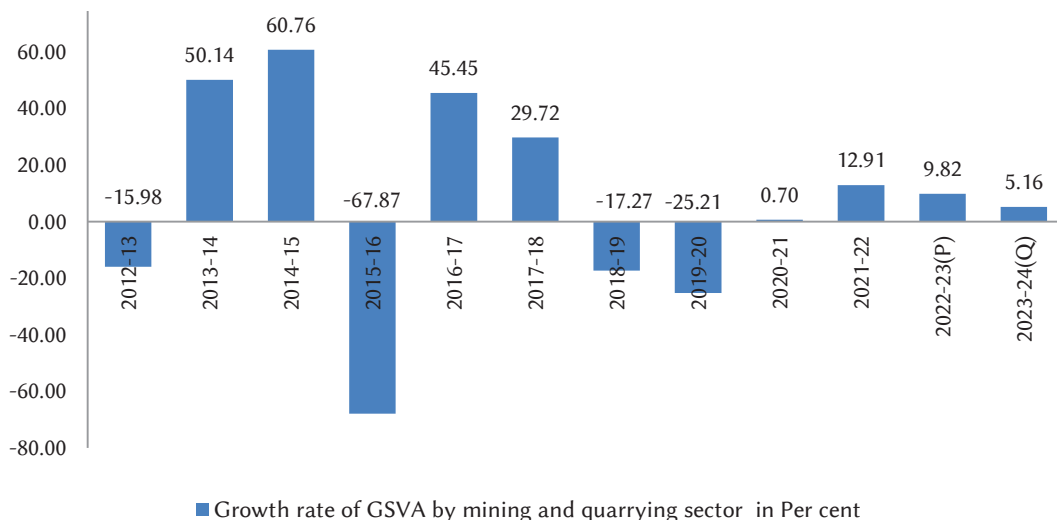
The trend in growth rate of GSVA of manufacturing sector in Kerala (at constant prices)

for the period from 2012-13 to 2023-24 is shown in **Figure 4.2.2**.

### Mining Sector in Kerala

Kerala is endowed with the deposits of minerals such as Heavy Mineral Sands (Ilmenite, Rutile Zircon, Monazite, Sillimanite) Iron ore, Bauxite, Graphite, China Clay, Tile and Brick clay, Silica sand, Lignite, Limestone etc. However, mining activities on large scale are confined to a few

**Figure 4.2.3** Growth rate of GSVA by Mining and Quarrying sector in Kerala, at constant prices (2011-12), in per cent



Source: Directorate of Economics and Statistics

minerals like Heavy mineral sands, China clay and to a lesser extent Limestone/Lime shell, Silica sand and Granite.

In 2023-24, the mining and quarrying sector in Kerala contributed an estimated value of Rs 2,721.58 crore (Quick Estimate) at constant prices. This sector registered 5.2 per cent growth in 2023-24 (Q) at Constant Prices. The growth rate of GSVA by Mining and Quarrying sector in Kerala, at constant prices from 2012-13 to 2023-24 is depicted in **Figure 4.2.3**.

### Mineral wise Production and Revenue Collection 2023-24

The Government gets revenue from minerals mainly by way of royalty. About 95 per cent of the revenue comes from minor minerals. In 2023-24, the revenue from minerals amounted to Rs.517.23 crore, indicating a significant annual growth of 59 per cent as compared to the previous year's amount of Rs 325.78 crore. In 2023-24, out of the total revenue of Rs.517.23 crore, an amount of Rs.17.29 crore was contributed by major minerals and the rest Rs.499.93 crore was from minor minerals. The revenue from minerals from 2018-19 to 2023-24 is given in **Table 4.2.1**.

**Table 4.2.1** Revenue from Minerals (Rs in crore)

Sl No	Year	Major Minerals	Minor Minerals	Total
1	2018-19	5.35	165.93	171.29
2	2019-20	8.76	151.34	160.11
3	2020-21	8.38	183.74	192.12
4	2021-22	10.75	196.83	207.58
5	2022-23	17.32	308.46	325.79
6	2023-24	17.29	499.93	517.22

Source: Department of Mining and Geology

In 2023-24, Kerala witnessed significant increase in production of major and minor minerals, amounting to 525.57 lakh tonne. Among the major minerals, limestone emerged as the top contributor with a production of 3.81 lakh tonne, followed by Ilmenite with 1.16 lakh tonne. In case of minor minerals, Granite Building Stone topped with production of 312.05 lakh tonne, followed by Ordinary Earth with 33.49 lakh tonnes. In 2023-24, Ilmenite and Sillimanite generated the highest royalty among major minerals, accounting for Rs 6.41 crore and Rs 3.81 crore respectively.

On the other hand, Granite Building Stone and ordinary earth were the top royalty contributors among minor minerals, generating Rs.179.32 crore and Rs 57.93 crore respectively in 2023-24. The production and royalty obtained from major and minor minerals in 2023-24 and 2024-25 (August 31st 2024) are exhibited in **Appendix 4.2.2**.

### District Wise analysis of Revenue Collected from Major/Minor Minerals

In 2023-24, Kerala has generated revenue of Rs. 517.23 crore from minerals. In District-wise analysis of revenue collection, Malappuram district emerged as the front runner with a collection of Rs.80.59 crores. Following behind were Palakkad with Rs. 69.96 crore, Ernakulum with Rs.68.38 crore and Thiruvananthapuram with Rs.54.64 crore. On the other end of the spectrum, Wayanad witnessed the lowest revenue collection of Rs.4.80 crore. The detailed breakdown of the district-wise revenue collection from both major and minor minerals is depicted in **Appendix 4.2.3**.

The Plan outlay and expenditure of Mining and Geology Department from 2016-17 to 2024-25 is Shown in **Table 4.2.2**.

**Table 4.2.2** Plan Outlay and Expenditure of Mining Department (Rs in lakh)

Sl. No	Year	Outlay	Expenditure
1	2016-17	84.00	48.82
2	2017-18	135.00	123.03
3	2018-19	149.00	61.46
4	2019-20	149.00	75.92
5	2020-21	132.00	117.73
6	2021-22	132.00	111.29
7	2022-23	405.00	229.3
8	2023-24	605.00	181.57
9	2024-25	557.00	12.29*

Source: Budget Estimates

\*till September 2024

The Department is implementing the Kerala Online Mining Permit Awarding Services (KOMPAS), an online system implemented through National Informatics Centre in all districts.

### **Mineral Based Industries in Kerala**

Indian Rare Earths Ltd, Kerala Minerals and Metals Ltd, Travancore Titanium Products, Malabar Cements, Travancore Cements Ltd, Kundara Ceramics, English Indian Clays Ltd, and Kerala Clays and Ceramic Products Ltd are some of the industries that are based on major minerals. On the other hand, the major industries that rely on minor minerals include stone crushers, units for the production of manufactured sand, brick factories, and tile factories. The State has witnessed a recent increase in the establishment of granite building stone crushers and sand production units, which can be attributed to the growth in infrastructure development.

Mining and quarrying are important economic activities, although the impact they may have on the environment needs to be closely monitored. The Government is therefore diligent in adopting and implementing Lidar based Drone Survey which is in the final stage, to moderate the negative impacts of mining operations. Modern technologies and practices have, reduced to some extent, the risks associated with mining and quarrying to the environment and economy.

## 4.3 PUBLIC SECTOR UNDERTAKINGS

The Government of Kerala aims to enhance the efficiency of public sector undertakings (PSUs) by ensuring professional management, profitability, and their contribution to the growth of the industrial sector and the economy. State Public Sector Units have contributed significantly to the progress made by the industrial sector in Kerala in recent years. State and Central Public Sector Units in Kerala operate in various manufacturing sectors, including chemicals, engineering, and electronics. Notably, certain PSUs in the state, like Travancore Cochin Chemicals (TCC) and Keltron, have been at the forefront of production in their respective fields, serving as pioneers in the country.

In addition to State PSUs, Kerala also has a number of Central PSUs. They include Fertilizers and Chemicals Travancore Limited (FACT) in Kochi, Bharat Petroleum Corporation Limited (BPCL), Cochin Shipyard Limited (CSL), and Instrumentation Limited (IL) in Palakkad.

### Central Public Sector Undertakings (CPSU)

The Public Enterprises Survey traditionally covers, besides certain statutory corporations, those Government companies wherein more than 50 per cent equity is held by the Union Government. The subsidiaries of these companies, if registered in India, where any CPSE has more than 50 per cent equity are also categorised as CPSEs. The survey does not cover departmentally run public enterprises, banking institutions and insurance companies. Out of the total, 402 CPSEs, 254 are operating PSUs.

### Central Sector Investment

The total financial investment in Central PSUs in India increased from Rs.22.89 lakh crore in 2021-22 to Rs. 25.35 lakh crore in 2022-23, registering a growth of 10.8 per cent over the previous year (Public Enterprises Survey, 2022-23). The total gross block by Central PSUs in Kerala decreased marginally from Rs.73,767.24 crore in 2021-22 to Rs. 73,522.01 crore in 2022-23. The share of investments in Central PSUs in the State also decreased marginally from 2.6 per cent in 2021-22 to 2.4 per cent in 2022-23. The investment in central PSUs as on March 31, 2023 is highest in Maharashtra (8.5 per cent of investment), followed by Uttar Pradesh (7.3 per cent of investment) and Tamil Nadu (6.7 per cent of investment). Kerala occupies 17th position among states in terms of Gross Block. (Public Enterprises Survey 2022-23). Details of central sector investment in Kerala from 2014-15 to 2022-23 are given in **Appendix 4.3.1** and central sector investment in selected States (as on March 31, 2023) are given in **Appendix 4.3.2**.

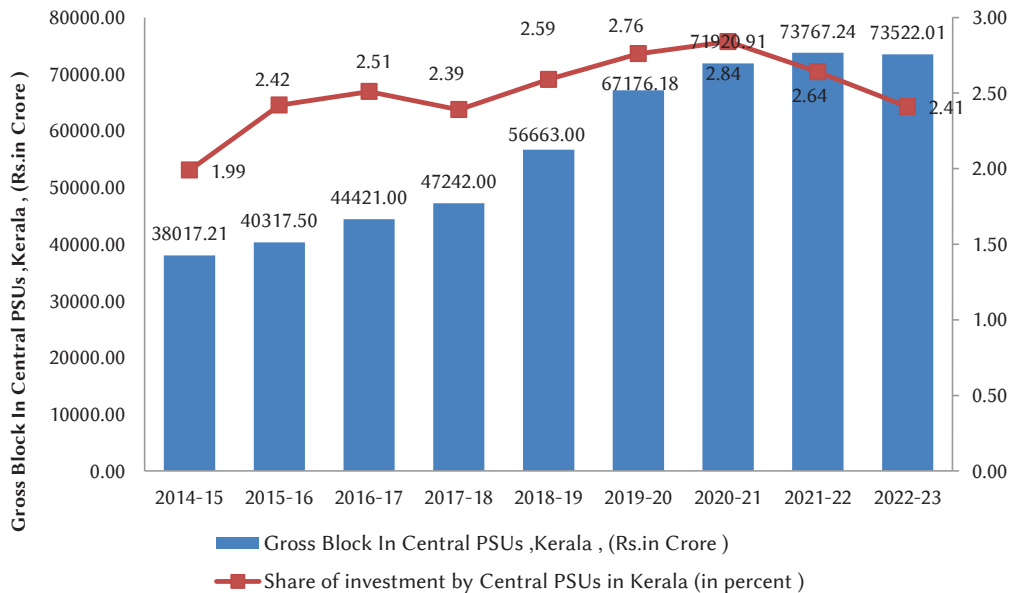
The total amount of gross blocks in Central PSUs in Kerala and the total Share of investment in Central PSUs in Kerala from 2014-15 to 2022-23 is shown in **Figure 4.3.1**

### Joint Stock Companies

As of March 2023, Kerala has 56,290 joint stock companies. In 2023-24, a total of 5,889 new Joint Stock Companies were registered in Kerala. Out of these, 25 companies were transferred from other states, while 11 companies were transferred



**Figure 4.3.1** Total amount of gross blocks in Central PSUs in Kerala and the total Share of investment in Central PSUs in Kerala



Source: Public Enterprises Survey 2022-23

to other states. Additionally, 452 companies were dissolved, struck off, or amalgamated in 2023-24. So, the total number of joint stock companies at the end of 23-24 was 61,741. The Registrar of Companies, Kerala and Lakshadweep reported a total of 181 Government companies registered as of March 2024. Detailed information on joint stock companies operating in Kerala, are provided in **Appendix 4.3.3**.

### State Public Sector Undertakings under Industries Department

There are 51 Public Sector Units including eight cooperative spinning mills under the Department of Industries and Commerce, spread across nine sectors. Two of these units were not operating in 2023-24. The PSUs under Industries Department reported a combined turnover of Rs 4,452.85 crore and net loss of Rs 405.54 crore in 2023-24. The turnover has decreased 0.52 per cent compared to previous year. The number of profit-making PSUs (Net profit) in Kerala has decreased from 15 in 2022-23 to 12 in 2023-24. The number of PSUs making operating profit has reduced from 21 in 2022-23 to 18 in 2023-24. The overall operating loss of PSUs was Rs 7.03 crore. The performance of State PSUs under Industries Department during the last 5 years is given in **Appendix 4.3.4** The major profit-making PSUs during the year includes Kerala Minerals and Metals Ltd (KMML), Transformers and Electricals

Kerala Ltd, Steel Industrial Kerala Ltd, Kerala State Electronics Development Corporation Ltd, Kelton Component Complex Ltd, and Kerala State Industrial Enterprises Ltd. PSUs under Electronics Sector generated a net profit of Rs.34.54 crore. At the same time, PSUs in all other sectors recorded losses. The State Government has launched efforts to revive the PSUs and help them emerge as agents of technological transformation of Kerala's industrial sector. The sector-wise financial performance of State PSUs under Industries department during the last five years is shown in **Appendix 4.3.5**. Details of PSU-wise turnover and profit/loss in 2023-24 and 2024-25 (till August 2024) are shown in **Appendix 4.3.6**.

In 2024-25 the Budget provision for PSUs under Industries Department is Rs 309.10 crore, which includes working capital support to PSUs. Of this amount, Rs 28.80 crore was spent till September 2024.

### Major achievements of the PSUs

- Implemented Business Plan and MoU in PSUs as part of performance improvement.
- Launched the e-commerce platform “K-shoppe” for marketing the products of PSUs at competitive price to the general public.
- Initiated steps for purchase of cotton through Cotton Board.
- KELTRON has signed MoU with Eloqua,

a Norwegian company to collaborate on the design and manufacturing of electric, hydraulic and electro-hydraulic actuators in the control and instrumentation sector.

- KELTRON has bagged orders worth Rs.97 crores from Indian Navy for manufacturing various defence electronics equipment required for underwater operations
- SILK, Azheekal received order from Indian Navy to dismantle 2,000 MT submarine
- Keltron Component Complex Ltd, Kannur commissioned India's first Super Capacitor manufacturing facility.
- Keltron Electro Ceramics Ltd received orders worth Rs.17 crores from Bharath Electronics Ltd, Bangalore to supply state of art of MF Transducers.
- Kerala Automobiles is supplying e-cart to municipalities / corporation for collection and disposal of dry and wet waste
- KELTRON handed over 7 completed products relating to defence electronics.

### **Future Plans**

PSUs need transformation from purely profit-making ventures to institutions that create an enabling environment for high technology enterprises, in private and public sector. There is need to increase the linkages between PSUs and the State's economy. For this, raw material should be procured as much as possible from the State itself and measures should be taken to help and support the development of ancillary and downstream industries. PSUs in Kerala should play the role of facilitators for the promotion of entrepreneurship, especially high technology entrepreneurship.

Government of Kerala is committed to the development and rejuvenation of PSUs. Professional managers have been appointed to oversee the operations of PSUs. A permanent Public Enterprises Selection Board has been set up for selecting a cadre of top managers in a transparent manner. Convergence and mergers of PSUs manufacturing similar products will be undertaken to bring about efficiency in their operations.

### **Board for Public Sector Transformation (BPT) - erstwhile Public Sector Restructuring and Internal Audit Board (RIAB)**

Government have re-named Public Sector Restructuring & Internal Audit Board (RIAB) as

Board for Public Sector Transformation (BPT) and re-constituted the Governing Board. BPT is functioning under the Industries Department, as a responsible agency for undertaking reform initiatives in State PSUs. BPT has been playing a major role in the rejuvenation and revival of PSUs under the Industries department. Major responsibilities of the agency include performance planning and monitoring of PSUs, enterprise reconstruction, capacity building, and governance advisory support to State PSUs.

### **Industrial Promotion and Investment Facilitation**

The main industrial financing agencies in the State are Kerala State Industrial Development Corporation (KSIDC) and Kerala Financial Corporation (KFC). In addition to industrial financing, KSIDC promotes and facilitates physical and social infrastructure required for industrial growth in the State. Kerala Industrial Infrastructure Development Corporation is the agency focusing on industrial infrastructure development.

### **Kerala State Industrial Development Corporation (KSIDC)**

KSIDC is a wholly owned company of the Government of Kerala, established in 1961, for the promotion and development of medium and large-scale units in the State. KSIDC initiated major industrial and infrastructure projects, which are strategically important for Kerala's economic development. KSIDC has 11 industrial parks with 1174.5 acre land, of which 707.5 acres of land developed and allotted 540.9 acres to 344 units, provides employment to 11,009 persons. Details are given in **Appendix 4.3.7**. KSIDC also plays a vital role in the State by financing and promoting private industrial projects, spearheading investment promotion initiatives, creating sector-specific industrial infrastructure and ecosystem, and nurturing entrepreneurship and start-ups. As the nodal agency for foreign and domestic investment in Kerala, KSIDC provides comprehensive support for investors, helping them access various incentives and schemes, and facilitating constant interaction between the Government and the industrial sector.

The Kerala State Industrial Development Corporation (KSIDC) serves as the primary interface for investors who wish to establish their businesses in the state. KSIDC provides a wide range of services that encompass the

entire process of transforming business ideas into successful ventures. These services include aiding in the formulation of feasible projects, conducting thorough feasibility studies, offering well-developed infrastructure facilities, expediting necessary approvals and clearances, and providing continuous support to investors from the initial conceptualisation of their projects to their ultimate realization. KSIDC has strived to create an enabling ecosystem for start-ups by establishing Business Incubation Centres, organizing mentoring sessions, and offering seed funding to foster their growth.

The corporation has so far promoted more than 750 projects in the State and has played a vital role in the setting up of pioneering organizations such as Cochin International Airport Limited, Kerala Minerals & Metals Ltd, Nitta Gelatin India Ltd., Geojit BNP Paribas Financial Services Ltd., Lakeshore Hospital & Research Centre Ltd, KIMS Hospital, Le-Meridien Hotel, Crown Plaza, Apollo Tyres and many others.

#### Major initiatives and achievements (2023-24)

- The State has been categorised as the Top Achiever in 9 reform areas under State Business Reform Action Plan (SBRAP) 2022.
- The Kerala Industrial Policy 2023 was launched, which among other things, specify 22 Priority sectors and 18 incentives applicable to entities in the Priority Sectors.
- Cabinet Approval has been obtained for Kerala Logistics Park Policy, 2024
- Launched K-RIIS (Kerala Responsible Industry Incentive Scheme) on 6th of November 2023. It is an initiative of the Government of Kerala,

which aims to incentivise Industries in the State that focuses on Responsible Investment (RI) & Responsible Industry (RI) concept.

- Developed and activated online portal “www.kriis.kerala.gov.in” through Keltron for receipt of applications, its processing & monitoring.
- Conducted Scale-up conclave 2024 on 4th March 2024 at Kochi with over 400 participants attending the event including 21 speakers.
- Assisted 16 Start-up with Loan assistance of Rs 407.43 lakhs and 12 Women Entrepreneurs with Rs.232.20 lakhs.
- Drafts of ESG (Environmental, Social and Governance) policy, Export policy, Logistic policy and Graphene policy are prepared & submitted to Government for approval.
- KSIDC has actively participated in numerous national and international events, including mega events like Bio Connect, Scale Up and other event like Regional industry meet in food processing sector, Investor Conclave in footwear sector in association with FDDI, Growth Investor Conclave in association with FICCI etc.
- In 2023-24, loans to start-ups for scaling up has been enhanced to 1 crore. We Mission loans to women entrepreneurs was enhanced to Rs.50 lakh. Started the online portal for sustainable Industry Incentive Scheme, where investors can apply for all 18 incentives. Project Implementation Committee has been constituted for monitoring projects above Rs.10 crore.

Besides financing several industrial units and implementing various mega projects, KSIDC had also taken up many activities. The major activities

#### Box 4.3.1 KSIDC: Major Activities and On-going Projects

- Financial assistance and support to medium and large-scale industries
- Investment promotion in Kerala
- Industrial infrastructure development, including Industrial Growth Centres
- Promoting ease of doing business in Kerala
- Providing support for various start-up initiatives
- Entrepreneur support through mentoring
- Angel/seed fund scheme
- Electronic Hardware Park at Kochi
- Life Science Park for promoting private industries and R&D institutions in the life sciences sector.
- Second phase of Light Engineering Industrial Park, Palakkad
- Business Incubators
- Medical devices Park (Med Spark)
- Mega Food Park
- Sustainable Industry Investment scheme

Source: KSIDC

**Table: 4.3.1** Key Financial Parameters of KSIDC (Rs in Crore)

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Net Worth	725.1	643.2	809.8	869.12	945.23
Total expenditure	14.4	16.2	20.4	13.6	13.6
Employee Expenses	8.9	10.7	10.7	9.02	9.71
Net Profit/Loss (+/-)	33.8	39.6	25.5	54.9	64.72
Audit Status	Audit up-to-date				

Source: BPE Review 2022-23

and ongoing projects initiated by KSIDC are shown in **Box. 4.3.1**.

### Financial Status

The Corporation reported a net profit of Rs.64.72 crore in 2022-23. Certain key financial parameters of KSIDC for the past five years are given in **Table 4.3.1**.

### Industrial Financing by KSIDC

In 2023-24, KSIDC sanctioned projects worth of Rs.602.10 crore. The Corporation achieved Rs. 261.39 crore of disbursements, and a total amount of Rs.293.06 crore was recovered by way of principal and interest. There are 98 projects under various stages of implementation with a total investment of Rs.1,221.07 crore, which would create employment for around 4,366 persons. The physical and financial performance of KSIDC in 2023-24 and 2024-25 (as on August 2024) is given in **Appendix 4.3.8**.

The plan outlay and expenditure of KSIDC from 2016-17 to 2024-25 are shown in **Table 4.3.2**.

**Table 4.3.2** Plan Outlay and Expenditure, KSIDC, Rs in crores

Sl. No	Year	Outlay	Expenditure	Per cent
1	2016-17	87.5	75.5	86.3
2	2017-18	96.3	171.7	178.4
3	2018-19	134.4	77.5	57.7
4	2019-20	116.0	15.9	13.7
5	2020-21	109	84.32	77.36
6	2021-22	109	48.74	44.72
7	2022-23	113	50.53	44.73
8	2023-24	122.50	56.35	46.01
9	2024-25*	127.50	17.68	13.86

Source: Budget Estimate, Plan Space  
\*till September 2024

### Major Promotional Activities of KSIDC

#### 1. Investment Facilitation and Industrial Promotion Activities

- **Investment Facilitation Division** - As part of the State Business Reform Action Plan (SBRAP) implementation, the agency has uploaded proof of implementation for 340 action points out of 352, in the Department for Promotion of Industry and Internal Trade (DPIIT) EoDB portal. Out of 340 submitted by the State, 319 have been accepted by the DPIIT and 21 have been rejected. DPIIT completed the process of initiating Feedback Survey among the beneficiaries. In this regard, the State has received the Top performer award in 9 reform areas under the SBRAP 2022 which is the highest in the country.
- In an effort to address various issues faced by entrepreneurs in the State, KSIDC had prepared and forwarded 23 reform proposals across 12 departments /agencies to the Govt. These proposals sought reforms or amendments in various acts, rules and regulations.
- As part of promotional activities, engaged C-Dit for the production of videos of 50 successful companies in Kerala, approved the sponsorship/advertisement request of 23 entities, updated the database of 1700 industrialists of Kerala, prepared and printed promotional materials for branding and promotional purposes.
- As part of reducing the Cost of Doing Business exercise, State has submitted the data set for requisite 13 relevant approvals/clearances pertaining to setting up and running an industry.
- Online modules for Know Your Approvals, criminal indices, and know your incentives were developed in the KSWIFT portal as part of the implementation of SBRAP 2022.
- Revamping of Invest Kerala Website completed and contents are updated.
- KSWIFT- Completed the integration with National Single Window System and IBPMS.

There are 21 departments integrated with the system with 95 services being delivered through it. There are more than 75,000 registered users and more than 45,700 MSME Acknowledgement Certificates were issued so far. Around 4,000 licenses/permits/NOCs were issued through the portal.

- KCIS- The centralised inspection system has at present 5 various departments on board. Local Self Government Department, Kerala State Pollution Control Board, Legal Metrology, Factories & Boilers Department and Labour Department are the departments integrated. More than 5 lakh enterprises are enrolled in the system.
- 2. Innovation Acceleration Scheme:** A total of 9 seed fund loans and 7 scale-up loans were approved during the fiscal year 2023-24. An amount of Rs. 132.43 lakh was disbursed under the Seed Fund scheme, while Rs. 275 lakh was disbursed under the Scale-Up Support scheme.
- 3. Women Entrepreneurship mission:** A total of 12 proposals have been officially approved under the WE Mission Financial Assistance Scheme for the financial year 2023-24. Subsequently, funds amounting to Rs.232.20 lakh have been disbursed to these 12 units during the financial year.
- 4. Chief Minister's Special Assistance Scheme:** A sum of Rs. 369.23 crore has been allocated as financial assistance to a total of 116 units.
- 5. Covid Samashwasa Padhathi:** A sum of Rs. 495.80 lakh were spent towards interest waiver on land allotment at industrial growth centres.
- 6. Medical Devices Park (Medspark):** The civil structure of two buildings, namely, Prototype & Incubation Centre and Animal House has been completed. Construction of Knowledge Resource Centre's foundation and first floor RCC work completed.
- 7. Life Sciences Park, Trivandrum:** The Admin Block & Biotech Lab Block with built-up area of 80,827 sq. feet has been completed in all respects in March, 2023. Development of Road and basic amenities-IIInd phase of Life Science Park is ongoing. INKEL was selected as PMC for the Biotech Incubation Space development.

### **Kerala Rubber Limited**

Government of Kerala formed KRL for promoting manufacturing of intermediate and final rubber products and coordinating related activities with prime focus on MSME sector. KRL is now nominated as the State Level Implementing

Agency for the development of Rubber/Rubber Wood based Common Facility Centres (CFCs) in Kerala.

### **Physical achievements**

- To address the problem of shortage of skilled labour in the rubber plantation sector, with the network of Rubber Producers Societies (RPS), KRL is in the process of experimenting an "event management" model through Kakkombu RPS at Thodupuzha for facilitating tapping and harvesting. KRL has also submitted a proposal to scale up the model, to the Plantation Directorate.
- Establishment of Rubber Industrial Complex at Velloor Village in Kottayam district is progressing.
- Facilities such as Research & Development Centre, testing and quality control centre and Business Incubation Centre are planned to be established by KRL.
- KRL has initiated discussions with Rubber Board, CUSAT and MGU for collaborative research involving sharing of expertise, faculties and facilities. MoUs will be signed with these three institutions forthwith.

### **Kerala Industrial Infrastructure Development Corporation (KINFRA)**

KINFRA was set up in 1993 with the objective of building industry-specific infrastructure across the State and thereby promoting private investment and employment creation, and creating a land bank for future industrial growth. KINFRA has promoted economic development of industrially backward regions of the State by setting up industrial parks/townships/zones, which provide most of the facilities required for entrepreneurs to start an industry. The industrial parks developed by KINFRA have facilities such as developed land on built up space, dedicated power and water supply, and communication facilities. KINFRA offers entrepreneurs a readymade manufacturing environment, assisting them in minimising the time and expenses required for establishing a unit. The primary objective of KINFRA is to develop infrastructure and attract investments by providing land or built-up spaces.

Over the past three decades, KINFRA has developed 31 industrial parks, accommodating around 1,200 units across various sectors such as garment manufacturing, food processing, defence equipment, petrochemicals, IT/ITES and

**Table: 4.3.3** Performance of KINFRA

Sl No.	Particulars	2022-23	2023-24	2024-25 (up to 30 August)
1	Allotment of land (acres)	48.25	36.94	24.75
2	Allotment of Space (sq. ft.)	1,48,860	1,63,702.26	50,577
3	No. of Units (Nos)	130	103	43
4	Employment (Nos)	3,584	2,686	759
5	Investment (Rs in crore)	336	460	54.64

Source - KINFRA

**Table: 4.3.4** Key Financial Parameters of KINFRA (Rs in crore)

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Net Worth	1230.20	1427.40	1548.70	1724.13	1845.01
Total expenditure	43.40	506.90	38.66	52.65	125.94
Net Profit/Loss (+/-)	6.40	2.30	17.04	7.33	6.08
Audit Status	Complete and up to date				

Source: BPE Review 2022-23

healthcare. KINFRA has constructed over 1.4 million sq ft of industrial space, which generated about 70,000 jobs and attracting investment totalling Rs.5,000 crores. The **table 4.3.3** illustrates the physical performance of the KINFRA Park.

### Financial Status

The Corporation reported a net profit of Rs. 6.08 crore in 2022-23. Certain key financial parameters for the past Five years are shown in **Table 4.3.4**.

The plan outlay and expenditure of KINFRA from 2018-19 to 2024-25 are shown in **Table 4.3.5**.

**Table 4.3.5** Plan Outlay and Expenditure, KINFRA (Rs in crore)

Sl. No.	Year	Outlay	Expenditure	%
1	2018-19	96.00	47.00	49.0
2	2019-20	107.00	31.00	29.0
3	2020-21	92.53	85.14	92.0
4	2021-22	302.53	177.88	58.8
5	2022-23	332.53	62.92	18.9
6	2023-24	335.56	226.74	67.6
7	2024-25*	324.31	34.68	10.7

Source:-Budget Estimate

\*till September 2024

### Land available with KINFRA

KINFRA has a total of 3695.36 acres of land available for industrial development, Out of this total area, 2476.81 acres were developed for allotment. Out of this total allotable area of land 1584.80 acres have already been allocated to industrial units. In terms of build-up space, out of the total 17,21,980.75 square feet, about 11,31,557.02 square feet have been allotted to the different Industrial units. The details of allotments in KINFRA industrial parks as on 31 August 2024 are given in **Appendix 4.3.9**.

KINFRA has promoted investments in the State and created investment friendly climate within its parks, contributing significantly to the State's economy.

- KINFRA has completed the construction of 48,686.18 sq. ft building of Standard Design Factory, Mattannoor.
- KINFRA has completed the construction of 1.2 lakh sq. ft standard design factory for IT/ITES at Advanced Technology Park, Ramanattukara and land development works are progressing.
- KINFRA has completed phase I development of KINFRA Spices Park and 100 per cent of the land has been allotted.
- KINFRA has effectively implemented a single window clearance system across all its parks.

The major on-going projects of KINFRA are shown in **Box. 4.3.2**

### Box 4.3.2 On-going Projects of KINFRA

- Petrochemical Park, Kochi
- Kochi-Bangalore Industrial Corridor
- Advanced Technology Park, Ramanattukara
- Global Ayurveda Village, Thonnakkal and Varkala , Thiruvananthapuram
- International Trade and Convention centre (JV with ITPO), Kochi
- Upgradation of infrastructure in existing industrial parks
- Electronic manufacturing Cluster (EMC Kochi)
- Kinfra Industrial Park, Perumbavoor

Source: KINFRA

### Industrial Park Rating System (IPRS) Government of India

As per IPRS rating system, KINFRA has made giant strides in the manner in which the industrial parks are being implemented. The following five KINFRA parks have emerged among the top performing parks in the South region in terms of excellence as per the 4 growth pillars of IPRS introduced by Department of Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce

- KINFRA High Tech Park, Kochi
- KINFRA Mega Food Park, Palakkad
- KINFRA Film and Video Park, Kazhakoottam
- KINFRA Small Industries Park, Mazhuvanoor
- KINFRA Integrated Industrial Park, Kanjikode

### Kerala Financial Corporation (KFC) (Industrial Financing)

KFC incorporated under the State Financial Corporations Act of 1951, is a leading State Financial Corporation in India, playing a vital role in the industrialization of the State by providing financial assistance to Micro, Small and Medium Enterprises in the manufacturing and service sector. The Corporation provides financial assistance for setting up of new units and for the expansion/modernisation/diversification of existing units in both manufacturing and service sectors. Financial assistance is provided in the form of term loans, working capital loans and special schemes. KFC is a member of Credit Guarantee Fund Trust for Micro and Small Enterprises.

The major activities of the Corporation are the following:

- Sanction of term loans to new micro, small and medium enterprises in the manufacturing and services sector.
- Sanction of term loans to existing industrial

concerns and services sector units for expansion/modernisation/diversification.

- Sanction of working capital loans to meet working capital requirements of industrial/service enterprises under special schemes.
- Special schemes for financial assistance to civil contractors.
- Special scheme for financial assistance for producing feature film and TV serials.
- Special scheme for modernisation, up-gradation and expansion of existing cinema theatres and establishment of new multiplexes.
- Special scheme for purchase of lab equipment and waste management.
- Scheme for Funding Venture Debt for IT Hardware and Software Enterprises.
- Scheme for financing working capital requirements of start-ups for executing purchase orders.

### Key Business Initiatives

In 2023-24, the Corporation has launched new loan schemes and products and also fine-tuned the existing processes to remain competitive. The key initiatives taken up are given below:

- During 2023-24, KFC's loan portfolio exceeded Rs.7,000 crore for the first time, reaching Rs.7,368 crore and its net worth surpasses Rs. 1,000 crore and touched Rs. 1,064 crore. Key performance indicators reflect a notable growth. Sanctions have increased by 4.0 per cent, disbursements by 14.4 per cent, portfolio expanded by 12.9 per cent, profit soared by 47.5 per cent, and Gross NPA decreased by 7.4 per cent, while net NPA witnessed a decline of 4.4 per cent .
- Expanding presence to new areas – with more products and sectors, the presence of KFC has been expanded to more sectors. Three stressed Asset Recovery Branches (SARBs)

were started to have focussed recovery at Thiruvananthapuram, Ernakulam and Kozhikode. Two Large Credit Branches (LCB) were set up for servicing large loans at Thiruvananthapuram and Ernakulam. The existing 16 branches are upgraded as exclusive MSME Credit Branches (MCBs) to focus on small and mid-sized enterprises

- Enhancement of Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) Guarantee ceiling - The CGTMSE guarantee ceiling of the corporation is enhanced to Rs.200 lakh from the existing ceiling of Rs.50 lakh.
- Awards and recognitions 2023-24- KFC have achieved FACT MKK Nayar Memorial Best Productivity performance award for service organisation, Hues of Life (Magazine) best loan provider for the food industry, MSME

Excellence Awards for Hues of Life best Loan provider for start-ups.

- During 2023-24, KFC assisted 2,648 MSMEs with 726.66 crore and created 25,000 direct employment. Also assisted 66 Start Ups with 70.28 crore and created 515 direct employment.

The performance of KFC over the past five years is outlined in **Appendix 4.3.10**, while **Appendix 4.3.11** and **Appendix 4.3.12** provide details on loan operations and industry-wise loan classification for the year 2023-24. **Table 4.3.6** displays the notable achievements of the Corporation during the previous two financial years.

The sector-wise classification of loans and advances as on 31 March 2024 is shown in the **Table 4.3.7**

**Table 4.3.6** Performance of Kerala Financial Corporation (Rs in lakh)

Sl.No	Key Parameters	2022-23	2023-24
1	Portfolio Size	6,52,940.30	736832.71
2	Sanctions	3,20,722.18	333666.41
3	Disbursements	3,55,594.61	4,06,855.43
4	Recovery	2,33,241.69	3,90,110.42
5	Interest Income	54,364.41	68,185.01
6	Total Income	69,437.51	86,871.54
7	Total Expenditure	55,835.81	76,082.46
8	Op. Profit before technical write off of bad debts	24,142.60	24,098.66
9	Op. Profit after technical write off of bad debts	13,601.70	10,789.08
10	Net Profit before Tax	8,602.95	10653.99
11	Net profit after tax	5,018.64	7404.39
12	Net worth	92,570.25	1,06,352.78
13	Capital Adequacy Ratio %	25.58	25.52
14	Gross NPA as percent of Gross advances	3.11	2.88
15	Net NPA as percent of Net advances	0.74	0.68

Source: Kerala Financial Corporation

**Table 4.3.7** The Sector-wise classification of loans and advances Rs. in Lakh

Sector	2022-23			2023-24		
	Number	Amount	Per cent	Number	Amount	Per cent
Manufacturing	2058	198580.44	30.41	1639	102153.41	13.86
Service	4189	423241.48	64.82	4941	602809.70	81.81
Commercial Real Estate	144	31118.38	4.77	120	31869.60	4.33
<b>Total</b>	<b>6391</b>	<b>652940.3</b>	<b>100</b>	<b>6700</b>	<b>736832.71</b>	<b>100.00</b>

Source: Kerala Financial Corporation



### **Kerala Bureau of Industrial Promotion (KBIP)**

Kerala Bureau of Industrial Promotion (KBIP) is an autonomous body under Department of Industries and Commerce. KBIP established in 1991 is a registered society under the Travancore Cochin Scientific Literary and Charitable Societies Act 1955. They are involved with MSME and Medium and Large enterprises in Kerala.

The various industrial promotion activities undertaken by KBIP are classified as follows.

- Industrial cluster development.
- Activities of Kerala State Bamboo Mission.
- Implementation of PM Formalisation of Micro Food Processing Enterprises Scheme.
- Activities of Commerce Mission.
- Audit and Certification of Food Processing and related units.
- National Scheduled Caste/Scheduled Tribe Hub activities in Kerala.
- Participation in Regional, National and International Events.
- General Promotional Activities.
- Kerala B2B Online Portal.
- Maintenance of Official Websites.

### **Centre for Management Development (CMD)**

Centre for Management Development (CMD) is an autonomous institution sponsored by the Government of Kerala and attached to the Department of Industries and Commerce. The Centre was established during 1979 as a professional registered society with the objective of providing professional management support to public enterprises in the State. Over the years, CMD has broadened its sphere of activities and it provides support to the Development Agencies, Corporate Section and the Government both at the National and State levels through consultancy, project management, Monitoring & Evaluation, Human Resource Management, Training, Education & Research and Public Private partnership (PPPs).

Major achievements of CMD in 2023-24 are

- **Consulting and Project Management support to KIIFB:** CMD has been providing advisory and consultancy services to the Kerala Infrastructure Investment Fund Board (KIIFB). So far CMD has evaluated and appraise more than 750 projects of KIIFB worth over Rs.37,850 crores. During 2023-24, CMD has completed technical appraisal process for 24

projects values at Rs 5,996 crores and as part of DPR support services, completed topographic survey of 34 road stretches covering 338 km.

- **Project Management Support for implementation of the Norka Department Project for Returned Emigrants (NDPREM):** NDPREM is a rehabilitation programme of NORKA department for the overseas returnees to identify their strength and skills and capable them to start small enterprises. CMD is providing management support services for the implementation of the scheme and also advisory services to project opportunities, project viability and managerial aspects of the units created under the scheme
- **Sustainable Livelihood Generation Programme for Scheduled Tribe Community (Gothrajeevika):** The project, which was conceptualized and executed by CMD with the backing of the Scheduled Tribes Development Department. The scheme ensures skill development, sustainable livelihood, and economic and social empowerment of the members of the tribal community. Under Gothrajeevika I, 1170 beneficiaries were providing training to strengthen labour force in construction, building material manufacturing, painting and flooring, carpentry, plumbing, wiring etc. these beneficiaries were grouped in to 57 societies. Gothrajeevika II is being carried out in three interlinked phases.
- **NORKA Institute of Foreign Languages (NIFL):** NIFL is the initiative of the NORKA Roots intended to help young men and women candidates from Kerala seeking overseas placements and to mould them to get employment in the global job market. CMD is responsible for establishment of institutes and successful management and operation of institutes which includes recruiting and managing the teaching and non-teaching staff
- **Social Impact Assessment Studies:** During 2023-24, CMD has completed 20 Social impact Assessment studies across the State for development projects. Social Impact Assessment studies for the land acquisition from the Coastal Highway (Reach IV) at Thiruvananthapuram, Development of Balusseri –Kozhikode Road, Nilambur Bypass Road, Vizhinjam Seaport to Balaramapuram RS Rail Connectivity (Reach1)

### **Way forward**

Recent years have witnessed a steady increase in

the size of Kerala's manufacturing sector. Kerala has achieved substantial progress with respect to modernising and diversifying its industrial sector. The vision of the Government is to achieve an industrial transformation in Kerala that is socially and environmentally sustainable, even while protecting the interest of the workers. A new set of modern industries have emerged and are growing in Kerala. There has been a growing interest in food and agro-based industries; and industries, using advanced technology, such as medical devices.

Facilitation of industrial investment, especially by the private sector, the adoption of new technologies, application of research, continuous upskilling, human resource development, and the encouragement to innovation are significant components of Kerala's strategy for industrial progress. With continued Government support and favourable industrial climate, the State is poised to do well in manufacturing in the coming years.



## 4.4 MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs)

The Micro Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy. It contributes significantly in the economy and social development of the country by fostering entrepreneurship and generating large employment opportunities at comparatively lower capital investment. MSME is the second largest employer sector after agriculture. MSMEs are expanding their domain across sectors of the economy, producing a diverse range of products and services to meet the demands of domestic as well as global markets.

### MSMEs in India

As per the Economic Survey 2023-24 of Government of India, MSMEs contributes approximately 30 per cent of the country's GDP, 45 per cent of the manufacturing output, and provide employment to 11 crore population. As on March 31, 2024, a total number of 4,15,04,899 MSMEs were registered in Udyam Registration online portal, which include 80,12,542 enterprises registered under Manufacturing category, 1,48,84,175 enterprises registered under Service and 1,86,08,182 enterprises registered under Trading category (Annual Report 2023-24, Ministry of MSME, Government of India). The sector is diverse in terms of size, levels of technology employed, and products. Existing classification of MSME units based on investment in plant/machinery /equipment and annual turnover is shown in **Table 4.4.1**.

**Table 4.4.1** Classification of MSMEs

<b>Composite Criteria: Investment in plant / machinery / equipment and Annual Turnover</b>			
<b>Classification</b>	<b>Micro</b>	<b>Small</b>	<b>Medium</b>
Manufacturing Enterprises and enterprises rendering Services	Investment <Rs 1 crore	Investment <Rs10 crore	Investment <Rs50 crore
	Turn over <Rs 5 crore	Turn over <Rs 50 crore	Turn over <Rs250 crore

Source: Ministry of MSME, Government of India

### MSME Sector in Kerala

The MSME sector is emerging as a major income generating and employment providing sector in Kerala. MSME sector can become a pathway for an inclusive industrial growth of Kerala. The MSMEs promote industrialisation in rural and backward areas, and provides employment to youth and socially and economically disadvantaged groups. The sector fosters innovation and serves as an avenue for start-ups since they are easy to set up and adaptable to the changing market situations.

Within the MSME sector, micro enterprises are expanding, both in terms of working enterprises and employment mainly because of 'Year of Enterprises' campaign. The industries under MSMEs include, handicrafts, handloom, khadi, food processing industries, garment making and textile industries and industries related to coir, wood, bamboo, plastic, rubber, leather, and clay

**Table 4.4.2** Plan Outlay and Expenditure of Directorate of Industries and Commerce, 2022-23 to 2024-25\*, Rs in lakh

Sector	2022-23		2023-24		2024-25 (as on 11/11/2024)	
	Outlay	Exp	Outlay	Exp	Outlay	Exp*
Small Scale Industries	20,040.00	12,466.3	21,270.00	12,891.9	20,494.00	10,439.75
Commerce	700.00	653.42	700.00	102.83	650.00	63.00
Handicrafts	350.00	166.87	420.00	131.6	420.00	92.91
<b>Total</b>	<b>21,090.00</b>	<b>13,286.59</b>	<b>22,390.00</b>	<b>13,126.33</b>	<b>21,564</b>	<b>10,595.66</b>

\* as on November 11, 2024

Source: Plan space Kerala

products. MSMEs produce over 8000 various products ranging from traditional to high-tech items. One third of the MSME units in Kerala are owned by women.

The Government and banks in Kerala facilitate and support MSMEs. To promote the growth of the MSME and traditional industrial sectors, the District Industries Centres (DIC) acts as a facilitator. DIC implements various schemes to develop an entrepreneurial culture in the State. The

Industries Department provides financial assistance to start Entrepreneurship Development clubs at school and college levels to foster entrepreneurship among the youth. The Department also gives high priority in providing services to Start-ups and establishing business incubation centres in District Industries Centres.

The agencies under the Directorate of Industries & Commerce are the Directorate of Handloom and Textiles (which aims at evolving policies for

#### **Box 4.4.1** Year of Enterprises 1.0, 2.0 and 3.0

To encourage and promote Micro, Small and Medium level entrepreneurs in the State, the Government declared the Financial Year 2022-23 as the “Year of Enterprises” with the motto “My enterprise, Nation’s pride”. The Directorate of Industries & Commerce was entrusted with the initiative of “Setting up of One Lakh Enterprises in 2022-23”. The targets were to establish one lakh enterprises through joint efforts of various departments and to create three lakh employments in the year 2022-23. This is known as Year of Enterprises 1.0.

Some of the key systems that were established as part of this initiative include

- Appointment of professionally qualified interns and setting up Enterprises Help Desks at all local bodies.
- Setting up MSME Clinics in all Districts.
- Establishing Taluk level Enterprise Facilitation Centres with the services of professional resource persons.
- Constituting committees at State, District and local body level for monitoring the activities under the initiative.
- To ensure adequate access to affordable finance to enterprises, a new subsidy scheme was introduced to provide all enterprise loans at 4 per cent interest through interest subvention.
- To ensure adequate availability of industrial land/infrastructure, Private Industrial Estate Scheme was introduced to grant developer permit to private entities.
- A robust and dynamic online portal was developed to offer Industries Department’s services.
- Continuous campaigns like General Orientation Training to potential entrepreneurs, Loans, License, Subsidy mela for entrepreneurs, and Marketing festivals for providing marketing avenues to newly formed enterprises were conducted at all local bodies.

As part of the ‘Year of Enterprises 1.0’, in 2022-23, a total of 1,39,839 new enterprises were started which led to an investment of Rs 8,421.64 crore. It generated 3,00,049 new employment opportunities in the State.

The 'Year of Enterprises 2.0' was the second edition of the flagship initiative for the period 2023-24. In addition to the activities of 2022-23, emphasis was placed on sustainability of enterprises. The objective was to ensure that at least 70 per cent of new MSMEs formed in the State operate successfully. It also sought to ensure 5 per cent growth rate in the turnover of new MSMEs. Another significant addition was 'Mission 1000' which sought to select 1000 MSMEs and turn them into ventures with an average turnover of Rs 100 crore in four years. As part of the 'Year of Enterprises 2.0' campaign, in 2023-24, a total of 1,03,596 new enterprises were started which are backed by an investment of Rs.7,048.66 crore and generated 2,18,179 new employment opportunities in the State.

The 'Year of Enterprises 3.0' campaign is started in the year 2024-25. Since 2022-23 (till September 2024), under the campaign, a total number of 3,30,309 MSMEs have been started leading to an investment of Rs 21,141.75 crore investment. It has created 7,00,263 employment opportunities. Around one-third of these newly formed enterprises are promoted by women entrepreneurs. The top sectors in which new units have been established include Agro and Food Processing, Textiles and Garments; and Service activities.

Source: Directorate of Industries and Commerce, Government of Kerala.

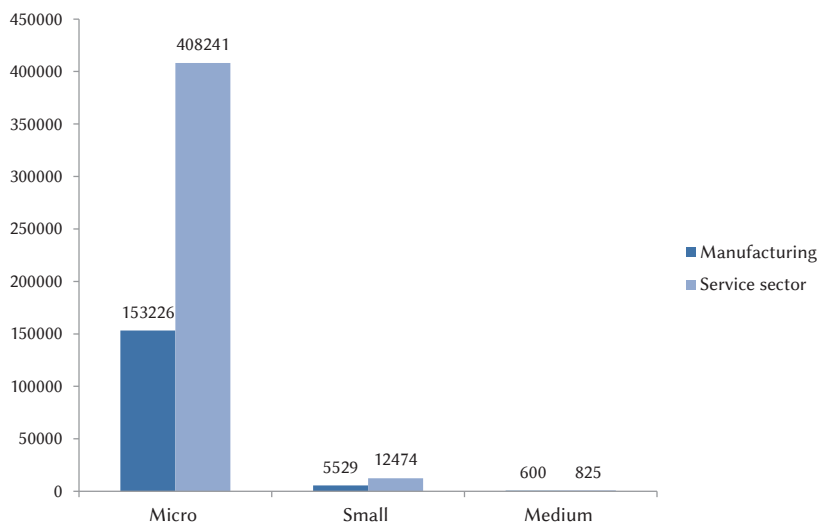
the promotion and development of handloom and textile sector in the State); Directorate of Coir Development (the implementing agency for all policy decisions of the Government of Kerala related to coir industry); Khadi and Village Industries Board (vested with the responsibility of organising and promoting Khadi and Village Industries in the State); and the Directorate of Plantations, set up in 2022-23 for the development of the plantation sector in the State.

### Udyog Aadhar Memorandum (UAM) in the State

Kerala has discontinued the practice of filing Entrepreneurs Memorandum Part II from

September 18, 2015, and in its place, started online registration in Udyog Aadhar. As on March 31, 2024, there were, 5,80,895 UAMs filed which include 1,59,355 manufacturing units and 4,21,540 units in the Service Sector. Manufacturing units comprised of 1,53,226 micro units, 5,529 small units and 600 medium units. Out of 4, 21,540 UAMs in the service sector, 4,08, 241 are micro, 12,474 are small and 825 are medium units. The District-wise number of Micro, Small and Medium units registered under manufacturing and service sectors in 2023-24 is given in **Appendix 4.4.1**. **Figure 4.4.1** shows the number of MSME units registered under manufacturing and service sectors in Kerala in 2023-24.

**Figure. 4.4.1.** Number of Micro, Small and Medium units registered under Manufacturing and Service Sectors in Kerala, 2023-24



Source: Directorate of Industries and Commerce

### Performance of the Sector

The State achieved remarkable surge in the number of new MSME units established in 2023-24. A total of 1,03,596 new MSME units were set up in 2023-24 with investment of Rs.7,048.65 crore. These units have created employment opportunities for 2,18,179 individuals, marking a sustainable expansion in the MSME sector. The details of new MSME units for the last five years are given in **Table 4.4.3**.

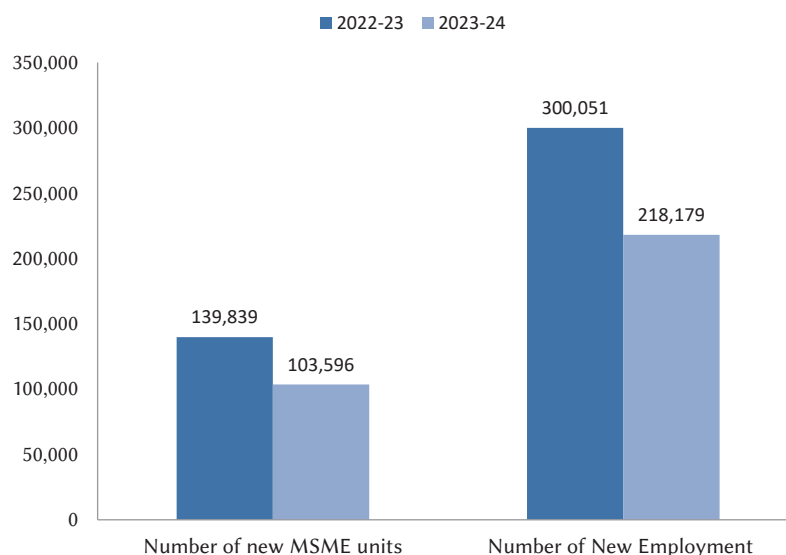
**Table 4.4.3** Achievement in MSME sector, 2018-19 to 2023-24 (As on March 31, 2024)

Year	No. of MSME units	Investment (in Rs crore)	Employment (in number)
2018-19	13,826	1,321.94	49,068
2019-20	13,695	1,338.65	46,081
2020-21	11,540	1,221.86	44,975
2021-22	15,285	1,535.09	56,233
2022-23	1,39,839	8,421.63	3,00,051
2023-24	1,03,596	7,048.65	2,18,179
Total	2,97,782	20,888	7,14,587

Source: Directorate of Industries and Commerce

The number of new MSME units and employment provided for the last two years is shown in **Figure.4.4.2**.

**Figure.4.4.2** Number of new Micro, Small and Medium units and employment created in MSMEs in 2022-23 and 2023-24



Source: Directorate of Industries and Commerce

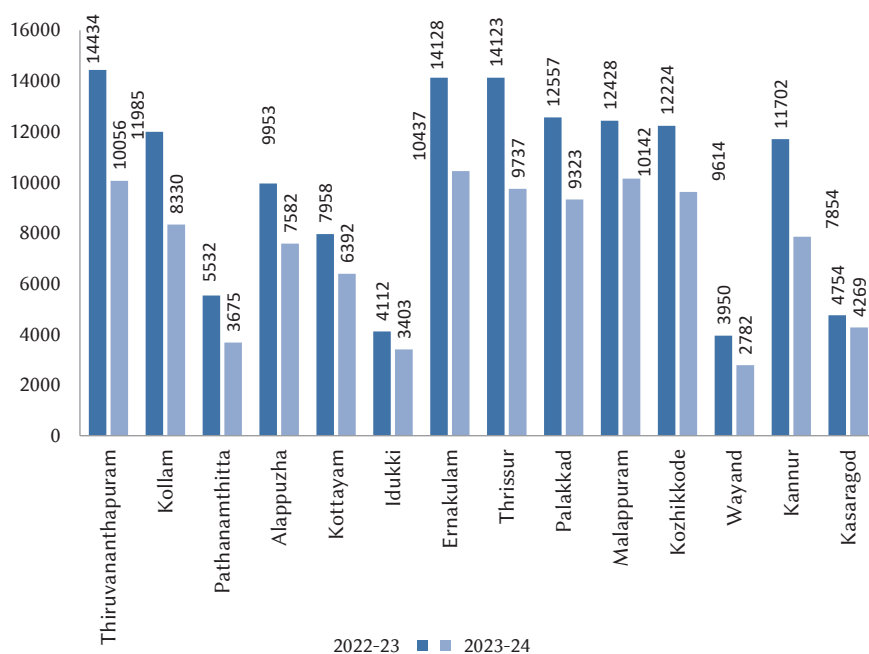
In 2023-24, the District with the largest numbers of new MSME units was Ernakulam (10,437 units) with an investment of Rs 1,013.77 crore, generating 25,387 employment opportunities, followed by Malappuram (10,142 units) with an investment of Rs 742.14 crore generating 23,529 employment opportunities and Thiruvananthapuram (10,056 units) with an investment of Rs 518.62 crore providing employment to 19,550 persons. Wayanad (2,782 units) had the lowest number of new enterprises (2782 units) with an investment of 212.18 crore generating employment for 6,004 persons. The District-wise details of new MSME units started in Kerala in 2023-24 is given in **Appendix 4.4.2**.

**Figure 4.4.3** shows District-wise details of new MSME units in the State started in 2022-23 and 2023-24.

The sector-wise growth of MSME units over the last five years reveals an increase in the number of agro and food-based units from 2,582 in 2019-20 to 23,474 in 2022-23. The number of service related MSME units has increased from 4,036 in 2019-20 to 38,006 in 2023-24. The number of units engaged in trade is also significant. The subsector-wise details of MSME units started in the last five years is given in **Table 4.4.4**.

The top five subsectors together consist of over 80 per cent of the MSME units in the last five years.

**Figure.4.4.3** District wise new MSME units started in Kerala in 2022-23 and 2023-24



Source: Directorate of Industries and Commerce

**Table 4.4.4** Subsector wise details of new MSME units started in Kerala

Sl. No.	Name of subsector	2019-20	2020-21	2021-22	2022-23	2023-24
1	Agro and Food- based	2,582	3,359	4297	23,474	6786
2	Textiles and Garments	1,904	1276	1564	14,702	1890
3	General /mechanical/light Engineering	1,334	989	1193	1,988	549
4	Service Activities	4,036	2725	4097	24556	38006
5	Wood Products	5,32	436	517	1,529	688
6	Cement Products	3,09	233	368	0	0
7	Printing & Allied	2,80	188	198	3,795	2728
8	Paper Products	1,88	198	234	659	347
9	Information Technology	2,40	187	348	6,091	4957
10	Trade activity*	-	-	-	48,945	43869
11	Others	2,290	1949	2469	14101	3776
<b>Total</b>		<b>13,695</b>	<b>11,540</b>	<b>15,285</b>	<b>1,39,840</b>	<b>1,03,596</b>

Source: Directorate of Industries and commerce

\*From 2022-23 onwards the data of trade activity included

Trade Activity based units (42.4 per cent), Agro and food based (6.6 per cent) units and Service Activities (36.7 per cent) dominate in MSMEs. Units making plastic containers, gold ornaments, rubber products, handicrafts products are classified as “Others” (3.7 per cent). Textiles and garments (1.8 per cent), Information Technology (3.7 per

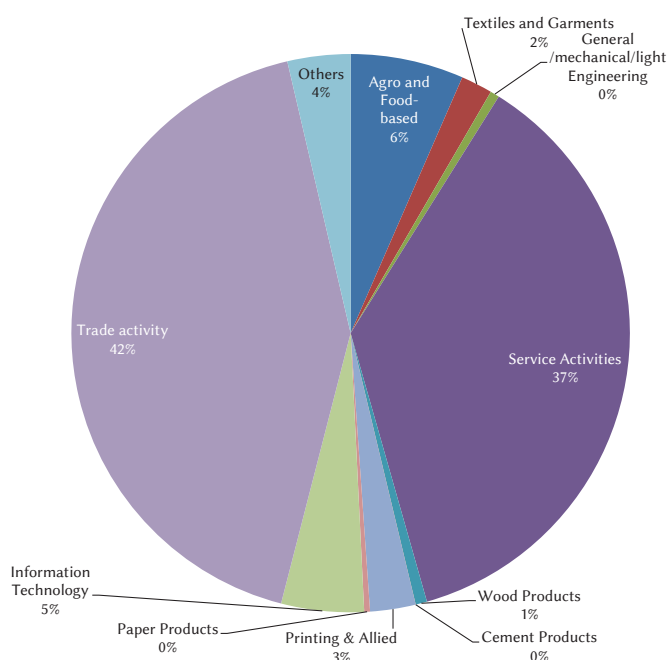
cent) and General/Mechanical/Light Engineering (1 per cent) are the other leading subsectors. The share of each subsector is given in **Figure 4.4.4**.

#### Industrial Co-operative Societies

There were 424 working industrial co-operative societies as on March 31, 2024 in the State of



**Figure.4.4.4** Subsector wise details of new MSME units in 2023-24



Source: Directorate of Industries and Commerce

which 99 are women cooperative societies. 69 societies were registered in 2023-24. Thiruvananthapuram has the larger number of working societies (66). The District-wise number of Industrial Cooperative Societies in the State is given in **Appendix 4.4.3**.

### Improving infrastructure in existing Development Plots/Areas

The Directorate of Industries and Commerce (DIC) develop infrastructure facilities for small-scale industries in the State. At present, there are 40 development area/development plots under DIC, having a total area of 2,428.24 acre. In 2023-24, a total of 2,255 units employing 35,363 persons generating an income of Rs. 4,74,232.73 were functioning in these DA/DPs. The District-wise details are given in **Appendix 4.4.4**.

### Industrial Estates

Industrial estates are being utilised as an effective tool for the promotion and growth of small-scale industries in the State and also as an effective tool to decentralise industrial activity to rural and backward areas. Industrial estates are specific areas zoned for industrial activities in which infrastructure such as roads, power and other utility services are provided to facilitate the growth of industries and to minimise impacts on the

environment. The number of major and mini industrial estates in Kerala as on March 31, 2024 is given in **Table 4.4.5**.

**Table 4.4.5** Industrial Estates in Kerala, 2023-24

SI No	Agency	No. of Industrial Estates		
		Major Estates	Mini Estates	DA/DPs
1	District Industries Centre	-	92	40
2	SIDCO	17	36	-
3	KINFRA	30	-	-
4	KSIDC	11	-	-
<b>Total</b>		<b>58</b>	<b>128</b>	<b>40</b>

Source: DIC, SIDCO, KINFRA & KSIDC

### Industrial Estates under District Industries Centers

The District Industries Centre is a permanent set up at the District level. They provide all the services and support facilities to the entrepreneur for setting up micro, small and medium enterprises. This includes end-to-end support like identification of suitable projects, preparation of feasibility report, arrangements of credit, machinery and equipment, and raw materials and also connecting the units into

industrial clusters. They also cater registration and development of industrial cooperatives. There are 92 mini-industrial estates under District Industries Centres with 843 Small Scale Industrial units as on March 31, 2024. There are 781 working units in these estates employing 3,567 persons and generated an income of Rs.9,125.50 lakh. The District-wise details are given in **Appendix 4.4.5**.

#### **Industrial Estates under SIDCO**

Kerala Small Industries Development Corporation (SIDCO) is playing a vital role for the promotion of Small, Micro and Medium Industries in the State. The Industrial Estate under SIDCO provides infrastructure facilities such as land, work shed, water and raw material to the units in the small-scale sector. SIDCO has developed 17 major industrial estates in 235.83 acre of land, and about 195.75 acre has been allotted to 868 working units employing 7,771 workers (as on March 31, 2024). Besides, there are also 36 mini industrial estates under SIDCO, with 324 working units employing 1,610 workers. The total income generated by 36 mini industrial estates under SIDCO in 2023-24 was Rs 21.12 lakh. The total income generated in major industrial estates in 2023-24 was Rs.834.3 lakh by generating 7,609 employment opportunities. District-wise details of industrial estates under SIDCO are given in **Appendix 4.4.6, 4.4.7 and 4.4.8**.

#### **Industrial Cluster Development**

Industrial clusters play an important role in the promotion of small and medium-sized enterprises mainly because of their inclusiveness, technology absorption, efficiency improvement, and availability of common resources. The Ministry of Micro, Small and Medium Enterprises (MSMEs) has adopted the cluster approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of small enterprises. Kerala is among the top 5 States in the country

in the effective implementation of Cluster Development Programmes.

#### **MSME- Development and Facilitation Office (MSME-DFO), Thrissur**

MSME-Development and Facilitation Office, Thrissur is a field unit of Development Commissioner (MSME) under the Ministry of MSME, Government of India. The Institute is actively engaged in the promotion and development of MSME clusters in the State. The DFO provides need-based support to MSME entrepreneurs by providing techno-economic and managerial consultancy services and also conducts entrepreneurial, technical and managerial training programmes. The DFO operates a number of reimbursements schemes and facilitates participation in industrial exhibitions in order to provide a platform to MSMEs to improve their productivity. MSME-DFO, Thrissur has reached to 81,813 beneficiaries through various modes of awareness programmes. The details are given in **Appendix 4.4.9**.

#### **Major Activities carried out by MSME-DFO, Thrissur**

- Guidance and assistance for the MSMEs on credit related matters
- Implementation of PM Viswakarma, the latest scheme of Government of India for Artisans through KADCO, the Nodal Agency of the scheme.
- Implementation of MSME Champions Scheme for promoting competitiveness amongst MSMEs by the way of wastage reduction through Lean Manufacturing, support for Design improvement, building awareness on Intellectual Property Rights, Zero Defect Zero Effect (ZED) Scheme, and to promote and support untapped creativity of individual and to promote adoption of latest technologies in manufacturing as well as

#### **Box No.4.4.2 Business Reforms Initiatives**

As part of the Business Reforms initiative by Department for Promotion of Industry and Internal Trade (DPIIT), Government of India, the State Business Reforms Action Plan 2022 had been completed and submitted to DPIIT. The State had submitted evidences pertaining to 340 reforms out of the 352 reforms prescribed by DPIIT. Out of the 340 evidences submitted by the State, 319 have been accepted by DPIIT and feedback survey had also been carried out by DPIIT, among the beneficiaries whose details were submitted to DPIIT. In this context, the State has received the 'Top Performer' Award in 9 reform areas under the State Business Reforms Action Plan 2022 which is the highest in the country.

Source: KSIDC

knowledge-based innovation MSMEs through Incubation across India.

- Various initiatives to support the marketing and export promotion of MSMEs, like Vendor Development Programmes, reimbursement for participation in the domestic trade fairs and also soft intervention by creating awareness.
- Infrastructure Development and Cluster Development activities in the State.
- Entrepreneurship and Skill Development assistance provided to 5,040 Entrepreneurs through 56 training programmes
- Conducted Grievance Redressal, Publicity and Out Reach Programmes.

### **Micro and Small Enterprise Facilitation Council (MSEFC), Kerala**

As per the Micro, Small and Medium Enterprise Development (MSMED) Act, 2006 (Section 15-24) State Government established Micro and Small Enterprise Facilitation Councils (MSEFC) for settlement of disputes on getting references/ filing on Delayed payments (Section 20 and 21). In exercise of the powers conferred by Section 20 of the MSMED Act, 2006, the Government of Kerala has established three Regional Micro and Small Enterprises Facilitation Councils at District Industries Centre, Thiruvananthapuram, Ernakulam and Kozhikode in addition to the State MSEFC at Directorate of Industries and Commerce, Thiruvananthapuram.

### **Kerala Bureau of Industrial Promotion (K-BIP)**

The State has also adopted the cluster development approach for industrialisation to reap the benefits of agglomerations. The State supports cluster development through MSME-DI, Government of India, Thrissur and Kerala Bureau of Industrial Promotion (K-BIP). The Common Facility Centres (CFC) is in various stages of development in the State. CFCs are deployed in the areas of wood, plywood, furniture, rubber, textile, rice mill, plastic, printers, ethnic food, agriculture implements and general engineering. Ministry of MSME, Government of India has sanctioned 16 CFC Projects to the State, of which 12 projects worth Rs.7,552.45 lakh has been completed and 4 CFC projects worth Rs.4,997.30 lakh are in various stages of implementation.

K-BIP undertakes and coordinates various industrial promotional activities in Kerala to improve the ease of doing business in the state and

achieve the UN Sustainable Development Goals. It is also the State Nodal Agency for implementing four schemes of the Government of India. The industrial promotional activities of K-BIP include the implementation of the Common Facility Centre (CFC) under the MSE-CDP Scheme, the 'Raising and Accelerating MSME Performance' (RAMP) scheme, the PM Formalisation of Micro Food Processing Enterprises (PM FME) scheme, the activities of the Kerala State Bamboo Mission and the National Bamboo Mission (NBM) Scheme, the certification of food processing and related units by the National Centre for HACCP Certification (NCHC), facilitating MSME participation in regional, national, and international events, and organizing regional exhibitions, B2B meetings, technical workshops, and awareness programs on behalf of the Department of Industries and Commerce.

KBIP is the State Nodal Agency of the centrally sponsored Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PM FME Scheme) launched by the Ministry of Food Processing Industries, Government of India. The Scheme provides financial, technical and business support for the upgradation of existing Micro Food Processing Enterprises. Kerala achieved 102 per cent of its target and secured 3rd position nationwide as of March 31, 2024, by sanctioning 2,548 loans under individual applications from micro-enterprises. Additionally, Rs. 13.01 crore has been released by the Government of Kerala as a 40 percent State share in the financial year 2023-24. Kerala provided seed capital assistance of Rs.10.68 crore for 3,466 State Rural Livelihood Mission (SRLM) beneficiaries under the Scheme in FY 2023-24. Seed Capital Assistance of Rs.18 lakh was released to 49 State Urban Livelihood Mission (SULM) beneficiaries.

In the FY 2023-24, the National Centre for Hazard Analysis and Critical Control Point (HACCP) Certification (NCHC) functioning in K-BIP completed the process of auditing for the issue/ renewal of Hazard Analysis and Critical Control Point (HACCP) Certification to 3 Food Processing and Allied Units from the State and also facilitated participation of MSMEs in Regional, National and International Trade Fairs and Exhibitions. On behalf of Department of Industries and Commerce, K-BIP co-ordinated the 'Dreamvestor' initiative with the objective of providing platform for young innovators across various sectors to

showcase their business ideas and making it in to a business reality as part of Entrepreneurship Year and achieving the target of One Lakh new MSMEs in the Year 2023-24.

K-BIP also co-ordinated '*Keraleeyam*', a weeklong celebration programme of the Government of Kerala, held from November 1 to 7, 2023 at Thiruvananthapuram featuring the story of Kerala's past, present and future and re-imagining the brand 'Kerala'.

#### **Package for Rural Industries- Prime Minister's Employment Generation Programme (PMEGP)**

The scheme aims to generate employment opportunities in rural as well as urban areas of the country through setting up of new self-employment ventures, projects and micro enterprises. Besides, the scheme also seeks to provide continuous and sustainable employment to all segments of traditional and prospective artisans and rural/urban unemployed youth in the country, so as to help arrest migration of rural youth to urban areas. The scheme also focuses to increase the wage-earning capacity of artisans and contribute to increase in the growth rate of rural and urban employment. The Scheme is implemented by Khadi and Village Industries Commission (KVIC), as the nodal agency at the National level. At the State level, the scheme is implemented through State offices of KVIC, State Khadi and Village Industries Boards (KVIB), District Industries Centres (DIC), Coir Board (for coir related activities) and Banks. The maximum cost of the project or unit admissible under manufacturing sector is Rs.50 lakh and under business or service sector is Rs.20 lakh. Prime Minister's Employment Generation Programme (PMEGP) is a credit linked subsidy scheme at the national level. In 2023-24, the banks in the State sanctioned 5,082 projects and provided margin

money of Rs.5,959.58 lakh. District-wise details are given in **Appendix 4.4.10**.

#### **Industrial Financing in MSME Sector**

##### **State Level Bankers' Committee (SLBC)**

As per the State Level Banker's Committee (SLBC) report, Banks have launched a number of sustainable banking initiatives like the achievement of target under PMEGP, indicates their keenness in lending under Government Sponsored Schemes. According to the SLBC Report, outstanding flow of credit to the MSME sector increased to Rs 80,210.28 crore in 2023-24 from Rs 68,450.91 crore in 2022-23, registering an increase of 17.2 per cent over previous period. The status of flow of credit to various sectors is given in **Appendix 4.4.11**.

##### **The Small Industries Development Bank of India (SIDBI)**

The Government encourages SIDBI to refinance credit institutions, which provide unsecured loans, at reasonable interest rates, to borrowers based on their transaction history. In order to improve access to credit for Micro, Small and Medium Enterprises (MSMEs), particularly those that have been underserved, SIDBI created a special fund of Rs 1,000 crore. The aim of this fund was to establish a bond market for smaller and lower-rated Micro Finance Institutions, Non-Banking Financial Companies, and Financial Technology companies. In FY 2023, SIDBI further simplified and digitised its lending processes for MSMEs. This resulted in a reduction of reliance on outdated borrower information and a shift towards using up-to-date information from public databases such as Goods and Service Tax, Income Tax Returns, Bank statements, and Ministry of Corporate Affairs databases. SIDBI also expanded its 'Prayaas' scheme, which provides

#### **Box No.4.4.3 Make in Kerala Initiative**

The announcement of the Make in Kerala initiative by the Government of Kerala in its annual budget for FY 2023-24 is a significant step towards building a self-reliant and sustainable economy in Kerala. With an annual outlay of Rs.100 crore, the Government has demonstrated its commitment to supporting local businesses and promoting economic growth in the State. The Make in Kerala initiative is a comprehensive plan that aims to promote domestic production, reduce imports, and create new employment opportunities. The initiative aims to identify the products that can be produced locally, develop the necessary infrastructure, encourage technological advancements, and promote branding and marketing of the products.

Source: Directorate of Industries and Commerce, Government of Kerala

micro-loans up to Rs 5 lakh to Micro Enterprises for livelihood activities. This expansion helped 1,59,000 beneficiaries, more than 87 per cent of the beneficiaries are women entrepreneurs and more than 70 per cent of the assisted beneficiaries belongs to the socially backward sections of the society.

#### Major achievements of the Department of Industries in 2023-24

- As the part of Year of Enterprises Campaign, the total number of MSMEs started has crossed 3 lakh and also the investment and the employment have crossed 20 thousand crore rupees, 6.5 lakh respectively.
- MSME clinics were established in all Districts, enabling them to function effectively.
- Under the Scheme 'setting up of Private Industrial Estates', sanction was accorded to private entrepreneurs who own more than 10 acres, to construct Industrial Parks. Out of them, 2 are functional.
- The I & II Phase of the construction works of Multi Storied Industrial Estate at Puzhakkalpadam in Thrissur District has been completed and inaugurated.
- With the aim to inculcate entrepreneurial aptitude among the students, the scheme 'Campus Industrial Park' has been envisaged in collaboration with educational sector, as a solution for non-availability of Government land. Government Order has been issued in this regard in the Financial Year 2023-24.
- As per the G.O.(P)No.309/2023/RD., 'Kerala Government Land Allotment and Assignment for Industrial Purposes, Rules, 2023' has been

enacted to foster an entrepreneurship friendly environment.

- A new insurance scheme, as an initiative to support MSME sector, has been introduced to compensate losses that may occur in industrial units due to unforeseen circumstances like fire or natural calamities. 1108 entrepreneurs were brought under the insurance coverage of the scheme by expending Rs. 20.7 lakh.
- Development permit has been issued to 30 Private Industrial Parks.
- With the aim of implementing the scheme 'One Local Body One Product' (OLOP), the Department has identified indigenous products and explored the possibility of implementing the scheme through the concerned LSGIs and thereby initiate new enterprises in the sector of value addition. As part of the implementation of the scheme, 456 local bodies identified products under OLOP scheme.
- Got approval for the RAMP ( Raising and Accelerating MSME Performance) scheme from the Ministry of MSME, Government of India for an amount Rs 107.71 crore.
- 'Kerala Brand' system has been introduced with the objective of certification of quality of Kerala's indigenous produces and exploration of national/international markets for such produces. As an initial step for this initiative, steps have been taken to brand 9 coconut oil producing enterprises under 'Kerala Brand'.
- With the aim of ensuring sustainability of industrial sector, 'Mission 1000' Scheme has been launched to scale up the enterprises from Micro to Small and Small to Medium. In the

**Table 4.4.6.** Policy Initiatives of the State Government in the Year 2023-24 and Action Taken

Policy Initiatives	Action Taken
Campus Industrial Park	Inaugurated the portal for submitting applications.
Private Industrial Estate	There are 30 private Industrial Estates established at Kerala at present.
Cooperative Industrial Park	Proposal submitted to Government
Scale Up of Micro to Small and Small to Medium thereby creating 1000 units with a turnover of Rs 100 crore	213 units have been selected and the procedures for submitting project reports of these firms are in progress
Revival, Rejuvenation and Resurrection of Private Cashew industry	The first instalment fund of 2 crore allotted for modernisation and making the units women friendly.
Sambhrambhaka Sabha	Inauguration on December 11, 2024.
Construction of Layams for the Plantation Sector	Proposal submitted to Government
Women Investors Conclave	Proposed to be held in January 2025

initial stage of the Mission, 213 enterprises have been selected by the State Level Approval Committee.

- As a grievance redressal forum, MSEFC Zonal Councils have been set up at Thiruvananthapuram, Kochi and Kozhikode.
- 'Machinery Expo 2024' has been held at Jawaharlal Nehru International Stadium, Kochi on February 10 to 13, 2024. In the exhibition, machinery producers and distributors from the State and outside the State participated and exhibited in 161 stalls.

### **Issues and challenges in the sector**

The industrial policy 2023 of Kerala focuses on inclusive growth. The recent hike in the number of industries started and the cross section of this number shows that the number of MSMEs started by the marginalised communities is comparatively less. The policy envisages a balanced regional growth which is also not achieved as there is still prevailing regional imbalance. The gap between manufacturing to the service and trade sectors are getting widened and also the percentage share of employment in the manufacturing sector is falling. The primary challenge in all aspects is the availability of funds for the proper functioning of planned schemes.

### **Way forward**

Kerala's future in the sphere of MSMEs depends to a great deal on the key factors of sustainability and scaling up. Kerala's new industrial policy aims to promote investments in areas suited to Kerala and to give special consideration to modern smart industries that can properly utilise the technologically skilled human resources of the State, thereby enabling rapid and sustainable industrialisation. The Year of Enterprises campaign of the Government has generated enthusiasm and has led to a momentum in the industrial sphere of the State. As we move forward it is essential to consolidate our gains, explore new possibilities and link up with broader developments in the industrial ecosystem at the national and international levels. The positives emerging out of the industrial landscape point towards greater achievements in the sector in the future.



## 4.5 FOOD PROCESSING

The food processing sector plays a crucial role in establishing growth linkages between industry and agriculture. It facilitates collaboration and integration, benefitting both sectors and boosting the overall agricultural value chain. A well-developed food processing sector with higher-level of processing helps reduce waste, improves value addition, promotes crop diversification, ensures better returns to farmers, promotes employment, and increases export earnings. This sector can address critical issues of food security and nutrition, and food inflation.

Food processing in India covers fruit and vegetables, plantations, grain processing, spices, milk and dairy products, meat and poultry, fisheries, non-alcoholic and alcoholic beverages, as well as other consumer product groups such as confectionery, chocolates, cocoa products, soya-based products, mineral water and high protein foods. The food processing sector in India encompasses enterprises in all the segments from micro to large industries.

### **Food Processing in India**

According to the Annual Report 2023-24 of the Ministry of Food Processing Industries, Government of India, the food processing industry engages approximately 20.68 lakh persons in 39,647 registered units in the country in 2021-22. Additionally, about 51.11 lakh workers are engaged in unincorporated non-agricultural enterprises in the food processing sector. There is substantial

women's participation in the sector. A total of 2.10 lakh women workers are directly employed in registered food processing units and more than 12.62 lakh women workers are engaged in unincorporated non-agricultural enterprises in the food processing sector.

Over the years, agriculture production has been growing in India. An abundant supply of raw materials, an increase in demand for food products and incentives offered by the Government of India have impacted food processing sector positively. Over the 8-year period ending 2022-23, the Food Processing sector grew at an Average Annual Growth Rate (AAGR) of around 5.4 per cent as compared to around 4.5 per cent in the Agriculture & Allied Activities sector (at 2011-12 prices). The Food Processing sector has also emerged as an important segment of the Indian economy in terms of its contribution to GDP and investment. Growth rate of GVA- FPI growth is 1.3 per cent and shares 7.7 per cent of GVA from manufacturing sector (at 2011-12 prices) in 2022-23 (Annual Report 2023-24, Ministry of Food Processing Industries, Government of India).

According to Annual Survey of Industries 2021-22, among the total number of registered units, Food Products industry ranks first in terms of total number of factories, number of factories in operation, and total number of persons employed. Moreover, the Food Production industry figures among the top five sectors with respect to output and Gross Value added (GVA).



The value of agri-food exports (including processed food exports) in 2023-24 was US \$ 46.43 billion accounting for about 11.7 per cent of India's total exports (US \$ 395.39 Billion). The value of processed food exports was US \$ 10.88 billion accounting for about 23.4 per cent of India's agri-food exports. The value of import of agri-food items (including processed food) in 2023-24 was US \$ 31.7 billion which was 4.7 per cent of India's total imports (US \$ 675.43 billion). The value of import of processed food in 2023-24 was US \$ 5.34 billion which was 16.9 per cent of India's total agri-food imports. The share of India's agri-food exports in the world was 2.6 per cent in 2022 and the share of India's agri-food imports in the world was 1.66 per cent in 2022. Hundred per cent Foreign Direct Investment (FDI) is permitted under automatic route in food processing industries in India. The food processing sector witnessed FDI equity inflow of US \$ 6.80 billion during April 2014 to March 2024 (Annual Report 2023-24, Ministry of Food Processing Industries, Government of India).

Development initiatives have been taken by the Ministry of Food Processing Industries of India to promote growth of the food processing sector since it has been identified as one of the priority sectors under "Make in India." PM *Kisan Sampada Yojana* (PMKSY), PM Formalisation of Micro Food Processing Enterprises (PM FME) Scheme and Production Linked Incentive Scheme for food processing industry (PLIS-FPI) are three of the main schemes used for the purpose. Other activities include promoting of Foreign Direct Investment and dissemination of all relevant information relating to food processing sector through Ministry's website and Investor Portal "Nivesh Dandhu". The PMKSY has seven component schemes viz; (i) Mega Food Parks, (ii) Integrated Cold Chain and Value Addition Infrastructure, (iii) Infrastructure for Agro-Processing Clusters, (iv) Creation of Backward and Forward Linkages, (v) Creation/Expansion of Food Processing & Preservation Capacities, (vi) Food Safety and Quality Assurance Infrastructure and (vii) Human Resources and Institutions. A total of 61 projects are approved under Agro Processing Cluster Scheme. About 592 approved food processing units are functioning under CEFPPC (Creation/Expansion of Food Processing and Preservation Capacities) Scheme. About 399 projects under Cold Chain Scheme and 53 projects under Operation Greens Scheme have

been approved in the country as on 31st March 2024. The Ministry of Food Processing Industries (MoFPI) has approved 42 Mega Food Park projects (Completed - 7 nos, Operational - 17 nos, Under Implementation - 17 nos) of which 7 have female promoters. Ministry has released grant-in-aid of Rs1,485.81 crore to the on-going Mega Food Park projects in the country.

### **Food Processing Industry in Kerala**

Kerala has always been a 'Leading State' in food processing, with its food processing industry acting as the launch pad towards making major contributions to food exports from the country. Food Processing has been accorded the status of a Priority Sector by the State Government in Kerala. Kerala has been successful in developing its ethnic food preparations for tapping the export markets around the world, mainly to cater to the vast Malayali diaspora across the world. These products have evolved into an important export sector. Besides, lot of non-residents have also made investments in food processing sector of the State. The State Government offers incentive for setting up industry through its 'Entrepreneur Support Scheme' and special incentive is offered for food processing, it being a priority sector. As per Annual Survey of Industries 2019-20 (Department of Economics and Statistics, Government of Kerala), units in the category 'Food products and beverages' had the largest share in total employment in the factory sector in Kerala (29.5 per cent). Its share in total output in Kerala's factory sector was also significant at around 16 per cent.

A total of 3,30,309 units were started under the Year of Enterprises programme of Kerala since 2022 till Nov 2024. Of this, about 46,224 are units in the manufacturing sector, 1,37,677 units are in service sector and 1,46,408 units are in trade category. As part of Year of Enterprises 2.0, about 26,304 MSME units (including manufacturing, service and trade category) were started in the agro food, beverage, meat/fish product and processing subsectors, in the year 2023-24. As per the reports of Directorate of Industries and Commerce, about 21,965 are functioning exclusively in the manufacturing sector under 'Agro food, Beverages, Meat / Fish products' (47.5 per cent) units (YoE 1.0, YoE 2.0 & YoE 3.0 as of November 25, 2024) under these sub sectors.

The Ministry of Food Processing Industries

(MoFPI), Government of India in partnership with the State Governments has launched a Centrally Sponsored Scheme Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) for providing financial, technical and business support for upgradation of existing micro food processing enterprises as part of the '*Atma Nirbhar Bharath Abhiyan*'. The Department of Industries and Commerce is implementing the PMFME scheme through Kerala Bureau of Industrial Promotion (K-BIP), to support micro food processing enterprises with credit linked subsidy up to 35 percent of project cost with ceiling of Rs 10.00 Lakh for expansion and modernisation. The scheme includes support on working capital, small tools and grant for strengthening backward and forward linkages, common infrastructure, packaging, branding and marketing etc. Focus is on value addition of local perishable products in identified agro clusters of fisheries, dairy, poultry and other allied segments. The scheme has been implemented over a period of five years from 2020-21 to 2024-25 with expenditure shared at 60:40 between GoI and State. As per the K-BIP reports, an amount of Rs 19.52 crores was received from MoFPI as 60 per cent GoI share and an amount of Rs 13.01 crores was received from Government of Kerala as 40 per cent State share to PMFME Scheme during 2023-24. Kerala achieved 102 per cent of the target and is in 3rd position in the country as on March 31, 2024 for the Loans sanctioned to individual applications from Micro Enterprises. Seed capital disbursement of Rs 10.68 Crores for 3,466 State Rural Livelihood Mission (SRLM) beneficiaries and Rs 18 lakhs for 49 State Urban Livelihood Mission (SULM) beneficiaries has also been made.

### **Kerala Industrial Infrastructure Development Corporation (KINFRA)**

KINFRA is taking a pro-active role in the advancement of the food processing sector within the State. KINFRA is the nodal agency for implementing schemes under the Ministry of Food Processing Industries, Government of India; and the nodal agency of the State for implementing "Assistance to States for developing Export Infrastructure and Allied Activities" (ASIDE) scheme of the Ministry of Commerce and Industries. KINFRA has set up a number of food-based parks across the State. Details of KINFRA food processing units in KINFRA parks are given in **Appendix 4.5.1**.

### **KINFRA Mega Food Park, Palakkad**

Ministry of Food Processing Industries (MOFPI), Government of India has approved the proposal from KINFRA for setting up a Mega Food Park in 79.42 acres at Kanjikode, Palakkad, with 43 working units, in accordance with the Mega Food Park Scheme (MFPS). The estimated project cost is Rs 119.02 crore. The assistance provided by the Ministry of Food Processing Industries is Rs 50 crore. So far, the park has attracted an investment of Rs 22,942.075 lakh and about 49.28 acres of land is allotted. The park provides employment to 1,350 persons. Owing to the standing demand in the park, 18.1 acre of land adjacent to the park is being developed as Phase II of the project. Of the available 13.55 acres, 4.85 acres of land has allocated for Rice Park. Kinfra intends to develop the second phase utilising all the infrastructure facilities available in the first phase.

### **KINFRA Food Processing Park, Kakkancherry (Malappuram)**

The KINFRA Food Processing Park at Kakkancherry, Malappuram district, set up in an area of 72 acres, has 44 working units. So far, the park has attracted an investment of Rs 14,977.53 lakh and an area of 36.95 acres has been allotted. About 1,479 persons are employed in the park.

### **KINFRA Food Processing Park, Adoor (Pathanamthitta)**

Kinfra's food processing park has been set up on 15 acres at Adoor in Pathanamthitta district with all necessary infrastructure requisite for food processing industries. About 12.37 acres of land has been allotted and 16 units function here. The park has attracted investment of around Rs 5,936 lakh so far.

### **Food and Spices Park, Muttam, (Thodupuzha, Idukki)**

KINFRA is setting up this park on 33.20 acres land at Muttom in Thodupuzha, Idukki district. As the first phase of the park, setting up of infrastructure on 15 acres was completed and inaugurated on October 14, 2023. KINFRA has provided the necessary infrastructure facilities for functioning of industries for spices and their value-added products as well as food processing industries. About 9.5 acres of land was slated for allotment in the first phase of this industrial park and out of this, 7.56 acres of land has been

allotted to 13 units. The park has attracted private investment of around Rs 112.54 crore generating around 545 employment opportunities.

#### **Small Industries Park, Nellad, Ernakulam**

Kinfra's food processing industrial park has been set up on 32.9 acres at Nelladu in Kunnathunad, Ernakulam district. KINFRA has provided necessary infrastructure for food processing industries. About 34,607 sq ft area has been allotted to industrial units. About 40 units work here. The park has attracted a private investment of around Rs 8,529.33 lakh and provides employment to about 1,151 persons.

#### **KSIDC Mega Food Park, Alappuzha**

Kerala State Industrial Development Corporation Ltd (KSIDC) is developing a Mega Food Park at Industrial Growth Centre, Pallippuram, Cherthala, focusing on the sea-food processing sector, with grant assistance from Ministry of Food Processing Industries (MoFPI), Government of India under the Mega Food Park Scheme. The park will cater to marine food processing sector with common infrastructure facilities such as cold storage, deboning, deep freezer, standard design factory (SDF), common facility center (CFC) and industrial shed. It is based on a demand driven, hub and spoke model, with strong backward and forward linkages. The objective is to create modern enabling infrastructure for setting up food processing industry. It contains three vital components – the Central Processing Centre (CPC) at its Hub, Primary Processing Centres (PPC) and Collection Centres (CC) linked by the agro-logistics network as the spokes. Land will be allotted to sea-food/food processing units and industrial units in allied sectors for a 30-year lease period. The total cost of the project is Rs 128.49 crore and the Ministry of Food Processing Industries (MoFPI) have sanctioned a Grant of Rs.50 crore. Total land area 84.03 acres was allotted to 36 units for establishing industrial units and out of these, 17 units are fully operational and the rest are being established. Standard Design Factory of 21,013 sq. ft. and industrial shed of 8,549 sq ft were also allotted to five units. Out of these, three units are operational. The project is expected to bring a total investment of Rs 600 crore and direct employment generation of 3,000 numbers when the Mega Food Park is fully operational.

#### **Implementation of Food safety system through NCHC**

National Centre for HACCP Certification (NCHC) in association with Kerala Bureau of Industrial Promotion (K-BIP) has been conducting auditing, certification and recertification at various food processing and allied units in Kerala. National Centre for HACCP Certification (NCHC) in association with the Kerala Commissionerate of Food Safety has been organising awareness programmes on food Safety across the State.

#### **Major challenges and the way forward in the food processing sector**

The food processing sector is facing a critical set of challenges that demand immediate and targeted intervention. The major challenges faced by the food processing sector are lack of primary processing, storage and distribution facilities, lack of product development and innovation. By and large, the industry should focus on maintaining quality and safety standards in food processing. The majority of businesses in this sector are small and micro units that lack the financial resources needed to expand or invest in essential infrastructure. To overcome these challenges, bold and decisive action is required, including targeted incentives, infrastructure development, and investment in processing capacity. This will necessitate significant investment in various components of the supply chain, such as grading and packing centres, controlled atmosphere facilities, reefer vans, cold storage for perishable cargo at ports/airports/railway stations, testing laboratories, and other supporting infrastructure and services such as research and development, imparting skill training, and marketing support.

Kerala has diversity in resources with respect to fruit, vegetables, cereals and marine products. Given the large Non-Resident Keralite population spread across the world and significant demand for processed food in the domestic market, there is a huge potential for the food processing industry. To realise this potential fully, it is important to connect agricultural production with the market by bringing together farmers, processors, and retailers. Given the support offered by the Government and progress achieved by this segment in recent years, food processing can be expected to do well in the coming years.

## 4.6 TRADITIONAL INDUSTRIES

### **Handicraft sector**

The Handicrafts Sector plays vital role in economic development in terms of its contribution to GSV, providing employment to a vast segment of craft persons in rural and semi urban areas, and generation of foreign exchange. The handicrafts sector employs 68.86 lakh artisans, of which, 38.61 lakh are women artisans (56.1 per cent) (Annual Reports 2022-23, Ministry of Textiles, Government of India). The Government of India has initiated an integrated approach for promotion and development of the handicrafts sector under National Handicraft Development Programme (NHDP) and Comprehensive Handicrafts Cluster Development Scheme (CHCDS)

### **Handicraft industry in Kerala**

Kerala has a rich tradition of handicrafts with variety of materials including ivory, bamboo, palm leaves, seashells, wood, coconut shells, clay, cloth, coir, metals, stone, lacquer ware, and more. Kerala has 32 unique crafts like ivory carving, wood and horn carving, bell metal casting, hand embroidery, and coconut shell carving, which are commercially important. Kerala State Handicrafts Apex Co-operative Society (SURABHI), Handicrafts Development Corporation of Kerala (HDCK), and Kerala Artisans Development Corporation (KADCO) are entrusted with the promotion of handicraft industry in Kerala.

### **Kerala State Handicrafts Apex Co-operative Society (SURABHI)**

Surabhi, an apex organisation of primary handicrafts co-operatives, aims at uplifting

the artisans by marketing their products and supporting them through welfare schemes of Government of Kerala and Government of India. There are 38 Co-operative societies and 8 showrooms under Surabhi inside and outside the State. It also operates a craft development centre and a common facility centre at Ernakulam. In 2023-24, Co-operative societies generated revenue of Rs 69.28 lakh and total employment generated was 25,000. Details are given in **Appendix 4.6.1**.

### **Handicrafts Development Corporation of Kerala (HDCK)**

HDCK, Government-supported organisation, specialised in procurement and marketing of handicraft products. Its main objective is to assure fair returns to artisans. HDCK has showrooms across Kerala including Sree Moolam Shashtyabdapurthi Memorial Institute (SMSMI) in Thiruvananthapuram and 19 Kairali emporia outlets spread within and outside the State. In addition, HDCK supports artisans through welfare schemes of Government of India and Government of Kerala. It finances schemes under National Backward Classes Finance and Development Corporation (NBCFDC) loan schemes. With the support of Government of India, the Corporation implements welfare schemes for artisans, conducts training programmes, set up Common Facility Centres, distributes tool kits, conducts exhibitions/craft bazars at important places and tourist centres and provides marketing facilities to the crafts produced by artisans.

In 2023-24, Corporation has targeted a sales

turnover of Rs.1,500 lakh, and earned Rs 856.00 lakh from sale, registering an increase of Rs 21 lakh over previous year. The total number of persons employed in 2023-24 was 67. Details are given in **Appendix 4.6.2.**

### **The Kerala Artisans Development Corporation (KADCO)**

KADCO, a Government-owned company established in 1981, registered under the Companies Act, 1956. Corporation aims to uplift the indigenous artisans of Kerala, including carpenters, goldsmiths, blacksmiths, potters, masons, and those who work with copper/bronze and other handicrafts. To promote crafts, the Common Facility Center's for Carpentry in Mini Industrial Estate at Nadavannur, Kozhikode, and Umayanallore, Kollam are functioning. In an effort to facilitate and empower the beneficiaries for their livelihood, KADCO introduced a registration-based online labour data bank. The data bank will aid in understanding and utilising hidden capabilities, providing proper training in respective domains, as well as in general aspects of doing business and commercial activities. This approach is the first step towards organising the beneficiaries and to ensure that they receive the support that is needed for their success.

KADCO is a State Channelling Agency (SCA) for NBCFDC, for disbursing short term loans up to one lakh with a nominal interest rate of 5 per cent for women who belong to backward classes and living below poverty line to start various income generating activities. Loans up to Rs. 5 lakh is provided to the artisan units for renovation and setting up of new production units. As per the provisional data for 2023-24 of KADCO, the total number of persons employed is 1.78 lakh and the turnover are Rs.4,811.93 lakh. It has reported a profit of Rs. 85.92 lakh. Details are given in **Appendix 4.6.3.**

### **Bamboo Industry**

Bamboo is considered to be the most sustainable, eco-friendly and renewable natural resource having special properties conducive in creating a wide range of everyday products. About 28 species of Bamboo are found in Kerala. Bamboo from Kerala forests is being supplied mainly to the pulp and rayon units at concessional rates. A unique feature of Kerala bamboo sector is that 67.3 per cent of the extracted bamboo comes from home gardens rather than from the forests.

### **The Kerala State Bamboo Mission**

Kerala State Bamboo Mission (KSBM), the Bamboo Development Agency (BDA) was constituted in 2003 under the Department of Industries and Commerce. KSBM implements the Centrally Sponsored National Bamboo Mission Scheme under Ministry of Agriculture and Farmers' Welfare, Government of India and functions at Kerala Bureau of Industrial Promotion (K-BIP) with the broad aim of marshalling the scattered resources of the State and adopting a focused approach to revitalise the bamboo sector by promoting value addition, enhancing income generation of workers in the sector, and alleviating poverty. The interventions initiated by KSBM through K-BIP include propagation and promotion of Bamboo-based entrepreneurship by providing necessary support services, creation of new design for innovative products in Bamboo sector, quality enhancement and product improvement on existing products through engineering inputs and providing necessary support to create market demands. The major activities undertaken by KSBM in the FY 2023-24 include:

- As part of the skill development programme, 10 Skill Upgradation Training Programmes on bamboo handicrafts through NGOs/ Societies/ Bamboo Groups, and Training Programmes on Bamboo Propagation at Kerala Forest Research Institute (KFRI), Thrissur under NBM scheme were conducted.
- A Design development cum Training of Trainers (ToT) Programme was given to 30 selected artisans.
- A Design and Skill Development Training Programme was conducted for the members of Vattalacki Society, (Attapadi, Palakkad) and Venmany Bamboo Society, (Idukki District) at National Institute of Design, Bengaluru under NBM scheme.
- KSBM organised the 20th edition of the Annual Mega event of 'Kerala Bamboo Fest', featuring 200 stalls and 386 participants. The speciality of the 20th edition was the international participation of artisans from Japan.
- Conducted the National level Seminar on Bamboo Sector in association with NBM and other State Bamboo Missions on January 12 and 13, 2024.
- Facilitated the participation of artisans/ craftsmen from Kerala in exhibiting their Bamboo products in the India International Trade Fair 2023 held at New Delhi from November 14 to 27, 2023. KSBM stall bagged

the Award for the 'Best Exhibitor' in the Commercial Area Category.

- KSBM also participated in the Indian Crafts Bazar (Exhibition cum Sale) organised by the Ministry of External Affairs, Government of India, concurrently with the G20 Leaders' Summit on September 9-10, 2023 held at New Delhi.

### **Kerala Bamboo Fest 2024**

Kerala State Bamboo Fest is one of the major interventions undertaken by KSBM for the development of marketing of Bamboo sector. It provides an opportunity and platform for Bamboo artisans and units from the State to interact, exchange ideas, share knowledge and foster partnership with artisans across the country. On behalf of Department of Industries and Commerce, Government of Kerala, the Kerala State Bamboo Mission (KSBM) in association with National Bamboo Mission and K-BIP, organised the 20th edition of Kerala State Bamboo Fest at Jawaharlal Nehru International Stadium, Kaloor, Ernakulam from January 12 to 17, 2024. A total of 386 artisans/craftsmen/NGOs from within and outside the State displayed their products in the Fest. The event featured an array of Bamboo products including various Bamboo saplings and seedlings emphasising the importance of Bamboo cultivation and conservation. This year, the Fest has expanded its scope with international participation, featuring two Bamboo artisans from Japan nominated through Japan International Cooperation Agency (JICA) showcasing their products.

### **National Seminar on Bamboo Sector 2024**

Concurrent to the 20th edition of Kerala Bamboo Fest, a two-day National level seminar in Bamboo sector was held on January 12 and 13, 2024 at Kochi. The seminar was organised by KSBM in association with National Bamboo Mission under the Department of Agriculture and Farmers Welfare, Government of India. The Seminar focussed on the latest developments in the Bamboo sector. The seminar witnessed the participation of 130 delegates consisting of Bamboo artisans/ craftsmen, officials from Government Departments, National Bamboo Mission and various stakeholders.

### **The Kerala State Bamboo Corporation**

The Kerala State Bamboo Corporation is an undertaking established in 1971 for the welfare,

development and uplift of traditional bamboo workers in Kerala. The main objectives of the Corporation are to develop and promote industries based on bamboo, reed, cane and rattan; to undertake the manufacturing and trading of bamboo-based products, and to provide financial, technical and other assistance to the traditional bamboo workers. The Corporation is serving about 10,000 bamboo workers in Kerala and the majority of these workers are from economically and socially backward sections of the community.

The main activities of the corporation include the collection of good quality reeds from government forests, the distribution of these reeds to traditional bamboo weavers at a subsidised rate on a credit basis, as well as the procurement of woven mats from the weavers. The main products of the corporation are bamboo mats, bamboo ply, flattened bamboo boards, bamboo flooring tile, bamboo furniture and handicraft items. As part of encouraging more workers into mat weaving, Kerala State Bamboo Corporation has started training programmes in making bamboo mats and handicraft items.

Kerala State Bamboo Corporation Ltd. has three feeder/primary processing units at Palakkad, Mananthavady and Nadapuram for converting raw bamboo into strips of different thickness. They are weaved to bamboo curtains for the production of Flattened Bamboo Board. The waste bamboo from processing, ranging from 50 per cent to 70 per cent, is further used to manufacture value added products like toothpick, curtain blinds, bamboo curtains and incense sticks.

### **Issues and Challenges in the sector**

Many traditional artisans in Kerala suffer from social and economic disadvantages, making it difficult for them to sustain in the industry. Limited entrepreneurship, insufficient skill development programmes and lack of modernisation in designs and products are the major challenges faced by the sector. The handicraft industry is labour-intensive, and artisans face difficulties in terms of hands-on labour. Industries dependent on bamboo and other raw materials face unique challenges like absence of proper supply chain impacting the overall sector. Artisans struggle to access markets, making it challenging to sell their products. Insufficient financial support and resources, like shortage of working capital and credit facilities hinder the

growth of artisans and the sector as a whole. The handicraft sector faces stiff competition from machine-made products, affecting demand and pricing. Lack of awareness about technology, designs and developing tools, standardisation and packaging, lack of effective pricing mechanism, exploitation by intermediaries and availability of cheap replacements for the crafts are also the challenges prevailing in the sector. Due to adverse working conditions, craftsmen are reluctant to pursue traditional employment, which results in a shortage of skilled workers in industries like bamboo.

### Way Forward

To tackle the challenges, collaboration among the Government and various stakeholders is essential to offer support and resources to artisans, enhance market access, and boost the handicraft industry in Kerala. The GI tag serves as an effective means to safeguard the authenticity of handicrafts produced in the industry, as various organisations are implementing successful marketing strategies to promote GI-tagged items.

## HANDLOOM AND TEXTILE INDUSTRIES

### Textile and Garment Industry

The Indian textile industry is one of the largest in the world with a large raw material base and manufacturing strength across the value chain. India is the second largest producer of Man-Made Fibre (MMF) and sixth largest exporter of textiles and apparel in the world. Textile and apparel exports including handicrafts accounted for around 8.2 per cent of India's total exports. India shares about 3.9 per cent of global trade in apparels and textiles in 2023-24. Major countries of export are USA, European Union and UK, which together account for about 47 per cent. Textile

industry provides direct and indirect employment and is a source of livelihood for millions of people including a large number of women and rural population.

### Handloom and Power loom Industry in India

Handloom industry with 28.23 lakh looms is the major source of livelihood for of the rural and semi-urban area. According to the Annual Report 2023-24 of the Ministry of Textiles, the Handloom Sector is one of the largest unorganised sectors in India, which provide employment to more than 35 lakh persons, of which, more than 25 lakhs are women weavers and allied workers. Handloom sector accounted for nearly 15 per cent of the cloth production.

The Handloom industry mainly exports fabrics, bed linen, table linen, toilet and kitchen linen, towels, curtains, cushions and pads, tapestries and upholstery's, carpets, and floor coverings. The major handloom centres are Karur, Panipat, Varanasi and Kannur. The major destinations of export are USA, UAE, Spain, UK, Italy, Australia, France, Germany, Netherlands and Greece. Handloom Export Promotion Council (HEPC) is the nodal agency under the Ministry of Textiles, Government of India to promote exports of handloom products. Technology advancement varies across looms, and upgradation of technology is under progress.

### Textile in Kerala

Kerala's textile sector includes spinning, weaving, garment manufacturing, dyeing and processing units. Textile units are there in public sector (both State and Central), co-operative sector, and private sector. The weaving sector includes the khadi units, handloom units, and power loom units. The garment industry has higher potential for employment, particularly for women. The textiles

**Table 4.6.1** State Plan Outlay and Expenditure for Textile sector (excluding PSUs and Khadi), in Rs lakh

Sub-Sector	2023-24			2024-25(till September 2024)		
	Outlay	Expenditure	%	Outlay	Expenditure	%
Handloom	4,003.00	1,945.56	48.60	3,189.00	325.51	10.20
power loom	137.00	57.20	41.75	115.00	0.00	0.00
Spinning Mills	700.00	1,123.46	160.00	985.00	0.00	0.00
Textile Processing Centre-Nadukani	800.00	0.00	0.00	900.00	0.00	0.00
<b>Total</b>	<b>5,640.00</b>	<b>3,126.22</b>	<b>55.42</b>	<b>5,189.00</b>	<b>325.51</b>	<b>6.27</b>

Source: Plan Space, Kerala State Planning Board

sector in Kerala has to depend on other States to meet its requirement for dyeing and digital printing. Hence it is setting up a dyeing and eco-friendly printing unit at KINFRA Textile Centre at Nadukani, Kannur which will be an important step towards localisation of textile processing in the State.

The total State Plan outlay for the textile sector (excluding State PSUs and Khadi) in the Annual Plan 2023-24 was Rs 5,640 lakh and the amount spent was Rs 3126.22 lakh (55.4 per cent). The total Plan outlay for the sector in the Annual Plan 2024-25 is Rs 5,189 lakh and the amount spent up to September 2023 is Rs 325.51 lakh (6.27 per cent). Details are provided in **Table 4.6.1**.

### **Handloom sector in Kerala**

The handloom industry is a traditional industry of Kerala mainly concentrated in Thiruvananthapuram and Kannur Districts and in some parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod Districts. The industry is dominated by the Co-operative sector covering 84 per cent of total looms. The remaining 16 per cent of handloom looms is owned by Industrial entrepreneurs.

The major products in the handloom sector are dhoti's, furnishing, bed sheets, shirting, saree and lungi. The total value of production in the handloom sector in 2023-24 is Rs 257.30 crore and the total sales turnover is Rs 260.41 crore. The total number of weavers engaged in the handloom sector in 2023-24 is 14,642. The total number of women weavers employed in this sector in 2023-24 is 11,364 (78 per cent of total weavers). The total employment generated in 2023-24 is 15.31 lakh person days. The value of production, total turnover, number of weavers and person days of work generated have all increased in 2023-24, as compared to 2022-23. Details are provided in **Appendix 4.6.4**.

### **Agencies in Handloom Sector**

The Directorate of Handlooms and Textiles, Kerala State Handloom Weaver's Co-operative Society (HANTEX), Kerala State Handloom Development Corporation (HANVEEV) and the Indian Institute of Handloom Technology (IIHT, Kannur) are the major stakeholder institutions involved in the development of the handloom sector in the State.

### **Directorate of Handlooms and Textiles**

The Directorate of Handlooms and Textiles, Kerala is functioning under the Department of Industries and Commerce aims at evolving policies for the promotion and development of handloom and textile sector in the State. The Directorate was established in the year 1979, to protect and promote the production in handloom and textile industry in the State. It has the overall responsibility to support the areas of infrastructure, marketing, human resource development, conservation and preservation of traditional skills and products, finance, design input, raw material supply, export, modernisation, welfare programmes, price stability to equip the segment to compete in a globalised environment. It also aims at the over-all skill up gradation of the weavers so as to produce high-quality value-added handloom products utilising traditional skill of Kerala in the global market avenues.

The Government implements various schemes and; provides assistance by way of loan and grant for the development of the handloom industry. Loans and Grants include those from the State Government, Central Government and other financial agencies such as National Cooperative Development Corporation (NCDC), National Bank for Agriculture and Rural Development (NABARD) and Housing and Urban Development Corporation Limited (HUDCO). Government also provides assistance for sales promotion through rebates. Details are provided in **Appendix 4.6.5**.

The handloom uniform project is one of the innovative projects that provides handloom school uniform cloth to students of Government and aided school. This project is implemented by the Directorate of Handloom and Textiles, involving HANVEEV, HANTEX and District Industries Centres as key players. This project has been successful in increasing employment, wages and person days of work.

Kerala Handloom Mark has been launched by the Handloom sector to endorse the quality of the handloom products in terms of raw material, processing, embellishments, weaving design and other parameters besides social and environmental compliances for earning the trust of the customers. Ultimately this will provide high quality defect free products to those consumers who are looking niche handmade products.



Geographical Indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation due to that origin. Handloom products of Kerala like Cannanore Home Furnishings, Balaramapuram Sarees and Fine Cotton Fabrics, Kasaragod sarees, Kuthampully Sarees, Chendamangalam Dhories & Set Mundu have received Geographical Indication. Two mega projects of the sector are on-going. One is Nadukani Printing and Dyeing unit in Kannur District and the second one is Chendamangalam Kaithari Gramam in Ernakulam District. These works will be completed in a phased manner; the initial works has already been started as 1st Phase.

### **Kerala State Handloom Weaver's Co-operative Society (HANTEX)**

Kerala State Handloom Weavers' Co-operative Society Ltd (HANTEX), the apex body of primary handloom weavers' co-operative societies in Kerala was established in 1961. It has its headquarters at Thiruvananthapuram. The main objective of HANTEX is to market the products of member societies and thereby support the livelihood of handloom weavers. At present 405 handloom societies are registered under HANTEX and more than 10,000 weavers are engaged for HANTEX. Hantex has 340 permanent / temporary employees working in various departments. It is marketing the products through its own 80 showrooms all over Kerala. Besides headquarters, 4 regional offices, 5 production centres, 2 weaving units, a processing unit and an international garment unit are functioning under HANTEX.

HANTEX achieved income from sales to the tune of Rs 2,286.00 lakh in 2023-24 of which, Rs 1,636.10 lakh is showroom sale and Rs 649.9 lakh is department sale (sale from depot to departments like health department). Sale in 2022-23 was Rs 2035 lakh. The paid-up capital at the end of the year 2023-24 was Rs.7,077 lakh. (*Source:* HANTEX) The agency has reported losses since 2019-20. The accumulated loss of HANTEX is increasing on a yearly basis and has reached about Rs 23,945.43 lakh by the end of 2023-24. Sales turnover, which had fallen post 2019-20, is gradually increasing over the years. Details are given in **Appendix 4.6.6.**

As part of modernisation and value addition of handloom fabrics, a full-fledged Garments unit is functioning with sate of the art facility. HANTEX

has launched shirts in linen and cotton under the brand name 'Royal Mint' and 'Commando', Ladies churidar tops and kids shirts under the brand name 'Kemi' and 'Junior Commando', and new born babies' products in the brand name 'Tara' and 'Vivo'. The scheme 'E-credit card' was launched to attract employees in the Government/banking sector as its customers.

### **Kerala State Handloom Development Corporation (Hanveev)**

Kerala State Handloom Development Corporation Ltd (Hanveev) was established in the year 1968. It is engaged in the production and marketing of a wide range of handloom products. At present Hanveev provides employment to 1950 individual weavers. It has 36 own showrooms and 32 production centres. The corporation conducts exhibitions in festival seasons and participates in expos conducted at national and international level. Free Handloom School Uniform Scheme helped Hanveev to provide uninterrupted employment and wages to around 2,000 weavers and indirect employment opportunities to others.

In order to innovate and enhance the consumer appeal, Hanveev launched a stylish gift box called "Proud-e" featuring value-added handloom products in attractive packaging. Hanveev successfully launched a Combo pack including items for men and women, which has been quite popular. It also introduced ready-made shirts and children's clothing, which broadened the product range. In order to promote Handloom products, the State Government is encouraging employees to wear handloom clothing on Wednesdays. Hanveev distributed more than 25 lakh meters of uniform material to around 4000 schools, from Kasargode to Thrissur Districts under the school uniform project. As per the focused policy to expand its market through targeted institutional sales and e-commerce platform, Hanveev is now securing institutional orders worth Rs 5 crore rupees annually.

Competition from power loom products, limited production capacity, and inability to meet urgent orders are some of the challenges faced by Hanveev. Sales turnover of Hanveev in 2023-24 was Rs 1867.31 lakh. The value of cloth and other items procured has decreased from Rs 1266.34 lakh in 2022-23 to Rs 1182.67 lakh in 2023-24. The value of yarn purchased and distributed was

Rs 496.29 lakh in 2022-23. It has decreased to Rs 275.15 lakh in 2023-24. Details are provided in **Appendix 4.6.7**.

The paid-up capital of Hanveev at the end of 2023-24 was Rs 5949 lakh. Income through sale of products at the end of the year has decreased in 2023-24, compared to 2022-23. The net loss of Hanveev was Rs 533.65 lakh in 2022-23. It has increased marginally to Rs 578.79 lakh in 2023-24. The details regarding the financials of Hanveev are provided in **Appendix 4.6.8**.

### **Indian Institute of Handloom Technology (IIHT, Kannur)**

Indian Institute of Handloom Technology-Kannur is an autonomous institute set up in 1987 in the name of 'Handloom Training Institute' under the aegis of Industries Department, Government of Kerala. In 2011 it was renamed as Indian Institute of Handloom Technology, Kannur. The institute is assigned as the nodal agency of Government of Kerala for implementing training and projects related with handloom and textile industry. The institute has been affiliated to Kannur University and has commenced 3-year degree course—BSc Costume and Fashion Designing in 2020. The institute is playing a key role in the setting up of the Integrated Handloom Village at Chennamangalam. IIHT was instrumental in setting up the design studios in HANTEX and Hanveev.

The first phase for basic amenities/infrastructure of IIHT is almost completed and the second phase work for the construction of Design Centre, Exhibition Centre and Sales Centre, Production and Demonstration centre are on-going. The implementation of project like Kannur Pudava, setting up of handloom village at Kanhirode (Koodali) and establishment of Technology centre at Balaramapuram are also on-going. The 39 Quality Control Inspectors (QCI) selected in 2023-24 and 35 of QCI's selected up to August 2025 by the IIHT were deputed in all Districts of Kerala by the Directorate of Handlooms and Textiles. Under the internship programme, 35 students completed their internship in IIHT in 2023-24.

### **Co-operative Sector**

The co-operative sector in Textiles sector is involved in spinning and weaving activity (both power loom and handloom) in the State. There are 8 spinning mills in the co-operative sector. In

weaving, the total number of power looms in the co-operative sector is estimated to be about 692. The co-operative units form about 40 per cent of total number of power looms in the State. There are 50 power loom co-operative societies in the State.

The co-operative sector in handloom sector (weaving) consists of factory type and cottage type societies. In 2023-24, there were 527 registered Primary Handloom Weavers Co-Operative Societies (PHWCS) in the State of which 208 were factory type and 319 were cottage type societies. Out of 527 registered Primary Handloom Weavers Co-Operative Societies, 336 were operational. In Factory type Handloom co-operative Societies, the number of profit-making societies has decreased and the number of loss-making societies has increased in 2023-24 as compared to the previous year. A slight increase is seen in the case of dormant societies. The number of profit-making societies has increased and the number of loss-making societies has decreased in the cottage type handloom societies in 2023-24 as compared to the previous year. Number of dormant societies has also decreased. Details of handloom Co-operative societies in the State are given in **Appendix 4.6.9**.

The production of handloom cloth by the co-operative sector in 2023-24 was 47.02 million metres valued at Rs 96.34 crore. The production of cloth has increased and the value of production has also increased in 2023-24 as compared to 2022-23. Total turnover which was Rs 98.79 crore in 2022-23, has decreased by 1.5 per cent to Rs 97.30 lakh in 2023-24. Number of looms has risen from 13,502 in 2022-23 to 14,064 in 2023-24. The number of weavers has increased to 12,085 in 2023-24 from 11,559 in 2022-23. Employment generated was 8.13 lakh person days in 2023-24. The number of women weavers engaged in the sector has been increasing since 2019-20 except for a fall in 2020-21. Details can be found in **Appendix 4.6.4**.

### **Power loom Sector**

There are 1745 power looms in the State of which 40 per cent (692) are in the co-operative sector. In the power loom sector, production of cloth in 2023-24 was 65.26 lakh meters valued at Rs 9544 lakh. Productivity was 3,739.85 meters per loom and the total turnover through sale of goods was Rs 8,716.10 lakh. Details are given in **Appendix 4.6.10**.

There are 6 Co-operative societies under Kerala State Co-operative Textile Federation Limited (TEXFED). Of these 5 are Powerloom/Integrated societies, namely, Neyyattinkara Taluk Integrated Powerloom Village Industrial Co-operative Society Ltd (NIPCOTEX), Kottayam Integrated Power loom Industrial Co-operative Society Ltd, Kerala Hi-Tech Textile Co-operative Ltd. (KELTEX), The Calicut Integrated Power Loom Ind. Co-operative Society and the Wayanad Handloom, Power loom and Multi-purpose Industrial Co-operative Society Ltd (WHIPCOS). The total number of looms under these societies is 565.

### **Spinning Mills**

Spinning mill industry, one of the labour-intensive traditional sectors in Kerala, plays an important role in absorbing rural unskilled labour force. The spinning sector in Kerala includes the public sector (State and Central), the co-operative sector and the private sector. The spinning sector includes 26 mills with total spindle capacity of 7.03 lakh, employing more than 7600 people. There are 9 spinning mills under the 3 State PSUs, namely, Kerala State Textile Corporation Limited (7 mills), Sitaram Textiles Limited and Trivandrum Spinning Mills Limited. There are 8 co-operative spinning mills in Kerala. They are part of Kerala State Co-operative Textile Federation Limited (TEXFED) and have a spindle capacity of 1.52 lakh. Together under State PSUs and co-operative sector, there are 17 spinning mills having 2.87 lakh spindle capacity and employing about 3500 people.

The central PSU National Textile Corporation Limited (NTC) had 5 mills (out of total 23) with a total spindle capacity of 1.99 lakh in Kerala. It employed more than 1900 people. Four of these mills were operational till 2020-21. It is reported that they are not operational now. In addition, there are two major private sector enterprises with a total of 4 mills. They have a spindle capacity of 2.16 lakh and employ more than 2200 people.

The main problems faced by spinning mills are the lack of working capital and low availability of raw material. To overcome shortage of raw material for the sector, Government of Kerala now procures cotton for the entire textile sector in the State through a centralised purchase system managed professionally by a committee comprising Board of Public Sector Transformation (BPT), Kerala State Co-operative Textile Federation Limited (TEXFED), and, Kerala State Textile Corporation

Limited (KSTC) and managing directors of the individual spinning mills. Sale of yarn produced by these mills is carried out through a Depot System which is monitored by the same committee. As a result, raw material costs have been brought down and the sector's performance has improved. Government had constituted an Expert Committee to study the crisis prevailing in the mills which recommended modernisation of co-operative spinning mills in the State. As a step further, a Cotton Board is constituted for the procurement of good quality cotton in the crop season. This would ensure adequate cotton to all spinning mills under Government control in the State, thereby ensuring availability of yarn for users down the value chain.

### **Kerala State Co-operative Textile Federation Limited (TEXFED)**

TEXFED is the apex body of co-operative spinning mills and integrated power loom co-operative societies in the State. TEXFED was established in 1992 as a body to Plan, to assist and supervise the setting up and management of co-operative textile units in Kerala. It integrates all the segments of the textile industry including spinning, weaving, processing and garmenting. There are eight co-operative spinning mills with TEXFED as apex body. They include the Quilon Co- operative Spinning Mills Ltd, Alleppey Co- operative Spinning Mills Ltd, Priyadarshini Co- operative Spinning Mills Ltd, Trichur Co- operative Spinning Mills Ltd, Malappuram Co- operative Spinning Mills Ltd, The Malabar Co-operative Textiles Ltd., The K. Karunakaran Memorial Co- operative Spinning Mills Ltd, and The Cannanore Co-operative Spinning Mills Ltd.

These 8 co-operative spinning mills having a total capacity of 1,51,920 spindles and directly employ 1,680 people. TEXFED mills have done modernisation of machines with the financial assistance of the National Co-operative Development Corporation (NCDC) and Government of Kerala. This has led to improvement in productivity and quality of output. The Government of Kerala intends to take the mills into break even through completion of the modernisation projects taken up with State assistance and other agencies.

### **Kerala State Textile Corporation Limited (KSTC)**

Kerala State Textile Corporation Limited (KSTC) was incorporated on March 9, 1972. Its registered office is in Thiruvananthapuram, Kerala. The main objective of KSTC is setting up and running textile mills in the State, and uplifting the sick units in textile industry in Kerala. The Corporation has seven mills and one research and testing centre. The mills under KSTC are Prabhuram mills, Kottayam Textiles, Edarikkode Textiles, Malabar Spinning and Weaving Mills, Hi Tech Weaving Mills, Komalapuram Spinning and Weaving Mills and Uduma Textile Mills. Two other units Sitaram Textiles and Trivandrum Spinning Mills Limited are now under the administrative control of KSTC. In addition to the above, the corporation has under its fold a research and testing division, Centre for Applied Research and Development in Textiles (CARDT), located at Balaramapuram, Thiruvananthapuram. The agency is setting up a new printing cum dyeing unit at Nadukani KINFRA Park, Kannur.

In 2023-24, the value of production of the corporation was Rs 73.90 crore and income from sales was Rs 74.65 crore. KSTC has reported consecutive net loss in the last 5 years. The accumulated loss of the corporation at the end of 2023-24 is estimated to be about Rs 627.85 crore. Details regarding the performance of KSTC are provided in **Appendix 4.6.11**.

Sitaram Textiles Limited was started in the year 1903. In the year 1972, Government of Kerala by Public auction took over the unit. There after the unit was functioning as fully owned Government of Kerala Undertaking under the administrative control of Industries Department and it was incorporated officially on February 14, 1975. Total human power is 124. Only the Spinning Section is functioning now and it has a capacity of around 25,000 spindles. Income from sales has decreased from Rs 10.59 crore in 2022-23 to 3.72 crore in 2023-24. It has reported net loss over the years. Details regarding the performance of Sitaram Textiles Limited are provided in **Appendix 4.6.12**.

Trivandrum Spinning Mills Ltd in Balaramapuram is a State Govt company, incorporated on November 01, 1963, one of the largest handloom centres in the State. The unit had to close down in 1998. As part of the attempt to revive the industrial unit, the Government of Kerala with the help of

Kerala State Textile Corporation Ltd. took steps to revive Trivandrum Spinning Mills and converted the same to a brand-new Open End (OE) spinning mill with imported State-of-the-art technology from Czech Republic, Germany and China under EPCG (Export Promotion Capital Goods) Scheme. In 2009, the Company restarted its production with the capacity of 360 rotors. Now the company has a 680 rotor capacity. There are 69 employees in the unit and accumulated loss is Rs 38.08 crore. Details regarding the performance of Trivandrum Spinning Mills Ltd are provided in **Appendix 4.6.13**.

### **Achievements in Textiles sector 2023-24**

The Government Share Participation was given to 14 Primary Handloom Weaver Co-operative Societies in 2023-24. Assistance was provided to 28 primary societies for modernisation and promotion of value-added products. Contributory Thrift Fund Scheme covered 3,092 weaver beneficiaries in the year 2023-24. About 4,650 weavers benefitted under the weavers / allied workers motivation programme. Government Share Participation assistance was also provided to HANTEX and Hanveev. Skill upgradation training was provided to weavers by 10 professional designers. There were 4 power loom co-operative societies receiving benefit of share participation for modernisation.

### **Issues and Challenges**

Price competition from cheaper, mass-produced fabrics, inability to capture modern trends and designs, inability to enter into mass production, inadequate marketing efforts; and dwindling number of weavers are some issues in the Handloom sector. Scarcity and increasing cost of raw materials, increasing production costs and the infrastructure constraints are some of the challenges faced by the Textile sector. Slow pace of modernisation, stiff competition, low productivity, increasing administrative expenses and production cost, decreasing profits and lack of working capital are also the issues of concern for the textile sector in Kerala. Mills involved in spinning and weaving in Kerala have been facing problems of both demand and supply. Absence of fabric processing facilities is also a problem faced by the industry in Kerala.

### **Way forward**

Kerala has a large market for clothing and the State has the potential to emerge as a major

player along various segments within the value chain (from spinning to garments). Opportunities exist in production of fabrics, bed linen, toilet and kitchen linen, towels, curtains, cushions and pads, upholstery, carpets and floor coverings, and embroidered textiles. The textile sector needs to find ways to attract the young and educated in Kerala to this sector, as entrepreneurs or as workers. Adopting innovative marketing strategies, the sector can attract younger consumers who value craftsmanship and sustainability. Branding and avenues for finance need attention. More priority will have to be given in the formation of handloom clusters, which bolster productivity and market access. It would also be essential to give attention for granting the Geographical Indication (GI) tags that protected the authenticity of Handloom products.

## KHADI AND VILLAGE INDUSTRIES

### Khadi and Village Industries Sector in India

Khadi and village industries have the potential to create employment for rural artisans with a very low capital investment. It undertakes activities such as skill improvement, transfer of technology, research and development, and marketing. There are 2,946 khadi institutions located across the country, which provide employment to 4.98 lakh artisans, about 80 per cent of employees are women. The production in khadi and village industries (including *poly vasthra* and *solar vasthra*) increased from Rs 95,956.67 crore in 2022-23 to Rs 1,08,297.68 crore in 2023-24, of which, Khadi production constitute Rs.3,206 crore. Similarly, sales increased from Rs 1,34,629.5 crore in 2022-23 to Rs 1,55,673.1 crore in 2023-24. Employment generation in khadi and village industries sector increased from 1.77 crore in 2022-23 to 1.87 crore in 2023-24 (Source: Annual Report 2023-24,

Ministry of Micro, Small & Medium Enterprises, Government of India). Production, sales and employment in Khadi and Village Industries in India for the last five years are shown in the **Table 4.6.2**.

**Table 4.6.2** Production, Sales and Employment generation in Khadi & Village Industries Sector in India, 2019-20 – 2023-24

Year	Production (Rs in crore)	Sales (Rs in crore)	Employment (in crore)
2019-20	67,667.31	88,855.55	1.52
2020-21	72,235.15	95,741.36	1.59
2021-22	84,289.93	1,15,415.23	1.67
2022-23	95,956.67	1,34,629.5	1.77
2023-24	1,08,297.68	1,55,673.1	1.87

Source: Annual Report 2023-24, Ministry of Micro, Small & Medium Enterprises, Government of India

### Khadi and Village Industries Sector in Kerala

In 2023-24, Khadi sector in Kerala provided employment to 12,500 artisans and showed an overall cloth and yarn production of Rs 4199 lakh. The total wage paid to khadi artisans was Rs 3488.1 lakh in 2023-24 and total Khadi retail sales were Rs.4,979.97 lakh. The Village industries in 2023-24 provided employment to 43,259 people with the value of production at Rs 155 crore and value of sales at Rs 164.79 crore. Details are provided in **Table 4.6.3**.

There are 29 Khadi institutions including Khadi and Village Industries Board (KKVIB), KKVIB aided institutions (14 numbers) and KVIC aided institutions (14 numbers) engaged in Khadi production and sales. Production and sales details of these institutions (under KKVIB & KVIC) from 2021-22 to 2023-24 and employment in 2023-24 are given in **Appendix.4.6.14**.

**Table 4.6.3.** Production, Sales and Employment in Khadi and Village Industries in Kerala in 2022-23 and 2023-24

Sector/sub sector	Value of Production (Rs in crore)		Value of sales (Rs in crore)		Employment (in numbers)	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Khadi sector	34.16	41.99	51.30	49.79	12,527	12,500
Village industries Sector	155.22	155.02	164.79	164.79	43,350	43,259
<b>Total</b>	<b>189.38</b>	<b>197.01</b>	<b>216.09</b>	<b>214.58</b>	<b>55,877</b>	<b>55,759</b>

Source: Kerala Khadi and Village Industries Board

State Plan outlay and expenditure of the sector for the last 3 years is provided in **Table 4.6.4**.

**Table 4.6.4.** Plan Outlay and Expenditure of Khadi and Village Industries Sector in Kerala (Rs.in lakh)

Year	Outlay	Expenditure	% of Exp
2021-22	1610	1351.48	83.94
2022-23	1610	860.77	53.46
2023-24	1610	728.41	45.24

Source: Plan Space

### Kerala Khadi and Village Industries Board (KKVIB)

KKVIB is a statutory body under the Department of Industries and Commerce responsible for organising, developing and promoting khadi and village industries in Kerala. The Board implements the programmes of Government of Kerala, Khadi Commission and availing financial assistance of nationalised banks through co-operative, registered institutions, individuals and departmental units. Schemes under State Plan include the Special Employment Generation Programme (SEGP) (Ente Gramam), Prime Minister's Employment Generation Programme (PMEGP) and Rural Employment Generation Programme (REGP) of KVIC. The Khadi and Village Industries Board generated 3,522 employment opportunities through the SEGP & PMEGP village industries programmes in 2023-24. Details are provided in **Appendix 4.6.15** and **Appendix 4.6.16**. Khadi and village industry's production, sales, employment,

wages paid for the last two years is shown in the **Appendix 4.6.17**.

The allocation of funds from various sources to KKVIB and the expenditure incurred by the Board in 2022-23 and 2023-24 is shown in **Table 4.6.5**.

### Special Employment Generation Programme

Special Employment Generation Programme provides margin money subsidy to small entrepreneurs and traditional artisans through bank linked projects, based on appraisal of the project and approved guidelines by Industries and Commerce Department. The maximum assistance under margin money is limited to 40 per cent of the project cost. The general category will get subsidy of 25 per cent of the project cost, women and OBC category will get 30 per cent and SC/ST/job lost NRIs due to COVID 19 pandemic will be eligible for 40 per cent. In 2023-24, Khadi Board created total project investment of Rs 2,872.90 lakh through 843 village industries and created 1,368 employment opportunities. District-wise details of achievements under special employment generation programme in 2023-24 are given in **Appendix 4.6.15**.

### Prime Minister's Employment Generation Programme (PMEGP)

PMEGP is a credit-linked subsidy programme that aims at generating employment opportunities through establishment of micro enterprises in rural as well as urban areas. The objective of the programme is to provide continuous and

**Table 4.6.5.** Fund allocated and expenditure incurred by Khadi & Village Industries Board in Kerala, Rs in lakh.

Particulars	2022-23		2023-24	
	Receipt	Expenditure	Receipt	Expenditure
<b>State Government Grant -PLAN</b>				
1. Plan (Budget provision)	915.77	872.85	784.67	755.4
2. Income Support Scheme (Fund through DIC)	1,500.00	1,500.00	3,680.79	3,680.79
<b>State Government Grant - NON-PLAN</b> (Including Budget Provision and Additional Authorisation)	4,832.00	4,903.54	4,800.20	4,853.06
1.Non- Plan – Special Rebate	1,000.00	1,000.00	570	570
<b>KVIC Grant</b>				
1.PMEGP - Margin Money	1,738.50	1,143.91	1,336.31	1,336.31
2.Grant for District Awareness Camps and District-level Exhibition of PMEGP	0	0	2.55	2.55

Source: Khadi and Village Industries Board, Government of Kerala.

sustainable employment to a large segment of traditional and prospective artisans, and rural and urban unemployed youth in the country. The scheme facilitates participation of financial institutions for higher credit flow to micro sectors. Under the programme, Government subsidy will be credited to the bank accounts of micro enterprises. It is supervised by the Khadi and Village Industries Board and also distributed as additional wages. Through the scheme, Prime Minister's Employment Generation Programme (PMEGP), the board created capital investment of Rs.4,143.57 lakh for 410 units and number of employments created were 2,154. Total production was worth Rs 6,629.66 lakh and the sales generated were Rs 7,624.11 lakh. An amount of Rs 775.44 lakh was paid out as wages. Achievements under the programme in 2023-24 are given in **Appendix 4.6.16**.

### Marketing

The KKVIB had 190 sales outlets for Khadi and village goods in 2023-24. District-wise details of departmental sales outlets and sales under KKVIB Board for 2022-23 and 2023-24 are given in **Appendix 4.6.18**. **Figure 4.6.1** portrays District-wise sales targets and achievement in 2023-24.

### Issues and Challenges of Khadi and Village Industries in Kerala

- Poor marketing and branding strategies are

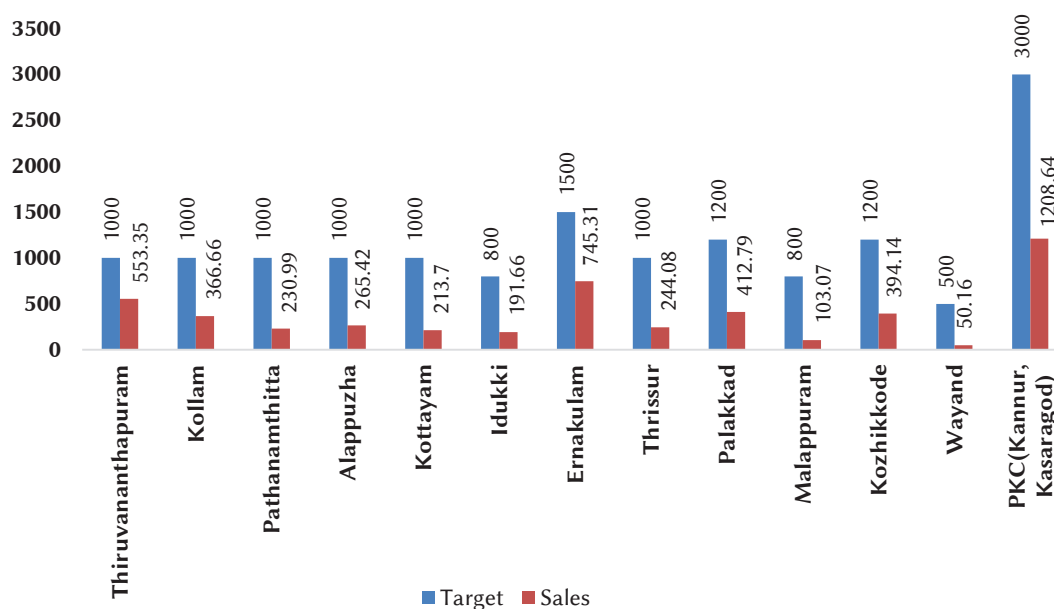
making it difficult for Khadi products from gaining attraction, leading to low sales both online and offline.

- Limited market access is also a problem, as artisans are restricted from selling their products directly to customers due to regulatory requirements. This limits their ability to negotiate prices and access wider markets.
- Low Wages for artisans are a major issue, with spinners earning between Rs 240 - 300 per day and weavers earning Rs 225 - 260 per day.
- Lack of innovation is another challenge, as Khadi Institutions (KIs) are not equipped to keep up with changing consumer preferences and adjust to shifts in market trends.
- Khadi products experience significant seasonal demand fluctuations, with certain products being more popular during specific times of the year due to various factors such as weather, cultural events, and fashion trends.
- To meet the present-day challenges, Khadi institutions must enhance their professional management and capability.

### Way forward

To address these challenges, there is a need for Policy Reforms, including giving Khadi Institutions greater autonomy and competitiveness, so that their pricing strategies can be more flexible. Furthermore, empowering artisans through cooperatives or producer companies can guarantee

**Figure 4.6.1** District-wise sales target and achievement 2023-24, Rs in lakh



Source: Khadi and Village Industries Board, Government of Kerala.

fair wages and enhance their bargaining power. Innovation in product development and better marketing of products is essential in any industry. The khadi sector, being a traditional industry, is largely dependent on Government assistance. However, it is necessary to make the sector self-sufficient and adaptable to the changing economic environment. By promoting and ensuring the sustainability of businesses in this sector, the State can become a global leader in the sphere of sustainable traditional industries. Kerala's youth have a great potential to contribute to the growth of khadi with their innovative solutions and ventures. With immense support from the Government and national institutes, the opportunities for entrepreneurship in this sector are at a high. The Khadi sector in Kerala requires greater momentum in its multi-faceted approach to address the challenges and ensure sustainability of this traditional industry.

**COIR INDUSTRY**

**Coir Industry in India**

Coir industry is important in terms of its contribution to Gross Value Added, employment generation and foreign exchange earnings. It provides direct and indirect employment to about 7.5 lakh persons, of which, about 80 per cent are women. Coir industry is predominantly concentrated in States like Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra,

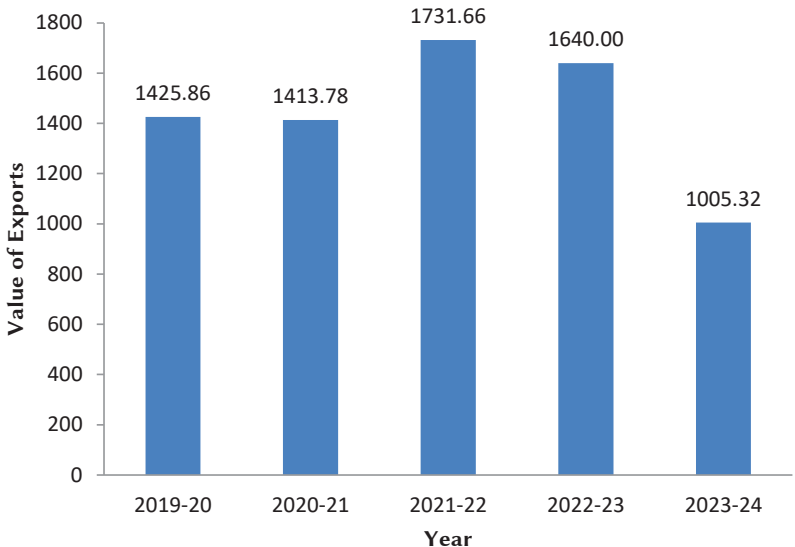
Goa, Odisha, Assam, Andaman and Nicobar, Lakshadweep and Puducherry. In 2023-24, production of coir fibre was 2,66,000 MT (Provisional). India exported coir and coir products worth of 1285.11 crore in 2023-24 (Up to July, 2024) (Provisional). India exports coir to more than hundred countries. India exports 14 coir products, including coir pith, coir fibre, tufted mats, handloom mats, geo textiles, coir yarn, curled coir, handloom matting and rubberised coir.

**Coir Industry in Kerala**

Kerala is the home of the Indian coir industry, particularly white fibre, accounting for 61 per cent of coconut production and over 85 per cent of coir products. Coir sector is the foremost traditional industry in Kerala employing nearly 1.5 lakh coir workers, of which 80 per cent are women. The entire processes in coir industry can be divided into three major segments, namely fibre extraction, spinning and products sectors. The fibre extraction and spinning segments are mostly concentrated in the co-operative sector while the manufacturing segment is mostly running in factory mode with large presence of exporters.

Coir industry is also significant to Kerala for its role in generating export earnings. State Public Sector Undertakings and private entrepreneurs are engaged in export of coir and coir products in Kerala. In Kerala, the Coir PSUs namely Kerala State Coir Corporation and Foam Mattings

**Figure 4.6.2** Export of Coir and Coir products by Kerala State PSUs and Coirfed, in Rs lakh



Source: Directorate of Coir Development, Government of Kerala



(India) Limited along with Coirfed are engaged in export of coir products. From Rs 1731.66 lakh in 2021-22, exports had decreased to Rs 1640.00 lakh in 2022-23 and it is Rs 1,005.32 lakh in 2023-24. The reasons for decrease in export are a) slow economic recovery of foreign markets from post Covid-19 effects, (b) inflation and recession in Western and European markets, (c) increase in ocean freight cost and (d) geopolitical conflicts. Details are provided in **Figure 4.6.2** and **Appendix 4.6.19**.

### Performance under schemes and programmes in coir sector

In Kerala, Directorate of Coir Development (DCD) is the nodal agency to implement the schemes of coir industry. In the Thirteenth Five Year Plan, State Government allocated an outlay of Rs 636.19 crore for the sector through Annual Plans which excludes outlay to PSUs. The expenditure reported is Rs 658.72 crore (103.5 per cent). Outlay for the sector in 2023-24 was Rs 117 crore as against the expenditure of Rs 74.98 crore (64.1 per cent). Details are provided in **Table 4.6.6**.

**Table 4.6.6** State Plan Outlay and Expenditure for Coir sector (excluding PSUs), in Rs lakh

Year	Outlay	Expenditure	Percentage of expenditure
2017-18	12,812	9,872.89	77.06
2018-19	14,108	12,766.13	90.49
2019-20	14,151	8,247.06	58.28
2020-21	11,274	21,913.40	194.37
2021-22	11,274	10,019.50	88.87
13th Five-Year Plan	63,619	62,818.98	98.74
2022-23	11,700	8,581.91	73.35
2023-24	11,700	7,498.06	64.09
2024-25*	10,764	4,342.65	40.34

Source: Budget Programme Book, various years and Plan Space Kerala.

\*Expenditure as on 31.11.2024

One of the most significant achievements in the coir sector in recent years has been the implementation of a comprehensive revival and transformational package called '2nd Reorganisation of Coir Industry'. Through the programme, effort is on to mechanise the coir

sector and protect the wages of labourers, at the same time. The package includes State and NCDC fund. The package involves activities in 5 thrust areas namely i) Technology enabled procurement and decentralised fibre extraction, ii) Distinct strategy for traditional spinning and weaving sector, iii) Modernisation of industrial spinning and weaving sector (focussing on geotextiles), iv) Product diversification of industrial coir – focus on non-woven and v) Institutional support for the coir sector and dynamic markets. The push for reorganisation also including among others, modernisation and mechanisation, is starting to benefit the sector.

- It has been possible to produce 18,509.19 tonnes of coir and coir products in the financial year 2023-24.
- An amount of 13.58 crore rupees have been disbursed to 20,932 traditional coir workers under Income Security Scheme.
- Through the operation of new defibring units, the husk utilisation in the State has risen. New applications for pith and short fibre are discovered. As a result, the value of raw coir pith has risen.
- With the introduction of over 26,000 good quality electronic ratts, and 1,493 Automated Spinning Mills (ASMs) in over 511 societies, yarn production has jumped from 7,880 tonne in 2016 to 16,336 tonne in 2024.
- In 2023-24, under the National Rural Employment Guarantee Scheme, about 58 lakh square meters of coir geo textiles have been produced and supplied within the State.
- All the coir public sector organisations including National Coir Research and Management Institute (NCRMI), Kerala State Coir Corporation (KSCC), The Kerala State Co-operative Coir Marketing Federation Ltd (COIRFED), Kerala State Coir Machinery Manufacturing Company Ltd (KSCMMC) displayed stalls at the *Keraleeyam* 2023.
- Coirfed and Coir Corporation participated in the 42nd India International Trade Fair -2023 (IITF-2023) held at Pragati Maidan, New Delhi from 14th to 27th November 2023.
- In the financial year 2023-24, National Coir Research and Management Institute (NCRMI) has developed 5 more products like Coco Aura, Coco Nurture, Coir Divider, Trichopith-Pro and Digital Coir Runage Meter as part of their research.
- Under the scheme, 'Regulated Mechanisation

of Coir Industry’, benefits to the tune of Rs 12.06 crore was disbursed to NCRMI, FOMIL, KSCC, Coirfed, KSCMMC, 31Coir Vyavasaya Cooperative Societies (CVCS’s) (infra), 4 private units (investment Subsidy), 2 defibring units (DF) for renovation.

- An amount of Rs 10.00 crore was distributed to 23 Mats and Mattings societies, Coirfed, FOMIL, and KSCC as ‘Market Development Assistance’ for sales promotion, market study and renovation of godowns.
- To ensure minimum price to the industry, an amount of Rs 30.05 crore was spent through KSCC, and Coirfed under the Scheme ‘Price Fluctuation Fund’.
- ‘Government Share Participation in coir co-operatives’ was provided to 9 co-operatives.
- Benefits to the tune of Rs 61.50 crore were provided to Coirfed, NCRMI, KSCMMC under the Scheme ‘Reorganisation of Coir Industry – II Phase’. There were 329 societies that benefited and an amount of Rs 2.50 crore was disbursed under the scheme ‘Restructuring of Coir Production Societies and Managerial Subsidies’.
- Production and Marketing Incentive’ (PMI Scheme) worth Rs 8.28 crore was provided to 433 CVCS’s.

### **Directorate of Coir Development and Agencies in Kerala Coir Sector**

The Directorate of Coir Development acts as a facilitator for the promotion and sustainability of the coir industry in Kerala. Kerala State Coir Corporation (KSCC), Foam Mattings (India) Ltd (FOMIL), Kerala State Co-operative Coir Marketing Federation Ltd (Coirfed), National Coir Research and Management Institute (NCRMI), Kerala State Coir Machinery Manufacturing Company (KSCMMC), Kerala State Coir Workers Welfare Fund Board are the important agencies functioning for the promotion of coir industry. The co-operative sector plays a substantial role in activities like collecting husk, defibring, and production of yarn and other products in the coir sector.

### **Coir Co-operative societies**

The total number of coir co-operative societies in Kerala has decreased marginally from 1,103 in 2022-23 to 1099 in 2023-24. Of this, the number of working societies is 511. The number of profitable societies has increased from 199 in 2022-23 to 219 in 2023-24. The number of societies

under liquidation has decreased from 271 to 268. The number of loss-making societies has decreased from 347 in 2022-23 to 292 in 2023-24. Almost 63 per cent of the total number of working societies is primary co-operative societies engaged in the yarn sector. The non-yarn sector includes manufacturing societies (mats and mattings) and small-scale producers’ co-operative societies. The total number of manufacturing societies (mats and mattings) and the number of small-scale producer’s co-operative societies has remained more or less stagnant. The number of profit-making societies has increased. Details are provided in **Appendix 4.6.20**.

The two important sub sectors within the coir industry are yarn sector and product sector. The number of workers engaged in the coir co-operative societies in the yarn sector has decreased from 22,596 in 2022-23 to 17,257 in 2023-24 (23.6 per cent). The amount of wages paid in the sector decreased from Rs 45.25 crore in 2022-23 to Rs 28.22 crore in 2023-24. Compared to 2022-23, the value of husk procured, the value of fibre purchased and the value of yarn produced have decreased in 2023-24. The number of workers in the product sector in the co-operative societies has also decreased significantly in 2023-24 compared to the previous year. Details are provided in **Appendix 4.6.21**.

### **Coirfed**

The Kerala State Co-operative Coir Marketing Federation Ltd (Coirfed) is the apex federation of primary coir co-operative societies spread all over Kerala. Coirfed has 11 factories for producing various coir related products and runs around 50 signature shops throughout the country. The main objective of the federation is procurement of the products of the member societies and marketing of these goods through its sales outlet. The process helps in providing fair wages and subsistence to the poor coir workers of Kerala. Coirfed has two factories for the manufacturing of value-added products. One factory produces rubberised coir products and the other produces rubber backed coir mats. Coirfed has 4 defibring units. Income from sales has decreased from 2020-21 to 2022-23. However, income from sales has increased from Rs 82 crore in 2022-23 to Rs 89.48 crore in 2023-24. As a whole, the annual net loss of the agency has been decreasing since 2019-20. Details are provided in **Appendix 4.6.22**.

### **Kerala State Coir Corporation**

The Kerala State Coir Corporation Ltd was established in 1969 to help the small-scale coir manufacturers by providing them assistance in manufacturing and marketing. Over the years, the Corporation has been procuring the produce of small-scale manufacturers, thereby reducing their dependence on the intermediaries. They provide the procured products to exporters and other sellers. KSCC also runs 11 showrooms (8 in Kerala and 3 outside Kerala). The Kerala State Coir Corporation has 3 production centres in Kerala. One more unit is being established in Adoor. The products produced/traded by the corporation include PVC tufted Coir mats/mattings, Coir pith, Coir yarn, Coir fibre and curled rope. KSCC exports their products to various countries including Australia, Brazil, USA, Poland, France, Kuwait, Kazakhstan and Guatemala.

The corporation implements the Purchase Price Stabilisation Scheme (PPSS) in coir sector. Value of procurement under the PPSS has decreased from 2020-21 to 2022-23. However, it has increased from 104.39 crore in 2022-23 to Rs 108.14 crore in 2023-24. The income from sales of the corporation increased from Rs 134.41 crore in 2022-23 to Rs. 147.66 crore in 2023-24. The PSU has continuously reported net profit. Its net profit has increased from Rs 14.77 lakh in 2017-18 to Rs 79.97 lakh (Provisional) in 2023-24. Details are provided in **Appendix 4.6.23**.

### **Major achievements of the KSCC**

- KSCC won the 'Best Quality Excellence Award for Indian Company' from Indian Business Association in 2023.
- Entered into MOU with National Institute of Designs (NID), Bhopal for product diversification and introducing new designs and patterns.
- A two day National Seminar was conducted in Trivandrum in April 2023 by DCD in association with KSCC for imparting awareness on application of coir geotextiles.
- Company has executed an agreement with Walmart for selling of coir products in their US platform.
- Company got an order from Odisha Mining Corporation for the supplying and laying of coir Geotextiles in Iron ore mines.

### **National Coir Research and Management Institute (NCRMI)**

The NCRMI is setup to strengthen the research and development activities of coir sector with a view to enabling the industry to produce more value-added products and new design products at competitive price.

The activities of the research institute in 2023-24 can be classified under the following heads –

- i. Demonstration projects including application of coir geotextile as mulch, coir geocell and its application in different parts of Kerala, coir road divider, launch of coir mulching material
- ii. Technology development includes utilization of coir pith for the production of bio plastic using significant microbial strains, conversion of household organic waste into compost using coir pith enriched with different beneficial microorganisms, optimization of pith activator for the composting of household organic waste using passive aeration bin, technology dissemination & training of coir pith composting to the workers of defibering units, development of technology for conversion of tender coconut husk into organic manure, collaborative project on Identifying coir pith based nutrient rich growing media suitable for vegetable cultivation in terraces between Kerala Agricultural University and NCRMI, collaborative project for the fortification and enrichment of coir pith compost and its evaluation, development of biofilm on coir based biomass carriers for treating effluent water, development of bacterial consortia to treat ret liquor, treatment of coir fibre with various biological and chemical agents to improve the texture and colour
- iii. Commercial activities including PEATKOL Dots, Ecoir bag, trichopith spawn production, pith activator, new Trichoderma strain for coir pith composting, coconutture – (A new potting filler), identification and characterisation of microorganisms including bacteria and fungi in automated systems and supply of mother culture on behalf of Department of Agriculture, Kerala, Technology transfer of various products developed by NCRMI, Technology release of cocoaura developed by NCRMI, and development of digital coir Runnage meter
- iv. Machine activities includes development of tender coconut crushing machine, design and

fabrication of pyrolysis unit for the conversion of coconut palm biomass residues to biochar for soil

- v. Participation in exhibitions like *Keraleeyam*,
- vi. Publication of coir bulletin
- vii. Sponsored live workshop in association with Ernst & Young and Viswa Santhi Development Foundation
- viii. Conduct of skill development training programs.

#### **Foam Mattings (India) Limited (FOMIL)**

Foam Mattings (India) Limited (FOMIL) is a Government of Kerala undertaking founded in 1979. The company is engaged in the production, manufacturing and marketing of coir, jute and sisal products under the brand name FOMIL. It was established with an authorised capital of Rs 800 lakh and paid-up capital of Rs 666.73 lakhs. FOMIL caters to the needs of domestic and international markets with a wide range of products – mattings, door mats, rugs, carpets, coir tiles, car mats, coir geotextiles and a host of other environment friendly products. Company has recently released novel gift packs of foot mats, carpets and floor decors made from coir and jute fibre. The company has state of the art facilities like Latex Backing Plant, Modern Dye House, and Fully Automatic Power loom where spare capacity is used for undertaking works of other exporters. New products from the company like coir pith manure and coir tiles are having good demand in the market. A new factory for manufacturing coir composite boards has been established and it is proposed to be revamped with the support of Institute of Wood Sciences and Technology. It successfully installed a new wood fired Thermic Fluid Heater as an alternative for the Diesel fired Thermic Heater, thereby reducing the fuel cost by about 60 per cent.

The State PSU has reported loss in the last 5 years and the accumulated loss of the PSU was estimated to be about Rs 17.52 crore at the end of 2023-24. Income from the sale of products is decreasing since 2018-19. However, it has increased from Rs 12.20 crore in 2022-23 to Rs. 13.01 crore in 2023-24. Details are provided in **Appendix 4.6.24**.

#### **Kerala State Coir Machinery Manufacturing Company Ltd (KSCMMC)**

Kerala State Coir Machinery Manufacturing Company Ltd (KSCMMC) was established in 2014, in Alappuzha by the Government of Kerala for

the organisation of Coir Industry, to provide the machinery needed for the coir sector in Kerala. Company has a well-established machine shop, Quality Assurance Department, Research and Development Department, Marketing and after Sales Service Department. Since its inception KSCMMC has manufactured and installed 174 defibering mills so far and an increase in coir fibre production was registered from 7,000 tonnes to 30,000 tonnes. It has manufactured and supplied 29,832 electronic ratts having production capacity of 15 to 18 kg yarn in a single shift. Around 1,500 Automatic Spinning machines having production capacity of 50-80 kg per shift were also manufactured and installed in coir co-operative societies in Kerala. The increased production of coir yarn through automatic spinning machines by KSCMMC has increased the per capita income of coir workers in the State. In addition to coir machines KSCMMC is manufacturing waste management machineries like bottle booth, mini MCF, metal trolley, sorting conveyors/sorting tables, deduster, shredder, glass bottle crusher and bailing machines.

The sales revenue of KSCMMC has fluctuated trend from Rs 17.06 crore in 2019-20 to 4.09 crore in 2023-24. Sales revenue had peaked at Rs 32.87 crore in 2020-21. The company is reporting a net profit of Rs 81.49 lakh in 2022-23, but in 2023-24 the company reports a net loss of Rs.288.42 lakh. Details are provided in **Appendix 4.6.25**.

#### **Central Government Schemes**

The Central Government has implemented various schemes for the Coir sector. The Coir Board a promotional body functioning under the Government of India is implementing various schemes for the promotion of the coir industry across the country. It is the implementing agency for *Coir Vikas Yojana*, and other central sector schemes like Scheme of Fund for Regeneration of Traditional Industries (SFURTI), Prime Minister's Employment Generation Programme (PMEGP), and Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE). There are 17,221 coir units and 2247 coir exporters registered with the Coir Board. Under the Umbrella scheme *Coir Vikas Yojana* (CVY), the Coir Board has been implementing various sub-components for Science and Technology, Skill upgradation and *Mabila Coir Yojana*, Domestic and Export market promotion and Trade and Industry related functional support services in

coir sector. In 2023-24, a total of 4,193 people were trained under various training programmes of the Board. In addition, 40 Entrepreneurship Development Programmes (EDPs), 47 awareness programmes, 12 national seminars, 13 workshops, 6 Management Development Programmes and 10 exposure tours were organised. A total of 64 entrepreneurs were supported to attend 7 international exhibitions abroad. Out of then, 30 entrepreneurs were from Kerala. Under domestic market promotion Coir Board has participated in 94 exhibitions. Market Development Assistance worth Rs 3.86 crore was disbursed to different State governments.

Under the scheme of Fund for Regeneration of Traditional Industries (SFURTI) of the Government of India, Coir Clusters are being established in different coconut producing States/UTs. This is to pave the way for a faster growth of the coir industry in the country. Out of the 40 clusters approved, 4 are in Kerala. The recent inclusion of coir industry under the purview of Prime Minister's Employment Generation Programme (PMEGP) is expected to contribute to employment generation in the sector especially for the youth. Under the scheme PMEGP, 90 units were provided assistance in the year 2023-24.

### Challenges and the way forward

The coir industry has been facing challenges including relatively low wages, shortage of raw materials, lack of advanced models for procurement of raw material and modern techniques of production and organisation. Government has taken comprehensive policies for the upgradation and devolvement of coir sector. This includes, technological upgradation, regulation of market-driven price fluctuations, developing self-sustaining units, innovations, competitiveness, diversification and tapping of new markets. The emphasis has also been given to develop an eco-friendly coir sector in the context of climate change.

## CASHEW INDUSTRY

Cashew occupies second position (21 per cent) after walnut (26 per cent) in global tree nut production in 2023-24. As per the Nuts and Dried Fruits Statistical Yearbook 2024 of the International Nut and Dried Fruit Council (INC), global cashew production has been increasing over decade. In 2023-24, global production of cashew

was 11.7 lakh metric tons (kernel basis) or 53.9 lakh tons of raw cashew nuts. India is a major producer (of raw cashew nut and kernels), consumer and exporter (shelled) of cashew nut. Details of production of cashew by leading producers are given in **Table 4.6.7**.

**Table 4.6.7** Top producers of cashew nuts, 2023-24, in MT

Rank no	Region	Production	Per cent share
1	Western Africa	6,40,140	55
2	India	1,83,600	16
3	Cambodia	1,44,900	12
4	Eastern Africa	77,000	7
5	Vietnam	69,000	6
6	Others	55,406	4

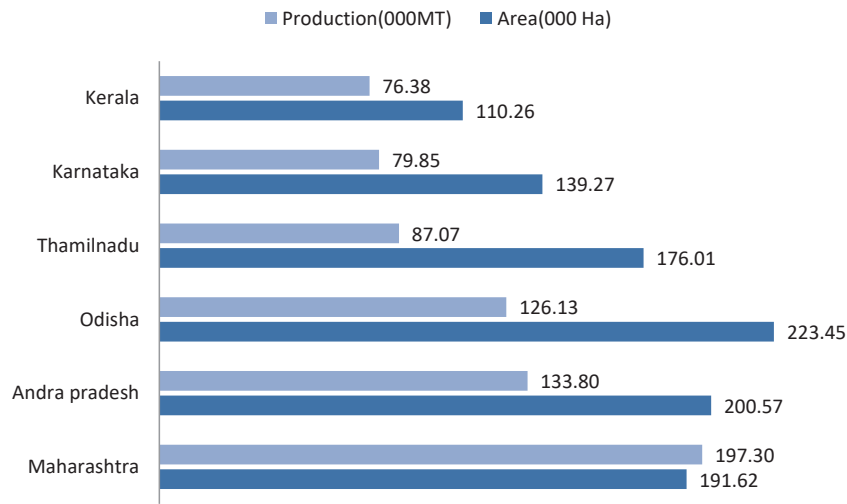
Source: Nuts and Dried Fruits Statistical Yearbook 2024, INC-International Nuts and Dried Fruit Council

Vietnam was the leading exporter of cashew kernels in 2023 (January-December), accounting for 31 per cent (4.56 lakh metric ton) of global exports. Cote d' Ivoire was the second leading exporter of cashew kernels, i.e.; 18 per cent (2.75 lakh metric ton). In the calendar Year 2023 (January to December), India was the fifth largest exporter of cashew kernels with an export of 55,302 metric tons and share of 4 per cent in global exports. India ranks second in the import of cashew kernels; India imported 3.32 lakh metric ton Cashew kernel in the calendar year 2023 (Viet Nam occupied the top position with an import of 4.82 lakh metric ton). India is the top consumer of Cashew Kernel among the world countries, consuming 4.60 lakh metric ton in the calendar year 2023. In consumption, second position went to USA, with consumption of 1.41 lakh metric tons in the calendar year 2023. Source: Nuts and Dried Fruits Statistical Yearbook 2024, (INC-International Nuts and Dried Fruit Council).

### Cashew Sector in India

In India, cashew cultivation is prevalent in Kerala, Karnataka, Goa, West Coast of Maharashtra, Tamil Nadu, Andhra Pradesh, East Coast of Odisha and in some areas of West Bengal, Chhattisgarh, Gujarat, Jharkhand and the North-eastern States. According to the Directorate of Cashew and Cocoa Development (DCCD), in India, cashew was grown in 11.99 lakh hectares with a total production of 7.94 lakh MT in 2023-

**Figure 4.6.3** Area and production of Raw Cashew Nuts in major producing States in India (2023-24)



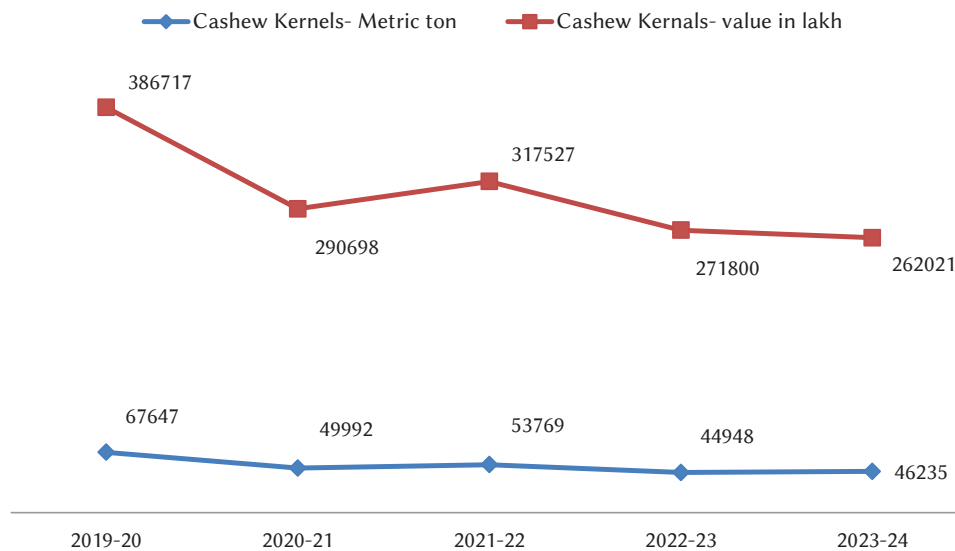
Source: Directorate of Cashew and Cocoa Development (DCCD), Government of India

24. Maharashtra is the largest producer followed by Andhra Pradesh and Odisha. In terms of total production of raw cashew, Kerala ranks 6th (0.76 lakh MT) among the producing States. Odisha has the largest area under cashew nut (2.23 lakh hectares) followed by Andhra Pradesh (2.01 lakh hectares) and Maharashtra (1.92 lakh hectares). Kerala has an area of 1.10 lakh hectares under cashew production and is sixth in terms of area under cashew production. State wise details of cashew nut production and area are provided in **Appendix 4.6.26**. A brief picture is provided in **Figure 4.6.3**.

Cashew Kernels are graded into white or scorched wholes, pieces, splits, butts, depending on the shape, size and colour of the kernel. The Export (Quality Control and Inspection) Act 1963 prescribes 33 different grades of cashew kernels. W-180, W-210, W-240, W-320 and W-450 are some of the popular grades of cashew produced in India.

According to the Cashew Export Promotion Council of India (CEPCI), the export of cashew kernels from India, in terms of quantity has been increasing since 2019-20. In 2023-24, the total

**Figure 4.6.4** Export of Cashew Kernels from India (since 2019-20)



Source: Cashew Export Promotion Council of India (CEPCI)

quantity of export of cashew kernels from India was 46,235 MT, registering an increase of 2.9 per cent compared to 2022-23. The export of cashew kernels from India, in terms of value has been on decrease since 2021-22. In 2023-24, the total value of export of cashew kernels from India was Rs 2620.21 crore, indicating a decline of 3.6 per cent compared to 2022-23. Details are provided in **Figure 4.6.4**.

Export of roasted & salted cashew kernels from India has been fluctuating since 2019-20. Compared to 2022-23, Export of roasted & salted cashew kernels from India, in 2023-24, increased to 28.2 per cent in terms of quantity and 25.5 per cent in terms of value. In 2023-24, a total of 2,548 metric ton of roasted & salted cashew kernels had been exported from India worth Rs.188.98 crore. A quick look is provided in **Figure 4.6.5**.

The domestic production of cashew nut in India is not sufficient to cater to the cashew processing industry’s current requirement or installed processing capacity of about 20 lakh MT. Hence, India imports raw cashew nut from other countries. India had imported a total of 12,51,322 MT of Raw Cashew Nut (RCN) in 2023-24 valued at Rs 11,632.62 crore. Compared to 2022-23, import of RCN by India has declined both in terms of quantity (5.9 per cent) and value (18.35 per cent) (Cashew Export Promotion Council of India - CEPCI). Large variations over the years in the

export and import of raw cashew nut are primarily due to the activities of traders in the processing industry. There are large fluctuations in the international prices of raw cashew nut and cashew kernel. Moreover, market conditions in other processing countries affect international trade.

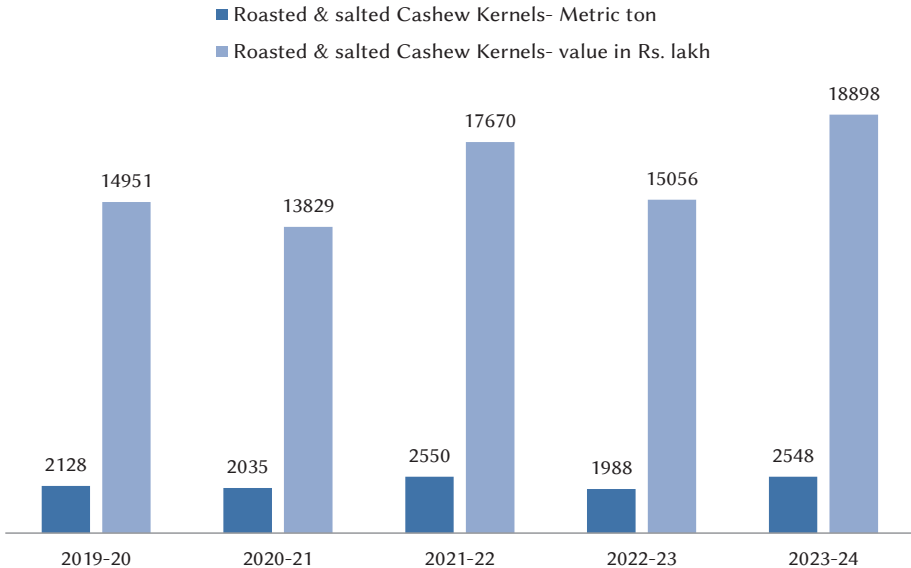
India is importing cashew kernels. The quantity of cashew kernel’s import was 3,775 MT valued at Rs 195.53 crore in 2023-24 (Cashew Export Promotion Council of India - CEPCI). There is an increase in terms of quantity and value compared to 2022-23. The import of low processed, low quality, finished/semi-finished kernels to India from competing countries by miss-declaration and misusing certain policy norms is a concern to the Indian cashew industry. Details are provided in **Figure 4.6.6**.

Export of cashew nut shell liquid from the country in 2023-24 was 13,222.27 MT (valued at Rs.77.21 crore) (Cashew Export Promotion Council of India - CEPCI). In comparison to the export of 2022-23, there was a decrease in terms of quantity and value in 2023-24.

**Cashew Sector in Kerala**

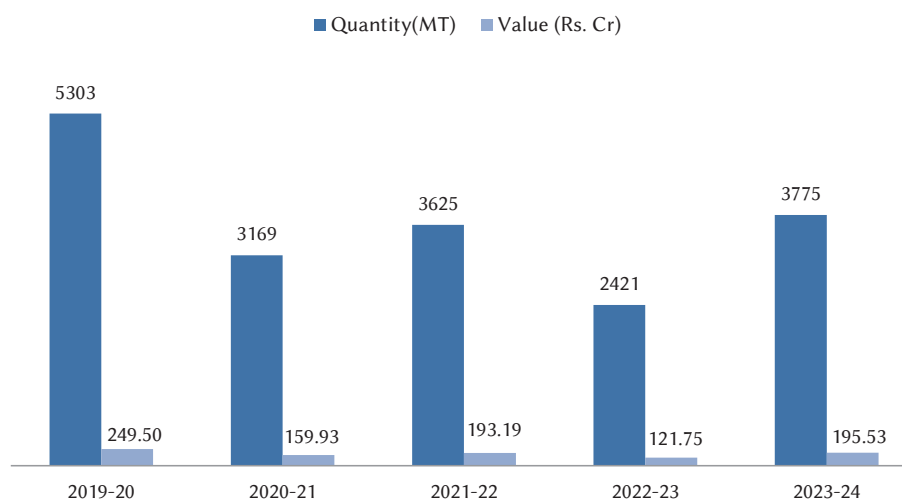
The cashew industry is a major traditional agro-based industry in Kerala. The cashew processing industry in Kerala is clustered in Kollam District, which is traditionally known as the global cashew trading capital. Cashew processing in Kerala has

**Figure 4.6.5** Export of Roasted & Salted cashew kernels from India (since 2019-20)



Source: Cashew Export Promotion Council of India (CEPCI)

**Figure 4.6.6** Import of Cashew Kernel into India (since 2019-20)



Source: Cashew Export Promotion Council of India (CEPCI)

been a labour-intensive industry and has a long history of employing a large number of women workers. It is estimated that roughly there are about 830 formal and informal cashews processing units in Kerala, employing about 3 lakh workers of which 90 per cent are women. However, a large number of cashew processing units (about 730) are not functioning due to losses. The number of working cashew processing units is about 100 where approximately 1 lakh workers are employed. About 65 per cent of the cashew exporting and processing units officially registered with the Cashew Export Promotion Council of India (CEPCI) are from Kerala. Cashew processing is concentrated mainly in the private sector. The co-operative sector has limited presence in cashew processing. There are two public institutions engaged in the cashew processing industry in Kerala, namely Kerala State Cashew Workers Apex Industrial Co-operative Society Ltd (CAPEX) and Kerala State Cashew Development Corporation (KSCDC).

Cashew kernels are obtained through processing (roasting or steaming, shelling and peeling) of raw cashew nuts. In 2020-21, the share of Kerala in export of cashew kernel from India was 49.9 per cent in terms of quantity and 50.3 per cent in terms of value. According to Cochin Port Trust, the quantity of cashew kernels exported from Cochin Port in 2023-24 was 22,753 MT. This is 49.2 per cent of total cashew kernel export from India (46,235 MT).

In Kerala the production of raw cashew nut increased from 80,000 MT in 2014-15 to 88,180 MT in 2017-18. Compared to 2022-23, RCN production has increased by 2.2 per cent to 76,380 MT in 2023-24. The area under cultivation of cashew has increased from 84,500 hectares in 2014-15 to 1,10,260 hectares in 2023-24. Mismatch between area and production is attributed to replantation and gestation period for production. Details are provided in **Table 4.6.8**.

**Table 4.6.8** Production of raw cashew nut in Kerala – 2014-15 to 2023-24, in hectares and MT

Year	Area (in 000 ha)	Annual growth, in %	Quantity (in MT)	Annual growth, in %
2014-15	84.50	-0.4	80,000	-0.2
2015-16	87.00	2.9	72,000	-10.0
2016-17	90.87	4.5	83,980	16.6
2017-18	92.81	2.1	88,180	5.0
2018-19	96.65	4.1	82,889	-6.0
2019-20	98.82	2.2	69,624	-16.0
2020-21	103.21	4.4	73,105	5.0
2021-22	106.52	3.2	71,760	-1.8
2022-23	108.59	1.9	74,630	4.0
2023-24	110.26	1.5	76,380	2.2

Source : Directorate of Cashew and Cocoa Development (DCCD), Government of India

The challenges to expansion of cashew cultivation in Kerala include the pressure on land, and



**Table 4.6.9** Plan outlay and expenditure of State Government agencies in cashew sector, 13th Five-Year Plan, 2023-24 and 2024-25(in Rs crore)

SI no	Agency	13th Five Year Plan			2023-24			2024-25 (as on 30-09-2024)		
		Outlay	Exp	%	Outlay	Exp	%	Outlay	Exp	%
1	Kerala Cashew Board Ltd	115.20	100.10	86.89	43.55	76.55	175.77	40.81	18.44	45.18
2	Kerala State Cashew Development Corporation	98.00	239.55	244.4	3.25	1.43	44.00	3.05	0.00	00.00
3	Kerala State Agency for the expansion of Cashew Cultivation	30.80	13.39	43.47	7.20	2.16	30.00	6.50	2.60	40.00
4	CAPEX	25.00	61.02	244.1	4.00	1.83	45.75	3.00	0.57	19.04
<b>Total</b>		<b>269.00</b>	<b>414.06</b>	<b>153.93</b>	<b>58.00</b>	<b>81.97</b>	<b>141.32</b>	<b>53.36</b>	<b>21.61</b>	<b>40.49</b>

Source: Plan Space, State Planning Board

the erstwhile shift to cash crops like rubber (particularly due to the absence of plantation status to cashew). Many of the cash crops have a long gestation period and to be economic, the activity has to be continued for a relatively longer period of time. Hence, an immediate large shift to cashew from other cash crops is not possible. In the last decade, Kerala has initiated steps to expand area under cultivation of Cashew, production and productivity. Though positive changes are visible, there is further scope for improvement. It is also noted that Kerala has vast areas under cashew cultivation which have not been replanted. A major reason limiting improvement in productivity in cashew cultivation is the fact that nearly 70 per cent of the cashew trees in the State are aged, local varieties, which start yielding late in the season. Climate change effects such as the coincidence of excessive rainfall and high relative humidity have also adversely affected cashew cultivation.

### Agencies in Cashew Sector

Kerala State Cashew Development Corporation (KSCDC) and Kerala State Cashew Workers Apex Co-operative Society (CAPEX) are the two State Government agencies involved in the processing of cashew. Kerala State Agency for the Expansion of Cashew Cultivation (KSACC) and Kerala Cashew Board (KCB) are the other two State Government agencies. Cashew Export Promotion Council of India (CEPCI) and the Directorate of Cashew and Cocoa Development (DCCD) are the other agencies involved in cashew promotion. The details regarding the outlay from State Annual Plan and expenditure incurred in 13th five-year Plan and 2023-24 are provided in **Table 4.6.9**.

### Kerala State Cashew Development Corporation (KSCDC)

Kerala State Cashew Development Corporation Ltd. (KSCDC) was formed in 1969 as a company fully owned by the Government of Kerala. KSCDC currently operates 30 factories, of which 20 are private factories run by KSCDC based on agreement. Modernisation of facilities and purchase of cutting machines has increased the productivity from 85 MT per day to 115 MT per day. KSCDC has achieved this productivity without going for any labour reduction.

Number of working days and turnover has fallen since 2019-20. In 2023-24, KSCDC provided employment to 10,632 people. Income from sales (turnover) of KSCDC in 2023-24 was Rs 129.80 crore. The agency has been reporting loss in recent years. Details are given in **Table 4.6.10** and **Appendix 4.6.27**.

**Table 4.6.10** Sales turnover of KSCDC, in Rs crore

Period	Turnover	Cost of raw material	Cost of human power	Profit / Loss
2018-19	132.33	134.49	70.45	-100.27
2019-20	173.13	120.13	75.38	-44.56
2020-21	88.31	80.88	62.12	-89.15
2021-22	112.24	76.39	61.64	-77.84
2022-23	93.49	83.61	52.54	-94.53
2023-24*	129.80	103.16	57.79	-84.12

Source: Kerala State Cashew Development Corporation

\* Provisional

KSCDC is marketing its value-added products and trying to sell more products directly to the end customers which are giving it better margins. The agency has launched new products such as gift hampers (250-gram tins, platinum and premium boxes), assorted premium cashews and jumbo cashews. These products have received good response from customers. KSCDC has also started outlets to increase the sales. It supplies grafted saplings in grow bags, at a discounted price. Details regarding performance of KSCDC can be found in **Appendix 4.6.28**.

In 2020-21 & 2021-22, KSCDC provided 89 and 110 working days respectively to the workers. However, in 2022-23, number of working days was only 71 due to the acute shortage of raw cashew nut across the globe. In 2023-24, in spite of various constraints, KSCDC managed to give 123 workings days for the workers. KSCDC has also developed new value-added products like cashew vanilla milk shake, cashew vita cardamom/chocolate/pista/vanila and flavoured cashew including chilly garlic/salt and pepper/red chilli, which have good acceptance from customers. In 2023-24 KSCDC installed 392 cutting machines, which increased productivity and operational efficiency. KSCDC is also trying to increase the sale of CDC branded cashew packet and value-added products like Cashew soup, Cashew powder, Cashew vita and cashew apple soda. The products with “Brand value” command a premium price and also sell better.

#### **Kerala State Cashew Workers Apex Industrial Co-operative Society Ltd. (CAPEX)**

CAPEX was set up at Kollam in 1984 as an apex body to take care of the operations of factories of 10 primary co-operative societies under Government of Kerala. The State Government

created the framework for Capex by purchasing the dormant cashew factories. Its major function includes procurement, management of processing through co-operative societies and marketing. It procures raw nuts, distributes the same to the primary societies and gets them processed, and markets the kernels. These are done with the aim of bringing down the processing costs and providing continuous employment and fair wages to the workers.

In 2023-24, CAPEX provided employment to 3,797 workers for 155 working days. Total sales turnover in 2023-24 was Rs.54.37 crore (Provisional). Details regarding sales and turnover of CAPEX are given in **Table 4.6.11**.

In 2023-24, Plan fund of Rs 76.86 lakh was utilised for installing peeling and grading tables, cutting machines and Roasting drums. CAPEX also undertook modernisation for convenience of workers and boosting retail sales of Capex Cashew. This included civil construction works at factories, and brand development activates. Details regarding the functioning of CAPEX are given in **Appendices 4.6.29 and 4.6.30**.

#### **Kerala State Agency for the Expansion of Cashew Cultivation (KSACC)**

KSACC was constituted by the Government of Kerala in 2007 to promote cashew cultivation and to ensure adoption of innovative technologies. KSACC started the project ‘Cultivation of Organic Cashew and Establishment of Raw Nut Bank’ from 2007-08. In 2023-24, the agency distributed 3,05,803 grafts among farmers and institutions, which is estimated to cover around 1257.16 hectore. In 2024-25 (till Sept) a total of 3,00,000 grafts have been distributed and the production of grafts saplings by the Government nurseries

**Table 4.6.11** Sales turnover of CAPEX, in Rs crore

Year	Working Days	No. of Workers	Total Sales Turnover	Raw material cost	Cost of human power	Profit / Loss
2019-20	206	4209	85.19	50.87	33.52	-16.95
2020-21	142	4130	46.89	44.74	24.99	-17.56
2021-22	179	4100	63.15	42.40	29.98	-22.24
2022-23	93	3970	53.87	43.65	21.01	-11.04
2023-24 (Provisional)	155	3797	54.37	44.14	*	*

Source :CAPEX

Note: \* Annual audit in progress

is progressing. There are two model Cashew Gardens in Kerala, one is located in the premises of Kerala State Cashew Development Corporation and the other is at the Open Jail at Nettukaltheri in Thiruvananthapuram. Through its schemes, KSACC supports farmers for undertaking normal density, high density and ultra-high density cashew farming. Support includes supply of grafts and assistance to ensure growth of saplings, and training among others. Details of cashew farming supported by KSACC are provided in **Appendix 4.6.31**. Climate change, dry weather, low rainfall, and damage of crops by wild animals are some of the issues faced by the cashew farmers supported by KSACC.

#### **Kerala Cashew Board Limited (KCB)**

KCB was established in 2017 by the State Government as a special purpose vehicle with the main objective of procuring and supplying Raw Cashew Nuts (RCN) at reasonable price to the cashew processing units in Kerala, thereby ensuring regular employment and wages to the workers. KCB supplies RCN to Kerala State Cashew Development Corporation Ltd (KSCDC) and CAPEX who in turn ensures that the 40 factories under them are able to operate continuously throughout the year and provide employment to the workers. KCB also ensures that both KSCDC and CAPEX benefit from the most competitive purchase prices of RCN. In 2023-24, KCB imported 13,976.59 MT of RCN from various countries. In 2024-25 (up to August 2024), KCB has imported 10,618.18 MT of RCN from various countries.

The major challenge faced by the Board is lack of adequate finance for procurement of RCN during peak season. The repayment from KSCDC and CAPEX are only about 50 to 60 per cent of the cost incurred and the rest is financed by the Government of Kerala by way of working capital loans to bridge the gap. The cash credit facility from Kerala Bank is also utilised for the purchase of RCN.

#### **Cashew Export Promotion Council of India (CEPCI)**

The Cashew Export Promotion Council of India (CEPCI) was established by the Government of India in the year 1955, with the object of promoting exports of cashew kernels and cashew nut shell liquid from India. The Council serves as an intermediary between importers of cashew

kernels and domestic exporters who are members of the council.

#### **Directorate of Cashew nut and Cocoa Development (DCCD)**

Directorate of Cashew nut and Cocoa Development (DCCD) functioning at Cochin is the subordinate office of the Department of Agriculture, Co-operation and Farmers Welfare of the Government of India. It is the nodal agency for accelerating cashew and cocoa development programmes in the country. Its activities are spread across the country.

In 2023-24, as a result of the combined efforts of Central and State Governments, an additional area of 6,830 hectares has been brought under the cultivation of cashew with high yielding varieties. Replantation and rejuvenation were undertaken in an area of 850 hectares of senile and unproductive plantations. Two Cashew nurseries were upgraded/modernised by providing financial assistance to the States of Kerala and Maharashtra. DCCD also conducted publicity and crop promotion activities including 28 District level seminars and 6 field days. As part of human resource development, 68 field level training programme were conducted and 3,400 farmers were trained on farming practices. About 450 unemployed women were trained in 18 batches, on preparation of value-added products from cashew apple.

#### **Challenges and the way forward**

Raw cashew produced in the State is not sufficient to meet the requirements of the cashew nut factories. The State needs to improve the aggregation mechanism to ensure enhanced utilisation of domestic produce. It may also need to revisit the price fixed for procurement of raw nuts by the Price Fixation Committee to ensure that the interest of cultivators and processors are balanced. The raw cashew nuts grown in India and made available to the cashew factories constitute hardly one-third of the total requirements of the cashew factories. The adoption of high yielding varieties, scientific farming techniques, greater support in terms of extension services, and commercial scale of production can bring remarkable improvement in the production of raw cashew nut in the State. Increased domestic production of cashew at reasonable price and quality can reduce Kerala's dependence on imported cashew.

As a result of good demand for cashew nuts in the global market, the cashew processors are compelled to import around 50 per cent of raw nuts. The cashew nut market is known for its volatility, with prices subject to fluctuations influenced by factors such as weather conditions, global demand, and geopolitical events. High cost of cashew imports is adversely affecting the profitability of the industry.

Focus areas for the development of the cashew sector in future include development and adoption of modern technologies (in processing and value addition), reduction of processing cost (through mechanisation), and development of new value-added products from cashew including the use of cashew apple. Greater efforts to develop new markets and marketing strategies which can retain the identity of 'Kerala Cashew' should also form part of strategies for the future.



CHAPTER

05

SERVICE SECTOR



## 5.1 INFORMATION TECHNOLOGY

The Information Technology (IT) sector plays a pivotal role Kerala's development. The Government of Kerala has recognised the potential and critical significance of the sector, and has made diligent endeavours to make the sector robust and globally competitive. Kerala has been implementing information and communication technology projects, e-Governance initiatives, and e-literacy programmes, aimed at establishing fundamental IT infrastructure facilities.

Kerala has emerged as a prominent IT destination in India. This accomplishment can be attributed to a dedicated and talented workforce, as well as the innovative initiatives implemented by the Government. The State's exceptional quality of life, well-established Governmental policies, and cost-effective operational expenses have successfully transformed Kerala into a highly sought-after IT hub for potential investors. Furthermore, Kerala boasts an impressive level of mobile and telephone penetration, along with substantial broadband and mobile internet access. The State's commendable achievements in literacy and school education have undoubtedly played a crucial role in fostering computer literacy. The IT presence of Kerala in the national IT sector is noteworthy, considering the relatively smaller size of the State's economy compared to the national economy.

Kerala is trying to become the State with the highest coverage of high-speed fibre connectivity through the KFON project. The active start-up eco system in the State has won international recognition for its efforts. The State's unique hub-and-spoke model in the IT sector has helped to decentralise investment regionally in the IT industry. As start-ups play key roles in the development of the country's electronics and IT sector, the State's focus on supporting fast growing start-ups through multiple policy interventions is key to creating a vibrant and inclusive start-up ecosystem.

The major agencies involved in the implementation and promotion of IT-related activities in Kerala are the Kerala State Information Technology Mission (KSITM), Kerala University of Digital Sciences Innovation and Technology, Technopark, Info park, Cyberpark, Kerala State Information Technology Infrastructure Ltd. (KSITIL), International Centre for Free and Open Source Software (ICFOSS), Kerala Start-up Mission (KSUM) and Centre for Development of Imaging Technology (C-DIT).

### **Performance of Agencies in the IT Sector**

The Government of Kerala envisages expansion of IT industry in the State in a manner that benefits all the Districts. A hub and spoke model has been



### Box.5.1.1 Major Highlights of Information Technology sector

- The phase I of KFON project is envisaged to provide internet connection to 30,000 Government institutions and offer free internet to 20 lakh economically backward families and internet services at a lower rate for others. At present 29,416 offices are connected through KFON, and 5989 BPL families are provided with free internet connectivity.
- 2843 Akshaya centres are functioning across the State giving employment to 9713 persons
- Government of Kerala's e- tender portal has been recognised as one of the best performing State portals by Department of Expenditure, Ministry of Finance and Ministry of Electronics and Information Technology.
- Kerala received the SKotch Award for e-governance in 2023-24.
- E-SEVANAM has expanded from over 500 services to more than 900 services across 81 departments and m-SEVANAM has grown from 500 services to over 700.
- Techno Park has become the largest employment base campus in Kerala and with the commissioning of Technopark Phase III, it became one of the largest IT parks in India with 768.63 acres of land, and 12.72 million square feet of built-up area.
- The number of tech start-ups eco system in 2023-24 is 4,681 as compared to 4,318 in 2022-23.

planned. Thiruvananthapuram (Technopark), Kochi (Info Park), and Kozhikode (Cyberpark) will act as the hub and the remaining Districts will be the spokes.

Government of Kerala provided an amount of Rs 559 crore in the Budget (2023-24), for the development of core IT infrastructure, ITeS, e-governance activities and incentivising investment in the sector and the expenditure incurred was Rs 172.59 crore (30.9 per cent). In 2024-25, the outlay earmarked for the sector was Rs 507.14 crore. The details of Plan outlay and expenditure for the last 3 years (2022-2025) are given in **Table 5.1.1**.

#### **Kerala State Information Technology Mission (KSITM)**

The Kerala State IT Mission is an autonomous nodal agency responsible for implementing IT initiatives on behalf of the Department of Information Technology, Government of Kerala. KSITM aims to promote digital innovations. Its primary role is to provide managerial and technical support to various projects undertaken by the Department. The KSITM is involved in a wide range of activities, including the development of ICT policies, the establishment of guidelines and standards for e-governance, and the facilitation of ICT services for Government entities. Its main objective is to deliver high-quality digital services to

citizens, with a focus on a "Citizen First" approach.

#### **Key Accomplishments of KSITM**

Today, e-Governance is an important tool for good governance by achieving transparency, reliability, and accountability in rendering services. Kerala has been a forerunner in e-Governance and mobile governance by promoting and developing core infrastructure and e-literacy programmes.

**Public Wi-Fi:** Public Wi-Fi project has set up with 2023 Wi-Fi hotspots across the State to provide free internet to the citizens of the State. The District administration has identified hotspot locations which include bus stands, tourist places, parks, public places, janasevanakendras and Government offices.

**E-Office:** E-Office is now operational in more than 90 per cent of the Government offices including all departments in the Secretariat, Directorates/Commissionerate/ all Collectorate/Sub-Collectorates/RDOs/all Taluks Offices and Villages covering a total of 861 sub-offices.

**Core infrastructure** for e-Governance in the State consists of Kerala State Wide Area Network (KSWAN), Secretariat Wide Area Network (SECWAN), State Data Centre, State Service Delivery Gate way (SSDG) and KFON

**KSWAN** is the backbone of the State Information Infrastructure (SII) connecting all Districts

**Table 5.1.1** Plan outlay and expenditure, in Rs crore

Sl No	Name of Department/ Scheme	Annual Plan 2022-23		Annual Plan 2023-24		Annual Plan 2024-25	
		Outlay	Expenditure	Outlay	Expenditure	Outlay	Expenditure (up to September 2024)
1	Kerala State IT Mission, Akshaya, IT Cell	131.62	86.37	131.62	54.24	121.43	23.78
2	Technopark	26.60	13.50	26.60	12.07	27.47	0
3	Info park	35.75	18.56	35.75	5.27	26.70	2.20
4	Cyber Park	12.83	7.42	12.83	2.50	12.80	0.16
5	Indian Institute of Information Technology and Management-Kerala (IIITM-K)	20.60	15.36	20.60	5.76	18.95	0.30
6	Kerala Start up Mission	90.52	36.75	90.52	34.00	90.52	7.13
7	Kerala State IT Infrastructure Ltd	201.09	97.29	201.09	36.55	119.91	4.01
8	C-DIT	6.00	3.48	6.00	0.81	6.00	0.00
9	International Centre for Free and Open Source Software	7.99	6.51	7.99	6.35	7.35	1.68
10	Kerala University of Digital Sciences Innovation and Technology	26.00	37.68	26.00	15.02	23.51	2.30
	<b>Total</b>	<b>559.00</b>	<b>322.93</b>	<b>559.00</b>	<b>172.59</b>	<b>507.14</b>	<b>41.56</b>

Source: Annual Plan of corresponding years; Plan Space

and 152 Block Panchayats and 63 Mini Civil Stations/revenue towers across the State. Around 4,000 offices of Government departments are connected to KSWAN through wireless and a larger number through leased lines and LAN. KSWAN aims to establish a state-of-the-art Optical Fibre Communication based network architecture in the Government Secretariat with a vision to improve the quality and availability of ITeS at its administrative headquarters. It also provides seamless integration with both State Data Centres (SDC1 and SDC2) providing various Government-to-Government services (G2G) and Government-to-Citizen (G2C) through a secure intranet.

**The State Data Center** has about 2500 virtual servers, about 560 applications and about 500 servers set up by various departments for various Government purposes. State Data Centres (SDCs) are at the heart of e-Governance framework of the State, hosting various applications and websites of the Government entities and provisioning associated services. Currently the storage capacity of the State data center is 2500 TB. Expansion of

server farm area and other renovation works are underway in 4000 sq. ft. area at the State Data Center-2 located at Technopark. As part of cloud infrastructure upgrades, 8 servers and 300 TB of storage capacity were added in SDC2; and 1020 virtual machines were provided to departments. They have established a 10 Gbps KFON connection between SDC1 & SDC2 and expanded additional 4000 Sq.ft area in SDC2.

**e-District** is a State Mission Mode project under the National e-Governance plan, aimed at delivering high volume services at the District level and enables online access to various services through Akshaya centres, streamlining the application and approval process for citizens. Till August 2024, a total of 9.64 crore applications were received, of which 8.75 crore certificates were approved. Among others, e-District currently offers 23 revenue certificate services, and 7 Forest and Wild life service's online across the State, allowing citizens to apply for certificates through Akshaya Centres or the public portal and receive digitally signed certificates.

**e-Government Procurement (e-GP)** has been rolled out in the State mandating all Government department/boards/universities/organisations to adopt e-tendering for all tenders with the value above Rs 5 lakh. Government of Kerala's e-tender portal has been recognised as one of the best performing State portal by Department of Expenditure, Ministry of Finance and Ministry of Electronics and Information Technology. It has also received the SKotch Award for e-governance for the year 2023-24

**Akshaya** is an innovative project launched in 2002 to bridge the digital divide. It works on public private participation mode. In the initial stages, the objective of the project was to make at least one person in a family e-literate. Gradually focus of Akshaya shifted to citizen service centric mode. Akshaya acts as the enrolment agency for Aadhaar enrolment. As on August 31, 2024, a total of 2,843 Akshaya centres are functioning across the State giving employment to 9,713 persons. About 91 per cent of the Social Security Pension Mustering is completed through Akshaya Kendras. The details of Akshaya centres in Kerala are furnished in Appendix 5.1.1

**Aadhaar** - UIDAI has approved KSITM as the Authentication User Agency and e-KYC User Agency for offering the Authentication and e-KYC services offered by UIDAI.

**Video Conferencing (VC)** technology is being utilised by all Government Departments, Boards and other Government organisations for conducting meetings with their sub-offices across the State. The management of VC sessions, upkeep of VC equipment and studios are done with the support of Keltron and SIDCO. Using VC infrastructure, KSITM was able to conduct around 9,000 VCs every year. KSITM hosts and manages an average of 30 video conferences per day.

**Digi Locker** is a secure digital storage service that allows citizens to store and access important documents online. Currently, it is integrated with various government services, enhancing accessibility and convenience for users. The following services are linked to Digi Locker.

- SSLC, VHSE, HSE, Ration Card, Driving Licence, Vehicle Registration, e-District Revenue certificates (25 types), PSC Certificates as Issued Documents
- Twenty Universities published Certificates for

selected years in National Academic Depository (NAD) DigiLocker.

**e-SEVANAM & m-SEVANAM:** Kerala e-Service portal, e-SEVANAM, launched as a good governance initiative, has used technology to aggregate almost all online services (G2C and G2B) of Government of Kerala, in a single platform. In 2021, e-SEVANAM & m-SEVANAM were launched with 500 plus services and 50 plus department. In two years, it has expanded to include around 900 services of 81 departments in a single platform. It won the Technology Sabha e-Governance Award 2023 (for excellence in service delivery through e-sevanam) and Governance Now National Award (July 2024 - in the category of Digital Accessibility and integration).

### **Kerala University of Digital Sciences, Innovation and Technology**

Government of Kerala upgraded IIITM-K as "Kerala University of Digital Sciences, Innovation and Technology." The university was set up by Government of Kerala by the Kerala University of Digital Sciences, Innovation and Technology Act 2021 and started functioning from the Techno City campus

The university is envisaged to become a unique centre of excellence of global repute by conducting education, research and extension activities in areas of digital technologies, science and humanities. The university aims to create capacity building in masters and doctorate programmes in the areas of Artificial Intelligence and Natural Language Processing, Internet of things, Electronic systems and Automation, Imaging Technologies, Data Analytics and Big Data, Cyber Security, Block chain, Ecological Informatics and Geospatial Analytics.

Graduates from Digital University hold commendable positions in reputed IT companies such as Data Beat, H&R block, TROIS, EY, Clear eye, Techolution, Chubb, Sun Tech, Group M, Innovation Incubator, Tata Elxi. In 2023 about 81 per cent of the students were successfully placed and 12 per cent opted for higher studies.

The new campus of the Institute at Technocity is in completion phase and would have a total built up area of 48,161 square meters. The Women Incubation, Start-Ups and Entrepreneurship (WISE) Scheme implemented by Digital

University intends to convert and translate innovative and creative ideas of young minds in various science and engineering disciplines to achieve excellence in research, products, processes and services to maximise its impact on industry and society. Through the programme, opportunities are given to new women entrepreneurs to launch their own businesses. About 10 startups are supported under the programme.

The University is implementing the Digital Science Park announced in the 2022 budget. It aims to capitalise on the advancements in the Digital Sciences and Technology Sector, thereby creating numerous new industrial prospects. The park will initially support industry and business units, as well as technology start-ups in areas like Artificial intelligence (AI), robotics, electronics, smart hardware and sustainable materials.

India Innovation Centre for Graphene (IICG) is a collaborative project by Ministry of Electronics & Information Technology (MeitY) and Government of Kerala; with Digital University and Centre for Material for Electronics Technology (C-MET) as implementing agencies and Tata Steel as the industrial partner. The centre will focus on R&D, innovation and capacity building activities to act as a knowledge centre in the area of Graphene. The work is progressing. As a next step, Digital University and India Graphene Engineering and Innovation Centre (IGEIC, a Section 8 company) are set to implement the 'Graphene-Aurora Program' a collaborative project of the Ministry of Electronics & Information Technology (MeitY) and Government of Kerala; along with contribution from industry. The 'Graphene-Aurora Program' seeks to nurture the deep / emerging Graphene technology and innovation ecosystem that can guide, develop, implement and support SMEs and Startups to commercialise developed Graphene technologies for scale adoption by consumers.

### **Technopark**

Technopark was set up as an autonomous organisation fully owned by Government of Kerala to create global standard infrastructure and to provide total support required for development of high technology industries. It was formally dedicated to the Nation on November 18, 1995. Since then, Technopark has been growing steadily both in size and employee strength. With the commissioning of Phase III, Techno park has

become one of the largest IT Park (Including Phase I, II, III) in India with 768.63 acres of land and 12.72 million square feet of built up area. With the launch of Technocity project in Kazhakkuttam, the largest integrated IT Township in 390 acres of land, the Kazhakkuttam-Kovalam (NH 66) has become the first IT Corridor in Kerala.

Technopark has been instrumental in providing essential support facilities such as water distribution network, power infrastructure, sewage and solid waste treatment plants, wide roads for smooth traffic flow, sprawling landscapes, club facilities, auditoriums, and other recreational amenities. These features have attracted numerous IT companies from around the world to establish their business on this campus

In the financial year 2023-24, the number of companies in the Technopark has risen to 490, indicating a growth rate of 2.3 per cent when compared to the previous year's figure of 479. Technopark plays a crucial role on employment generation in IT sector. In 2023-24, Technopark generated an employment of 75,000 IT/ITeS professionals compared to the last year figure of 71,000 marking a growth of 5.6 per cent. Technopark's contribution to the State economy is shown in **Table 5.1.2**. Details of growth and physical achievements of Technopark are given in **Appendix 5.1.2** and **5.1.3** respectively.

Technopark has 5 campuses which is spread over 768.63 acres under various phases of development. The details of extent of land in its 5 campuses are shown in **Table 5.1.3**.

The built-up space in Technopark has increased from 97 lakh square feet in 2018-19 to 127 lakh square feet in 2023-24. The Embassy Taurus project is under construction in Phase III. The 15 lakh sq ft IT building Niagra at Embassy Taurus Tech Zone was completed and inaugurated in January 2024. Taurus Downtown will develop a city centre for techno park, comprising 55.58 lakh sq. ft of IT SEZ and non- SEZ space. The project includes 36.45 lakh Sq. ft of IT space and 19.13 lakh sq. ft of non-IT space across three towers, offering world-class office spaces. On completion, Taurus downtown is expected to generate 30,000 direct employment and 90,000 indirect employment. The project also features 175 key business hotel rooms and 300 key serviced apartments.

**Table 5.1.2** Technopark's contribution to Kerala's Economy

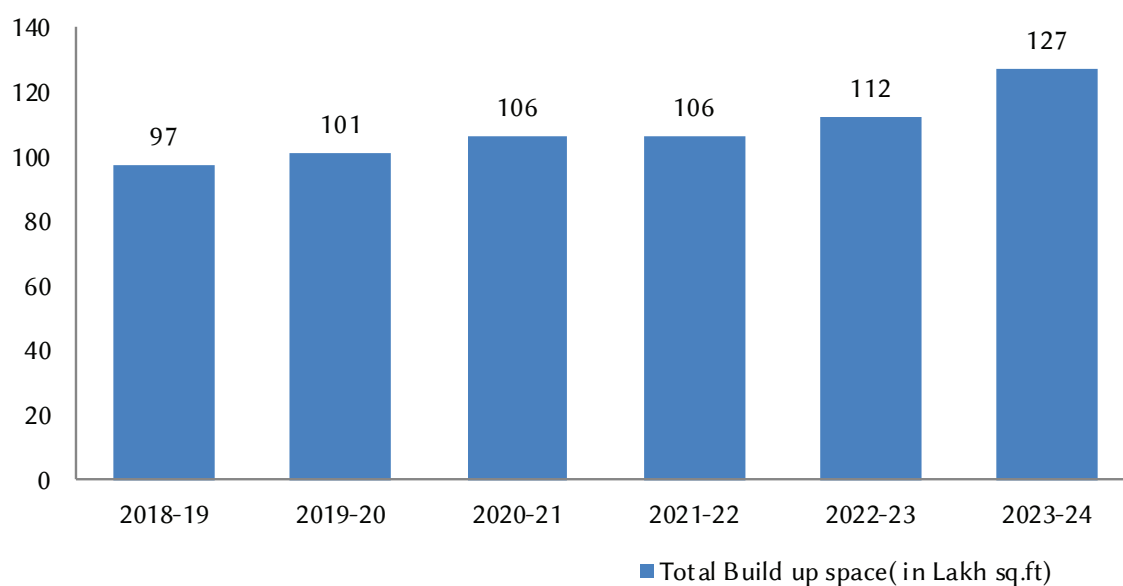
Particulars	Achievements 2020-21	Achievements 2021-22	Achievements 2022-23	Achievements 2023-24
Total turnover (in Rs crore)	15000	18000	20000	26000
Total export (in Rs crore)	8501	9775	11630	13255
Total investment (in Rs crore)	5309	5600	5600	5800
Total Employment (Nos)	63000	64000	71000	75000
No of Companies (Nos)	460	465	479	490
Total land (acres)	659.87	766.86	768.63	768.63
Total built up space (lakh square feet)	106	106	112	127

Source: Technopark

**Table 5.1.3** Land available with Technopark

Phases	Phase I	Phase II	Phase III	Techno city	Technopark, Kollam	Total Area (In acres )
Area, in acres	198.43	86	90.02	389.74	4.44	768.63

Source: Technopark

**Figure 5.1.1** Growth of built-up space in Technopark, in lakh square feet.

Source: Technopark

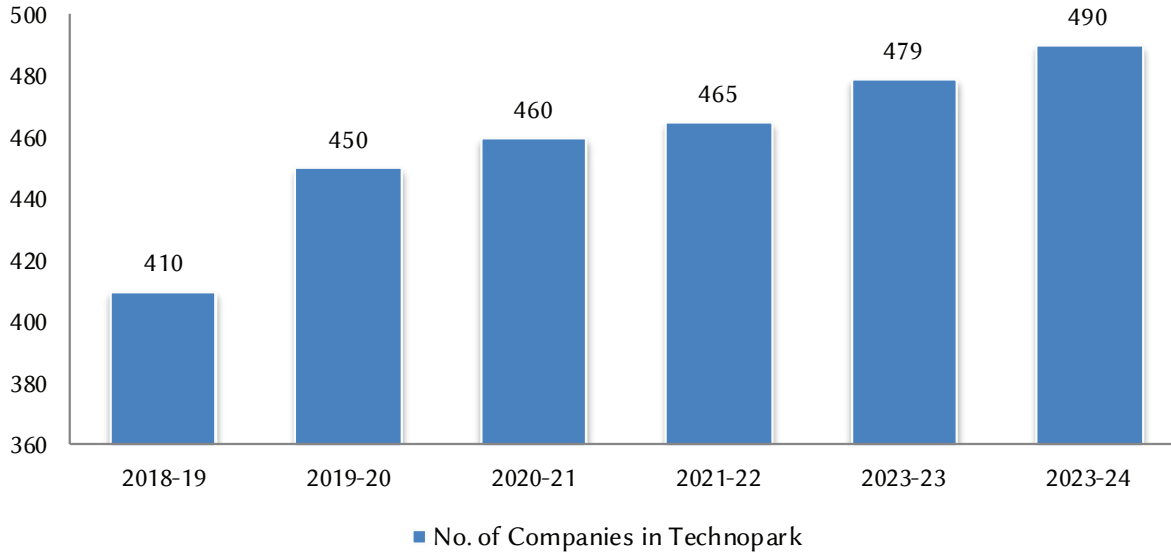
The growth of built up space in the Technopark is shown in **Figure 5.1.1**.

There has been an increase in the number of the companies working in Technopark during the last 5 years. In 2019-20, there were 450 companies in Technopark. It increased to 490 in 2023-24. It

shows growth of 8.88 per cent over the period. The number of companies in Technopark from 2019-20 to 2023-24 is shown in **Figure 5.1.2**.

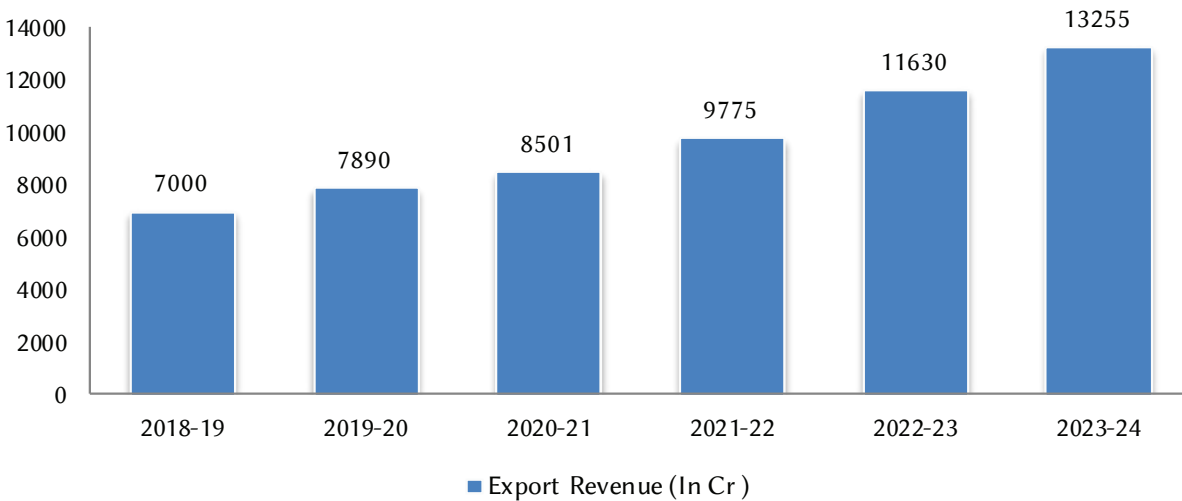
Over the six years, export in IT sector in Kerala shows a positive sign. Revenue generated through Export by Technopark has increased from Rs.7,890

**Figure 5.1.2** Number of companies in Technopark



Source: Technopark

**Figure 5.1.3** Export revenue of Technopark



Source: Technopark

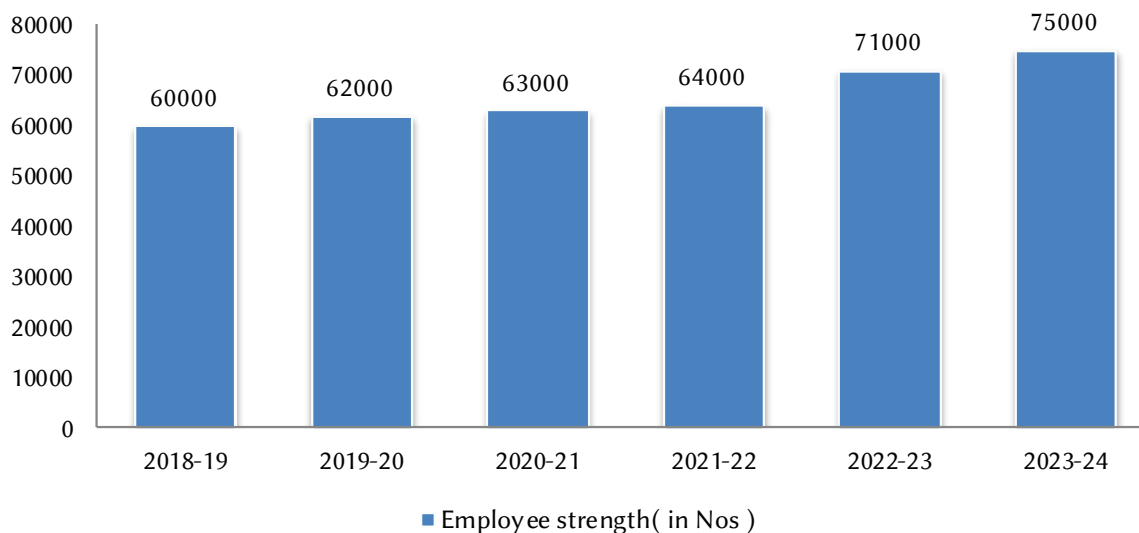
crore in 2019-20 to Rs.13,255 crore in 2023-24 showing a growth rate of 14.0 per cent. The trend in export revenue of Technopark during the last five years is depicted in **Figure 5.1.3**.

The expansion of the Technopark can also be examined in relation to the employment opportunities created in the past years. The number of employees has increased from 62,000 in the financial year 2019-20 to 75,000 in

the financial year 2023-2024. The progress of employment generation over the past five years is depicted in **Figure 5.1.4**.

The Techno city (Technopark Phase IV) project, launched by Technopark in 2009, is a flagship initiative that is broadly divided into two segments: the IT Integrated Township and the Knowledge City. Infrastructure facilities like water supply, power distribution, road network etc are

**Figure 5.1.4** Number of people employed at Technopark



Source: Technopark

developed. The major projects in the Techno city that make it a destination-next for IT/ITES/ Emerging Tech/ Space Tech/ Aerospace growth cluster are

- Country's first Digital Science Park
- Kerala University of Digital science and Innovation Technology campus.
- First IT building, Kabani in the Technocity campus is commissioned with a built-up area of 2 lakh sq. ft and is currently home to 20 organisations.
- TCS IT/ITES campus focuses on IOT, Blockchain, Data Analytics and AI.
- KSpace (Space Park) and MSME Centre.
- M/s Suntec Business Solutions will commission their first IT building of 3.10 lakh sq. ft soon, in their 10 Acre campus at phase 4.
- Emerging Technology Hub (by Kerala Startup Mission).
- Unity Mall (One District One Product).

Government of Kerala has transferred 18 hectare of land to M/s Kerala State IT Infrastructure Ltd, out of which, 10 per cent of land is available for the operation and maintenance of Kollam Technopark. The world class 1,00,000 sq ft IT building Ashtamudi is completed. The Arterial Road work is

also completed. The streetlights on the campus are fully solar based. It is expected to have 700 direct employments in this campus on full occupancy. Smart Business Centre is operational and 22 companies are already working from there.

#### **Infopark**

Infopark was established in the year 2004 with a vision to foster the growth of the IT sector in the State. Over the course of 19 years, the institution has achieved remarkable success in meeting its targets. Since its inception in 2004, Infopark and its co-developers have constructed 10 million square feet of built-up space and have provided employment to over 70,000 IT professionals through 580 IT companies that have taken space in its Parks. Notably, the export figures for the fiscal year 2022-23 amounted to Rs.9,186 crore, which increased to Rs. 11,417 crore in 2023-24, marking a growth of 24 per cent.

Infopark has 5 campuses which is spread over 322.98 acres under various phases of development. The details of extent of land in its 5 campuses are shown in **Table 5.1.4**.

The physical achievements of Infopark are furnished in Appendix 5.1.4. The major indicators of physical performance of Infopark for the last three years are given in **Table 5.1.5**.

**Table 5.1.4** Land available with Infopark, (in acre)

Phases	Kochi Phase I	Kochi Phase II	Thrissur	Cherthala
Area	100.86	125.92	18.00	60.51

Source: *Infopark*

**Table 5.1.5** Major indicators of physical performance of Infopark

Particulars	Achievements 2021-22	Achievements 2022-23	Achievements 2023-24
Total Export (in Rs crore.)	8,500	9,186	11,417
Total Employment (Nos)	63600	65900	70,000
No of Companies (Nos)	479	572	580
Total land (Acres)	323.00	323.00	323.00
Total built up space (million square feet).	10.2	10.2	10.2

Source: *Infopark*

### Major Achievements of Infopark in 2023-24

- Allotted 1.6 acre land to co-developer M/s Brigade
- Around 1,000 numbers of new job opportunities created
- Started works for the city centre of infopark to be developed in 36,000sq.ft. building of M/s KMRL.
- Fit out work of Indeevaram 4th Floor has been completed in which 17 companies can work with 560 work stations

### Cyberpark

Cyberpark Kozhikode was established along the lines of Technopark in Thiruvanthapuram and Infopark in Kochi. It was set up to bridge the IT infrastructure gap along the west coast starting from Kochi to Kasaragod. The objective of Cyberpark is to provide cost effective and top of the line infrastructure to the IT/ITeS investors and thereby encourage, promote and boost the export of software/software services and create employment opportunities in the Malabar region. It is the responsibility of Cyberpark to interface between Government and Industry, interact with potential investors, strengthen the IT/ITeS base, hold promotional campaigns, and develop human resources for IT and ITeS. Kerala State IT Infrastructure Limited (KSITIL) holds the

ownership of the entire area of 42.5 acres of land at Kozhikode Cyberpark.

Cyber Park provides a unique business model with a quality IT space in terms of smart business centres. IT/ITeS companies could establish their operations in Cyber Park and commence business operations either immediately or design their office space as per their specifications and investments after obtaining SEZ unit approval. Cyber Park in association with KSITIL has leased out 5 acres of SEZ land from KSITIL in a 42.5 acre campus and has developed the first IT SEZ building Sahya (3 lakh sq.ft)

### Major Physical Achievements

- The existing building (3 lakh sq. ft. built up space) is fully occupied. Currently 83 IT companies are operational in SEZ facility “Sahya.”
- A smart business centre with an approximate area of 12,391 sq ft in the non SEZ area has been assigned to Kerala Start-up mission for supporting the startup companies in the Malabar region. There are 22 companies operating from this facility employing approximately 130 IT employees.
- The direct employment has been increased to 2,200 and there has been a 15 per cent increase in the export revenue which has been recorded as Rs121 crore in the financial year 2023-24.



- Efforts have been undertaken to furnish the subsequent phase of industrial training prospects for recent graduates in Kerala's IT and ITeS companies through the "IGNITE" Internship Program.

The physical achievements of Cyberpark are given in Appendix 5.1.5. The major physical performance of Cyberpark for the last 3 years is given **Table 5.1.6**

#### **Kerala State IT Infrastructure Ltd (KSITIL)**

KSITIL is a public limited company formed for the creation of the infrastructure for IT/ITeS in the State. The business model of the company is to acquire land and develop basic infrastructure facilities like electricity, water, road and compound wall in the area, obtain SEZ status and other such Government approvals that may be required and then allot land to private developers for development of either IT SEZ or IT parks. Achievements of projects of KSITIL are as follows:

a. Skill Delivery Platform Kerala: SDPK is a

prestigious project assigned to KSITIL by Government of Kerala. SDPK consists of a virtual platform with teleconferencing system being installed in all the 150 engineering colleges and 3 studios, which are being setup as part of the project. The status of SDPK project is given in **Table 5.1.7**

b. FOSTeRA : The term FOSTeRA means Fostering Technologies in Rural Areas. The scheme will provide financial support to eligible selected companies. To achieve this objective, KSITIL has decided to implement the scheme, incentivising the establishment of these companies across rural Panchayaths in Kerala. At present the scheme is taken up by Kerala Development and Innovation Strategic Council (K-DISC) in the name Work near Home.

#### **Initiatives and achievements of KSITIL during 2023-24 & 2024-25**

Government of Kerala has designated KSITIL as the execution agency for all construction

**Table 5.1.6** Physical performance of Cyberpark

Particulars	Achievements 2021-22	Achievements 2022-23	Achievements 2023-24
Total export (Rs crore)	55.70	105.00	121.00
Total investment (Rs crore)	2.17	1.42	0.11
Total Employment (Nos)	1237	2,078	2,200
No of Companies (Operational)	67	85	83
Total land (acres)	42.5	42.5	42.50
Total built up space (lakh square feet)	3	3	3

Source: *Cyberpark*

**Table 5.1.7** Status of Skill Delivery Platform Kerala

Sl. No.	Classrooms/studio	Numbers	No. of colleges completed	Remarks
1	First phase Completed (Pvt)	23	23	completed
2	Government. controlled Engineering colleges	39	39	completed
3	Polytechnic Colleges	25	0	Work under process. Supplied to 19 colleges
4	Private colleges in second phase	12	12	Signed MoU
5	Others (ICFOSS, KSITIL & Secretariat)	3	3	Completed
6	Total Classrooms	102	77	-
7	Studio	3	3	-

Source: *KSITIL*

and connectivity activities under Electronics and Information Technology Department, Government of Kerala. Accordingly KSITIL is executing various infrastructure works for Technopark, Infopark, Cyber Park, Kerala Start Up Mission and Digital University etc. Details of major works completed were as follows.

- 10,000 sq. ft of Digital University furnished by KSITIL with a total cost of 2.25 crore.
- 2.26 lakh sq ft of interior fit out works were completed at Infopark Kochi with a cost of 70 crore and 45,000 sq ft work is in progress
- 5,000 sq. ft area furnished at Cyber Park, Kozhikode with a cost of Rs 1 crore.

**Construction of clean room for India Innovation Centre for Graphene**, is progressing with a total project cost of Rs.23.82 crore.

**IT Corridor project:** Government of Kerala has accorded administrative Sanction for setting up of four IT corridors parallel to NH 66 from existing IT centres in Kerala namely, Technopark Phase-III to Kollam, Cherthala to Ernakulum, Ernakulum to Koratty, Kozhikode to Kannur. KSITIL has been designated as the Special Purpose Vehicle for the project. KSITIL has identified 76 numbers of land parcels across Kerala and as per the estimate total market price for 1699.60 acres of land in the four corridors, works out to Rs.3800 crore.

**IT Park at Kannur:** DPR for construction of 5 lakh sq ft IT Building and masterplan has been submitted to Government for obtaining administrative sanction for construction with funding from KIIFB.

**Construction of building for K-Space:** KSITIL has been entrusted with the construction of

building for proposed Rural Dedicated Industrial Estate for Space sector at Trivandrum, Kerala at Technocity.

KFON had been separated from KSITIL and is now working as a separate entity. KSPACE PARK is also separated from KSITIL and is now working as a separate entity.

#### **Kerala Fibre Optic Network Limited (KFON)**

The State has been a pioneer in the country in making investments towards building core digital infrastructure to deliver e-Governance services. KFON's main objectives are providing a core network infrastructure that is accessible to all service providers, connecting Government. Offices, educational institutions and hospitals with reliable intranet, provide free internet to economically backward households, commercialisation of KFON infrastructure with value added services. KFON have the licenses of Infrastructure provider (IP) Category I, Internet Service Provider (ISP) Category B and National Long Distance License (NLD).

KFON is a State-wide optical fibre network for providing high-speed internet connectivity to about 30,000 Government and educational institutions (Track 1) and offer free internet to 20 lakh economically backward families and internet services at a lower rate for others (Track 2). Track 1 is implemented with KIIFB assistance. A new joint venture company (KFON Limited) was formed in the share holding pattern of 49:49:2 in favour of KSEBL, KSITIL and Government of Kerala respectively as the SPV for the project. In the latest budget, the Government introduced a program known as the provision of complimentary internet to individuals living below the poverty line

**Table 5.1.8** Status of KFON project

Sl. No.	Deliverable	Scope	Feasible Scope	Completed as on 30.11.2024	Per Cent of Completion
1	NoC&DR –Network Centre	1	1	1	100
2	Point of Presence-Nodes (Nos)	376	375	375	100
3	End Offices -installed	30,438	30,438	29,416	96.64
4	End Offices-Live	30,438	24,500	9080	37.06
5	Free Internet to BPL households	14,000	8,624	5,989	69.44

Source: *Kfon*

(BPL). As a result, a total of 5,989 families (as on November 30, 2024) were successfully connected through the Kerala Fibre Optic Network (KFON). The department-wise number of connected Government offices as part of KFON project is 29,416, Commercial FTTH connections are 42,525, SME connections are 135 (as on Nov30, 2024)

### **KSPACE - PARK**

Kerala Space Park is one of the ambitious initiatives of the government of Kerala to make Kerala a production hub for space, aerospace and defense related products and services, utilising the human resources both experienced and fresh graduates of the State. KSPACE was established as a society under the Travancore- Cochin Literary, Scientific and Charitable Societies Registration Act 1955, as per the G.O. (Ms) No.44/2022/ITD/ dated December 29, 2022.

### **Achievements of KSPACE during 2023-24 & 2024-25**

- KSPACE was officially registered as a society under the Travancore –Cochin, Literary Scientific and Charitable Societies Registration Act of 1955 on March 29, 2023.
- KSPACE secured a 241.38 crore loan from NABARD under Rural Infrastructure Development Fund for constructing Common Facility Centre (CFC) and Research & Development Centre (RDC) with a 95:05 funding ratio between NABARD and State.
- Leased 9.54 acres of land from Technocity to set up an Advanced Manufacturing Technology Centre by MSME (Government of India). Advanced manufacturing facilities will be set up and offer services for proto typing, training and consultancy services to new entrepreneurs.
- Executed MoUs with VSSC, DUK, Information and Communication Technology Academy of Kerala (ICTAK) and ASAP Kerala to foster knowledge sharing and collaboration.
- A total of 46 aerospace companies in Kerala are now affiliated with KSPACE

### **International Centre for Free and Open Source Software (ICFOSS)**

The Government of Kerala has established the International Centre for Free and Open Source Software (ICFOSS) in collaboration with Free Software Organisations in India and abroad. The primary objective of ICFOSS is to promote the development and application of free software and

free knowledge. As a nodal agency, ICFOSS is responsible for various activities related to free and open source software, including consultancy, research and development, academics, studies and service, training, publishing, certification, international cooperation, and collaboration.

ICFOSS has successfully conducted numerous training programs, workshops, seminars, research programs, projects, Malayalam computing activities, student internships and projects, summer camps, faculty development programs, and fellowship programs, all based on free and open source software

The major Achievements of ICFOSS in 2024-25 are listed below.

- **Assistive Technologies:** ICFOSS completed the manufacturing of 200 numbers each of innovative braille devices developed by it and submitted AKSHI crossword puzzle & AKSHI braille learner devices to SCERT Kerala for standardisation.
- **Language Technology:** As part of developing language technology, ICFOSS developed a Code-mix data analyser (POC) model for medicinal plant leaf detection system using Drupal CMS and created a database with 70 classes of medicinal plants. Solution is available as a multi lingual platform and also created data corpus of 900 species of medicinal plants along with its use and medicinal values.
- **E-governance and consultancy:** ICFOSS provided consultancy support to Kerala Media Academy for conducting online common entrance examination, consultancy support to Dairy Development Department for translation of Ksheerashree Web Portal, support to KASE for conducting three level screening activities as part of India Skills Competition 2024, Kerala Bhasha Institute for the Development and customisation of Online Malayalam Dictionary and its release.
- **Outreach Programmes:** Foss cell in colleges and schools conducted 16 number of programmes including various training programmes, workshops, hackathons, orientation programmes to students and about 981 participants were participated across Kerala.
- **Open Hardware:** The following are the major achievements a) Developed Acoustic based non-mechanical rain gauge POC, b) Non-mechanical Anemometer POC developed, c) Five quad types drones developed. d) Open ESC first phase POC developed.

### **Kerala Start-up Mission (KSUM)**

Kerala Start-up Mission (KSUM) serves as the nodal agency of the Government of Kerala responsible for promoting, supporting start-ups thereby creating a technology entrepreneurial culture in the State and creating a vibrant and dynamic environment for start-ups, fostering innovation, and facilitating the growth of entrepreneurial ventures. KSUM plays a multifaceted role in building and nurturing the start-ups ecosystem across various sectors, from technology and healthcare to social innovation and rural entrepreneurship.

The primary goal of the Mission is to ascertain and cultivate entrepreneurial abilities within the youth and student population of Kerala. This includes addressing the development of technology-based entrepreneurship and establishing the necessary infrastructure and ecosystem to support advanced technology-driven start-up enterprises. The mission also places emphasis on constructing suitable training programs that align with Kerala's socio-economic culture, identifying market opportunities for technology products and services, facilitating collaboration and networking among academic, research and development institutions, industries, and financial institutions. Additionally, the mission aims to establish a platform for the rapid commercialisation of technologies developed within institutes, ensuring their accessibility to end-users.

KSUM implements the Start-up Programmes through Government Support and it is an autonomous organisation under the Department of Electronics and Information Technology, Government of Kerala. KSUM is the nodal agency for implementing the Government Schemes: Youth Entrepreneurship Development Programme (YEDP) and Technology Innovation Zone (TIZ) through the State's Budget.

### **Youth Entrepreneurship Development Program**

The primary goal of the Mission is to ascertain and cultivate entrepreneurial abilities within the youth and student population of Kerala, through strengthening the startup ecosystem by promoting technology based entrepreneurial activities, entrepreneurial infrastructure & environment, industry institute linkages, R&D and addressing the ecosystem development challenges in enterprise market, product knowledge, idea & culture. KSUM has divided this scheme into eight sub

components or strategic pillars, which serve as the foundation for creating a holistic and sustainable approach to fostering entrepreneurship, inclusive growth and an innovation-driven ecosystem. Each pillar addresses a specific area crucial for the development of start-ups, from ideation to scaling and to their sustainability. These strategic focus pillars are transforming Kerala as one of the emerging start up ecosystems in the whole world. They are: 1. Entrepreneurship Pipeline Creation 2. Co-works 3. Early-Stage Funding 4. Prototyping and Fab Labs 5. Incubation 6. Government Procurements 7. Corporate Innovations and International Linkages 8. Investments and Portfolios

- **Seed Support Scheme** - Seed support, a soft loan scheme, has been implemented by the Kerala Startup Mission since 2014-15. The amount disbursed under the scheme so far is Rs. 11.17 crore and the same released in the financial year 2023-24 is Rs 1.35 crore for 16 start-ups.
- **Interest Subvention Scheme** - Government of Kerala approved Special Loan Schemes for Start-ups through Kerala Financial Corporation. As per the scheme, Kerala Start-up Mission should provide with 2 per cent interest subvention per annum. Nine Start-ups were supported under the scheme in KFC loan.
- *Innovation and Entrepreneurship Development Centre (IEDC)* - Promotion of Technology and Entrepreneurship among the students are taken up by Kerala Start-up Mission (KSUM) since 2014-15 as an important traction of the pipeline for start-ups and as part of the same establishment of IEDCs at various Engineering Colleges, Polytechnic Colleges, Professional Colleges and arts & Science Colleges are in progress. IEDCs act as the focal point of KSUM efforts to drive venture creation for Students in emerging technologies among students. The IEDCs are established within various academic institutions to provide students with the platform to develop their entrepreneurial skills, generate ideas, and turn them into viable business models. IEDC has 453 Institutions and has a network of more than 1,00,000 students.
- *Westart - A Pre-Incubation Program for Women Startups Kerala -Startup Mission (KSUM)* organised the WeStart, a Pre-Incubation program tailored specifically for women startups. The program aimed to provide comprehensive support, guidance, and resources to women

entrepreneurs, fostering their growth and success in the startup ecosystem. Spanning over three months starting from 6th January 2024, the program featured weekly online sessions covering various aspects of startup development and entrepreneurship.

## INCUBATION

Kerala Startup Mission has its own incubators at Thiruvananthapuram, Kochi, Kozhikode, Palakkad, Kulakkada and Kasargod and partnered incubation centres such as Maker Village, Bionest, FOSS Incubator etc. During this financial year, KSUM launched its unique co-working space under the brand name of 'Leap'

As on 31.03.2024 the number of start-ups occupying facility at Thiruvananthapuram, Kollam, Ernakulam and Malabar was 69 startups, 2 startups, 78 startups and 66 startups respectively. Kerala Startup Mission supported the following incubators in the State.

1. Bionest
2. Maker Village
3. Foss Incubator
4. Startup Dreams
5. Palakkad Incubator
6. Calicut Incubator

*Fablab Kerala* - Following its foundational objectives, Fablab Kerala was able to support the startups, innovators and students in Kerala and outside with regards to their fabrication and prototyping services. In the financial year 2023-24, Fablab Kerala executed 733 work orders catering to over 200 unique customers greatly expanding its operational reach.

## TECHNOLOGY INNOVATION ZONE (TIZ)

Technology Innovation Zone is the global innovation incubator hub for many technology sectors. TIZ will create world class infrastructure facilities for multi sector technology incubators to incubate their start-ups and to support home grown enterprises. TIZ is being established in the 13.2 acres of land at KINFRA Hitech Park, Kalamassery. The Zone comprises of built-up start up modules, high end fabrication labs, R&D lab facilities, commercial office spaces, dormitories, Small Office/Home Office (SOHOs), malls. TIZ will create a total built up area of approximately 5 lakh square feet facilities. The infrastructure for TIZ will be built in different phases. Currently Phase I is operational.

Current status of:

- *Integrated Startup Complex* - The building having an area of 1.87 lakh square feet is functional. But the area left for furnishing at the 4th floor - tower 1, 3rd floor – tower 2 and at the basement area are being furnished and thereby the usable area can be increased by 10000 square feet. All those works are in progress.
- *Construction of Annex building* - The construction of an Annex Building to the ISC having an area of 15000 square feet has been awarded and the initial work are in progress.
- *Construction of Digital Hub and Building 2* - Construction of Digital Hub having an area of 2 lakh square feet has been completed and the furnishing work is nearing completion. The construction of building 2 having an area of 43000 square feet is also in progress.

Major cumulative physical achievements of KSUM for the last 3 years are given in **Table 5.1.9**

## Achievements of KSUM in 2023-24

- In 2023, start-ups from Kerala raised funds of \$ 33.2 Million, which is 15 per cent increase from the previous year.
- Kerala's start-up ecosystem has received significant recognition in the 2024 Global Start-up Ecosystem Report (GSER), presented during London Tech Week. It was highlighted for creating a start-up ecosystem valued at \$1.7 billion in just 18 months, significantly outpacing the global average growth rate.
- Kerala ranked fourth in Asia for "Affordable Talent," a category that measures the ability to hire and retain tech talent.
- The State also made it into the Top 30 in Asia for start-up ecosystem performance and ranked highly in categories such as "Bang for Buck" and "Knowledge," which track innovation, funding, and research.

## Centre for Development of Imaging Technology (C-DIT)

C-DIT has been functioning as an Information and Communication Technologies (ICT) solutions provider in the Government sector. The major programmes undertaken by C-DIT are:

- Developed Software for the successful conduct of the Online examination for the Kerala Engineering and Pharmacy courses (KEAM) of the year 2024 .
- Software for the online examination system for Kerala Public Service Commission developed by C-dit has been customised with innovative

**Table 5.1.9** Physical achievements of KSUM from 2021-22 onwards

S/No	Particulars	Cumulative achievement during 2021-22	Cumulative achievement during 2022-23	Cumulative achievement during 2023-24	Cumulative achievement 2024-25 ( up to 31.08.2024)
1	Number of tech start-ups in Ecosystem	3650	4318	4681	5728
2	Incubators/Accelerators (nos)	67	67	67	60
3	Employment creation (no)	40,000	43180	46800	57000
4	External investment (Rs crore)	4252	5325	5375	5375
5	Ranking of Ecosystem	Top Performer	Best performer	Evaluation in progress	In progress
6	Incubation Space (lakh sq.ft)	3.41	5.47	5.58	5.58

Source: KSUM

features for the online recruitment process of a host of agencies in the public sector.

- Digitisation of the land deal records in the Sub Registrar Offices is progressing in all the Districts with 375 lakh pages completed so far.
- Web and Social media communication projects for various organisations were undertaken.
- The Malayalam computing Team under C-Dit has developed a new text mining tool for Malayalam and has facilitated the design and launching of new Unicode fonts in Malayalam.
- C-Dit has been entrusted with the task of co-ordinating the setting up of a Centre of Excellence in Animation, Visual Effects, Gaming, Comics and Extended Reality in Thiruvananthapuram, under the ambit of the new AVGC-XR policy announced by Government of Kerala.

### Way Forward

The IT sector in Kerala is undergoing changes that provide immense potential for business and economic development. To stay competitive as an IT destination, the IT sector in Kerala is now focussed on moving up the value chain to focus more on recent advances which add more value and greater revenue. Industry-linked research, with the active participation of educational institutions, can provide a foundation for greater achievements by the IT sector in the near future. The State has to consolidate its position as an attractive investment destination by focusing on emerging areas in the IT sector and diversify from established IT/ITES activities. Kerala must keep pace with rapid changes at the national and global IT sector. The State continues to draw benefits from its gains in digital empowerment and IT awareness of the

population. As per the Comprehensive Annual Modular Survey, 2022-23, in Kerala, among the age group of 15 years and above, 79.7 per cent of persons search the internet for information, 50.5 per cent of persons can send or receive emails and 53.9 per cent of persons can perform online banking transactions. Data show that Kerala is ahead of the national average in many parameters. The emergence of sound institutional mechanisms, active Government support, strong industry support, and the State's large workforce in the sector hold great potential for the future.



## 5.2 SCIENTIFIC SERVICES AND RESEARCH

Science, technology, and innovation are essential catalysts for economic transformation, national development, driving societal progress, and prosperity. The development and advancement of science and technology are a priority of Kerala's 14th Five-Year Plan. The State Government encourages programmes of research and innovation that are fine-tuned to the needs and potential of the State. In keeping with Kerala's commitment to inclusive development, the Government ensures that the benefits of science and technology reach all sections of society. The State continues to support interventions to develop scientific temper among the people, particularly youth.

### **Agencies and institutions in Science and Technology Sector in Kerala**

The Department of Science and Technology, Government of Kerala, aims to build capacity within the academic and research institutions in the state, carry out research and development through R&D centers, identify and facilitate projects and programs in the biotechnology sector, conserve and sustain biological resources, augment laboratory and scientific infrastructure in educational institutions and research centers, nurture young talents and promote them to take up projects and activities in the field of science and technology, and promote innovation at the grass-roots level and the development of rural technology for the benefit of the masses.

The major institutions coming under the Science and Technology sector in the State are the Kerala State Council for Science, Technology and

Environment (KSCSTE), Institute of Advanced Virology (IAV), and the Regional Cancer Centre (RCC).

### **Outlay and Expenditure of agencies under Science and Technology Sector**

The details of outlay and expenditure of Science and Technology sector from 2020-21 to 2024-25 are given in **Table 5.2.1**.

### **Kerala State Council for Science, Technology and Environment (KSCSTE)**

Kerala State Council for Science, Technology and Environment (KSCSTE) focuses on the promotion of excellence in science and technology through learning, research and development with the participation of academia, industry, and research organisations. Kerala Biotechnology Commission (KBC), is also functioning at the Council Headquarters to support and facilitate various schemes and programmes related to biotechnology. Kerala State Council for Science, Technology, and Environment (KSCSTE) has eight Research and Development (R&D) centres that focus on specific identified domains to conduct research, foster innovation, and drive advancements in the field of scientific and technological progress in Kerala. The R&D centres under the council are Kerala Forest Research Institute (KFRI), National Transportation Planning and Research Centre (NATPAC), Centre for Water Resources Development and Management (CWRDM), Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Kerala School of Mathematics (KSoM), Srinivasa Ramanujan



**Table 5.2.1** Outlay and Expenditure of agencies under Science and Technology Sector, 2020-21 to 2024-25, Rs in lakh

Year	KSCSTE			RCC			IAV		
	Outlay	Expenditure	%	Outlay	Expenditure	%	Outlay	Expenditure	%
2020-21	7,664.00	5,596.24	73.01	7,100.00	1,838.81	25.89	5,000.00	2,304.70	46.09
2021-22	8,164.00	6,033.55	73.90	7,100.00	4,682.11	65.94	5,000.00	2,400.00	48.00
2022-23	8,977.00	5,184.53	57.75	8,100.00	8,099.99	100	5,000.00	3,043.00	60.86
2023-24	9,077.00	3,816.02	42.04	8,100.00	2,999.76	37.03	5,000.00	3,048.93	60.98
2024-25	8,723.00	2,284.80*	26.19	7,300.00	896.63*	12.28	5,000.00	967.82*	19.36

Source: Plan Space, Accounts

\*Expenditure up to November 5, 2024

Institute for Basic Sciences (SRIBS), Malabar Botanical Garden Institute for Plant Sciences (MBGIPS) and Institute of Climate Change Studies (ICCS).

### I. Major Achievements of R& D Centres

#### Centre for Water Resources Development and Management, Kozhikode (CWRDM)

– CWRDM undertakes research projects on hydrology, watershed development, wetland management, water quality management, water management for agriculture, forest and urban hydrology, groundwater development, ecology and biodiversity and advanced waste water treatment technologies. It also provides research/ consultancy support to various line departments and Local Self Government Departments (LSGDs) for solving water related issues.

Major initiatives and achievements

- Under the *Navakeralam* Mission initiative, CWRDM prepared a Water Budget for Kerala, which was published on April 17, 2023. This was implemented in more than 250 Panchayaths across Kerala.
- A Climate Change Learning Lab was established at CWRDM with the financial support of European Union.
- CWRDM has developed and obtained copyright for (1) ‘Rooftop Rainwater Calculator’ that computes the volume of water that can be harvested from the rooftop catchment, and

(2) Decision Support System (DSS) for ‘Crop Nutrient Management’ and ‘Soil erosion’.

- The Centre has developed a novel method (Wick Irrigation) for vegetable production with optimum water use.
- CWRDM has developed a software HYDRAH (Hydrological Rainfall Analysis for Humid Tropics) for rainfall analysis, a Decision Support System for comprehensive drought monitoring and management in Kerala’s Village-level ecosystems and a Water Citizens Assessment Tool (WATER CAT).
- Conducted analysis of water samples (more than 7,000) at the NABL CWRDM Water Quality Division Testing Laboratory, Kozhikode and at the Water Analysis Laboratory established at Sub Centre Neyyattinkara.
- Prepared an Integrated Management Plan for conservation and wise use of Vembanad-Kol and submitted it to the State Wetland Authority Kerala (SWAK) and Wetlands International South Asia (WISA).
- Carried out regional variability in chemical and isotopic composition of rainwater, ionic source apportionment and wet deposition fluxes in the different agro-ecological zones of Kerala.
- Developed soil moisture sensor based automotive irrigation system for efficient agriculture water management practice. A DSS on Soil Erosion Risk Assessment is developed and hosted in CWRDM website for public use.
- Developed Integrated Management Plans for major wetlands of Kerala

### **Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Palode** —

JNTBGRI was established with an objective to conserve the tropical plant genetic resources and to develop scientific methods for their sustainable use. JNTBGRI maintains a 300-acre conservatory garden for the wild tropical plant genetic resources of the country. It has well integrated multidisciplinary R&D system dealing with exploration, conservation, management and sustainable utilisation of tropical plant resources through its eight scientific divisions.

#### Major initiatives and achievements

- JNTBGRI has established a Bamboo Museum and a Bamboo Craft and Incubation Centre with the financial support of National Bamboo Mission through the nodal agency of Kerala State Bamboo Mission. Collected and introduced germplasm and maintained the Bambusetum scientifically and aesthetically. Propagated bamboo and added 6,700 saplings to nursery. The institute has distributed 10,037 bamboo saplings to different beneficiaries including farmers, schools, colleges and also for river bank protection, plantation and afforestation programs. It has generated revenue of Rs.4,27,395 through the sales of bamboo saplings and products.
- Enriched the germplasm collection with 12 new species of Anthurium, maintained orchid conservatory, generated seedlings of selected orchid and carnivorous plants for distribution. The institute has generated an income of Rs. 75,500 through the sale.
- The institute has done therapeutic evaluation of a microbial compound in targeted therapy for cancer.
- As part of “Sustainable use of bio-resources and livelihood improvement through access and benefit-sharing”, training was conducted on cultivation of native orchids and hybrids for 75 beneficiaries from Kerala and also supplied good quality orchid saplings. A one-day workshop for Agricultural Officers was organised on the ‘Art and science of orchid cultivation’.
- Completed the ethnobiological survey in the coastal and tribal areas of Veliyancode, Purathur, Mangalam, Chaliyar, Chungathara, Mampad, Vettom, Nirmaruthur and Vallikunnu Gramapanchayaths and Ponnani and Parappapangadi Municipalities of Malappuram district, Kerala.
- The institute has screened 524 phytochemicals against the target of 14 cobra venom and integrated data on 85 anti-snake venom plants and 25 anti-

SARS-CoV-2 plants.

- It produced 15 kg of diverse vegetable seeds and propagated 13,000 ornamental plant saplings along with 1,250 orchids via stem cuttings.
- JNTBGRI received a State level Centre of Excellence in Phytochemical-Nanotechnology (CEP).
- JNTBGRI has collected seeds of 291 accessions of 219 species in 158 genera of 68 families which includes 19 endemic species of 12 families and accessions of rare, endangered and threatened plants comprising 15 species of 12 families. It conducted seed germination studies of 12 endemic species and collected taxonomic, nomenclatural, distributional data of flowering plants occurring in northern and north eastern States of India.

### **Kerala Forest Research Institute, Peechi (KFRI)** —

KFRI is envisioned as a world-class Centre of excellence in Tropical Forestry for effective conservation of forest ecosystems and sustainable utilisation of natural resources in service of the society. Research and development by KFRI has focused on forest ecology, biodiversity, and sustainable management. It undertakes research and consultancy programmes for national and international agencies on the issues relating to biological conservation and management of natural resources.

#### Major initiatives and achievements

- KFRI has developed AI for timber forensics (Mycorrhiza), invented a teak seed scarifying machine and created software for efficient field data collection.
- Established a DNA barcoding centre for timber forensics and produced biodegradable planters for medicinal plants, developed markers for sexing a rare medicinal plant, raised endangered tree seedlings, joined the Global Mangrove Alliance, collected and distributed tons of forest seeds and participated in river rejuvenation and grassland restoration. The centre has analyzed over 3000 samples for Analytical Instrumentation.
- KFRI has co-organised an International major forestry conference (TEAKNET). The Journal of Bamboo and Rattan, published by KFRI has achieved a high NAAS score of 4.10.
- The institute has empowered marginalized communities through training in various skills (NWFP development, bamboo crafts, nursery management). The Regional Facilitation Centre has trained farmers, implemented projects, and produced over 894,000 medicinal plants.

- KFRI's Bamboo Technical Support Group has raised 1 lakh seedlings, planted 40 hectares of bamboo, and provided technical assistance for establishing bamboo plantations in Panchayats.
- KFRI offers soil testing services to support agricultural and environmental research.
- KFRI has actively participated in the rejuvenation of the Bharathapuzha, Anjarakandy rivers and in coastal restoration efforts in Thiruvathra, Thrissur, and also worked on restoring degraded grasslands in the Idlimotta region of Munnar Forest Division.
- KFRI has established valuable databases on Xylarium collection and a digital database for natural timber colours. KFRI has undertaken the digitalization of their insect collection and forest entomology library, making this knowledge more accessible. The institute has also developed Standard Operating Procedures (SOPs) for wood identification, ensuring accurate and consistent practices.
- The institute has adhered to International Seed Testing Association (ISTA) standards for seed handling at the Kerala Forest Seed Centre and collected and distributed approximately 300 tonnes of seeds of various forestry species to stakeholders across India.
- Collaborated with the Kerala Forest Department to re-evaluate existing teak plantations and promote natural forest restoration and developed soil nutrient management protocols for important forestry species and plantations.

### **National Transportation Planning and Research Centre, Thiruvananthapuram (NATPAC) —**

NATPAC conducts research and development (R&D) and extension activities in transportation and allied fields and studies in safety and operational efficiency of transportation systems. The centre undertakes research and consultancy works in the field of transportation planning, traffic engineering, highway and pavement engineering, road safety, rural roads, inland water transport, tourism planning, transport economics and management, intelligent transportation systems, transport energy and environment, geomatics and other transportation related aspects. In 2023–24, NATPAC has carried out 23 Plan projects (17 continuing schemes and the remaining 6 are new schemes), 12 consultancy projects, several road safety programs, the production of various Road Safety training materials and 11 need-based studies.

### **Major initiatives and achievements**

- The centre is undertaking studies for estimating the cost of operating public and freight transport, including stage carriages, taxis, cars, State passenger boat services, freight vehicles.
- NATPAC's study on student's travel concession scheme serves as a guideline to reconsider the conditions for granting students concession and student fare.
- The study "Integrated land use and transport model for Thiruvananthapuram" evaluates the interdependence between land use and transportation. The findings reveal a vicious cycle in which changes in land use impact transportation and vice versa.
- NATPAC is in the process of establishing rich regional Origin-Destination (OD) matrices from various sparse data sources (like Cellular data, Global Positioning System (GPS) data, Electronic Ticketing Machine (ETM) data etc) and to determine which combination would yield the best reliable results.
- The centre has evaluated the parking deficiencies and recommending potential solutions including parking policies, parking pricing and management strategies and developing an appropriate parking policy framework for urban local bodies in Kerala.
- NATPAC has undertaken the study to perform the route rationalisation of KSRTC city circular services of Thiruvananthapuram and is evaluating the effectiveness of various traffic calming measures on achieving their predetermined objectives of speed reduction in various locations.
- The institute has undertaken site-specific studies on road safety measures, traffic modifications and traffic signal systems in various locations.
- NATPAC has also prepared road safety training materials including books, booklets, calendars, leaflets, stickers and display boards.
- A study is being undertaken by the centre for providing a framework for performance evaluation of water metro project in Kochi. The problems and prospects of inland water transportation in Kuttanad region are also being studied by the centre.

### **Kerala School of Mathematics, Kozhikode (KSoM) —**

KSoM is an advanced research institution in Mathematics and it focuses on the foundational aspects in Mathematics. The main objective of the institute is to promote mathematical research in the country, particularly in Kerala to have quality research activities and improve the standard of studies in Mathematics.

- Through various research workshops, the institute has trained about 100 researchers. KSoM has accomplished nine academic schemes and programs and has developed four scientific infrastructures, including computational and networking.
- The Integrated MSc-PhD programme offered at KSoM is among the best in the category in the country. The second and third batches of students have passed out in June 2023 and June 2024, respectively.

### **Malabar Botanical Garden and Institute for Plant Sciences, Kozhikode (MBGIPS)**

— MBGIPS is an institution engaged in the collection, conservation and strategic development of sustainable utilisation protocols for aquatic and lower plant group forms of the Malabar Region. The conservation strategies for different endemic aquatic plant species and enumeration of the wetland ecosystem and wetland biodiversity are also being carried out regularly.

- The institute has conserved a critically endangered aquatic species *Crinum malabaricum*
- 12 species of *Crinum* plants were collected from different regions of India and ecological surveys were conducted to evaluate the natural habitats of *Crinum malabaricum*.
- A potential partnership is established between Royal Botanic Gardens, Kew (UK) with JNTBGRI, MBGIPS and KFRI (Stakeholders include KSCSTE, Department of Tourism, Departments of Education and Higher Education). As part of the programme, 26 species of native orchids were collected from different parts of Northern Kerala and planted at Sarovaram Biopark, Kozhikode.
- Pollen cryopreservation is a crucial ex-situ conservation strategy has developed which enhances genetic diversity of aquatic plants of economic, medicinal importance, or with conservation priority.
- Under Reproductive Biology and Conservation of Aquatic Plants, 30 aquatic plant taxa were collected and their taxonomic identity completed. 135 herbarium specimens and 11 samples were added to the collection.
- Under Conservation and Biosystematics of Bryophytes, Pteridophytes and Lichens, 141 species were collected, including flowering and non-flowering plants, 34 bryophytes were added to the herbarium of MBGIPS.
- Under Aquatic Vegetation of Kerala: Ecology, Reproductive Biology, Systematics and land

use changes- taxonomic descriptions of eight taxa, along with photoplates, were completed, propagation of 17,974 plants from 85 species was achieved and sales of plants in this period amounted to 2,10,532.

- Studies on seed storage and germination of selected indigenous medicinal plants such as *Eleaocarpus tuberculatus* and *Wrightia tinctoria* were conducted.
- The species *C. embigi* (Rogadine genus *Conobregma*) was collected from campus of MBGIPS and named after the institute in recognition of the outstanding contribution towards the taxonomy and conservation of plants.

### **Srinivasa Ramanujan Institute for Basic Sciences, Kottayam (SRIBS)**

— SRIBS promotes fundamental research across various disciplines, including chemistry, biology, physics, mathematics, and computer science. The Institute is envisioned to establish collaborations with world's leading centres of theoretical research and intellectual inquiry and to encourage and support curiosity-driven research in basic science.

In 2023-24 SRIBS co-organised a three-day national workshop titled 'Bridging the Knowledge Gap: Workshop on the Theory of Climate Change' in collaboration with the International Centre for Climate Studies (ICCS), from November 1st -3rd, 2023.

- SRIBS has published two research articles in international journals and Seven research papers and eight technical reports.
- SRIBS has conducted a Seminar on "Madhava Sangamagrama and the Studies on Infinite Series in Medieval Kerala on 29th August, 2024.

## **II. Schemes and Programmes of KSCSTE**

KSCSTE is implementing various schemes and programmes focusing on science popularisation and promotion, research and development, ecology and environment, technology development and transfer, and science programmes for women. The schemes and programmes implemented by KSCSTE and achievements in 2023-24 are discussed below.

### **1. Human Resource Development in Science and Technology**

#### *i. Science Research Scheme (SRS)*

Research projects in emerging areas of science and technology are supported under the Science

Research Scheme by providing financial assistance for implementation. In 2023-24, 60 papers in conferences/seminars, 32 papers in refereed journals and three books/book chapters were published, and two PhDs were awarded under the programme. Six new species were founded and five outreach programmes were also conducted under Science Research Scheme of KSCSTE.

ii) *CRYSTAL (Crafting Young Scientists of Tomorrow)* is a programme with the objective of creating a platform for students to identify their talents at an early age and nurture them. IIT Palakkad hosted a residential science camp for 28 school students in May 2023. Students training programme was conducted for 10 days in May 2024 at IIST, Thiruvananthapuram for 28 school students who were the winners of National Children's Science Congress 2023 under the CRYSTAL programme.

iii) *Science Education Centre* - 24 training programmes were organised under the Science Education Centre scheme which intended to improve the quality of science education in Kerala by encouraging research in science education and focussing on developing new pedagogical and learning approaches.

iv) *Research Fellowship programme*

The objective of the programme is to motivate and assist highly dedicated postgraduate students in pursuing careers in science. In 2023-24, as part of this programme, 69 PhDs were awarded, 39 papers were presented in conferences/seminars, and several journals and books were also published.

v) *Post-Doctoral Fellowship*

With the objective of attracting doctorate holders to remain in science and technology and to motivate them to pursue research and develop career as scientists, KSCSTE gives post-doctoral fellowships every year. Under this programme, two papers were published in refereed journals and one in an international conference.

## 2. Ecology and Environmental Programmes

KSCSTE has documented three studies in the review period - the Neritic Jellyfishes in the Kerala Coast, Vector Ecology and Disease Transmission Dynamics and Metamorphic Evaluation of Madhurai Granulite Block.

As part of Green Kerala Initiative by KSCSTE and its R&D centers, JNTBGRI, KFRI, and

MBGIPS, species were selected from the IUCN Red List 2020 and propagate them for planting in forests, degraded lands, sacred groves, public parks, and school gardens. A total number of 92,149 plant seedlings were raised in the period and 28,756 seedlings were planted in different suitable ecosystem

The programme ASPIRE2023 (Aspiring Students in Progressive and Innovative Research and Education) organised by SC and ST Cell in collaboration with the Scheduled Tribes Development Department (STDD), Government of Kerala has benefitted 45 tribal students from Model Residential Higher Secondary (MRHS) schools in Kerala. Environment Education Programme & Eco clubs aim to create awareness on environment among school children by establishing Eco-clubs in all Government and aided schools in the State.

## 3. Science Popularisation

Science popularisation programmes of KSCSTE includes i) Kerala *Sasthrapuraskaram* ii) Kerala State Young Scientists Awards (KSYSA) iii) Kerala Science Congress iv) Science Literature Awards v) National Children's Science Congress vi) Science Media Support, Documentation and Publication, and vi) Technology Festival (TECHFEST).

Kerala *Sasthrapuraskaram* is instituted to encourage quality research, training, and leadership in science and technology by honouring outstanding scientists of Kerala origin working anywhere in the world. Kerala State Young Scientists Awards (KSYSA) are given to talented young scientists in recognition of their outstanding contributions in science and technology. Two candidates were awarded the KSYSA in 2023.

The Kerala Science Congress is an annual event conducted by the KSCSTE for promoting research and education in science and technology as well as providing an interactive platform for academia and R & D. The 36th Kerala Science Congress was organised at Government College, Kasaragod, 08-11, February 2024. The focal theme for Science Congress was "Transforming Kerala's Economy through One Health Approach" in which two new initiatives were introduced, namely, SciSol and Walk with Scientists. SciSol aimed at enabling young science enthusiasts to identify and propose science and technology-based solutions for local societal issues in the district

where Science Congress is conducted. Walk with Scientists involves school children walking and discussing science-related topics with scientists. 419 papers were presented in the event and 800 science aspirants were benefitted from this Congress.

KSCSTE has served as the nodal agency for conducting National Children's Science Congress (NCSC) in Kerala and has organised 14 district level and State level Children's Science Congresses for children aged 10-17.

KSCSTE Rural Innovators Meet (RIM)-2023 was jointly organised with KSCSTE-Kerala Forest Research Institute (KFRI), Thrissur, from 19-20 December 2023, at KFRI, Thrissur.

#### **4. Infrastructure Development in Science and Technology**

In order to provide sufficient infrastructure facilities in universities, colleges, and schools for the promotion of scientific activities and augmenting research, the council has been providing financial assistance for the creation of labs and related facilities in the institutions. Selective Augmentation of Research and Development (SARD) and Sastraposhini are the two schemes implemented by the Council for this purpose. During the year 2023-24, three papers in conferences/seminars, 22 in refereed journals and one book were published under SARD scheme. *Sastraposhini* scheme aims to establish model science laboratories in physics, chemistry, and biology to create a better ambience in high schools.

#### **5. Technology Development and Transfer**

##### **i) Intellectual Property Rights Information Centre - Kerala (IPRIC-K)**

IPRIC-K is Kerala's Nodal Agency for all Intellectual Property Rights (IPR) related services and matters. In 2023-24 and also till 31.08.2024, 36 IPR awareness programmes were organised and sensitising around 4,000 people. Two Patent Clinics were also conducted in the period. Sixteen patents, 2 trademarks, 2 industrial designs and 2 copyrights were granted in the period. IPRIC-K/PIC also offered internship for 3 LLB students.

##### **ii) Engineering & Technology Programme (ETP)**

ETP is a research support programme of KSCSTE for faculties of engineering colleges and scientists from research institutions/ research laboratories to

encourage and promote high quality research in the emerging areas of engineering and technology in the State. Best Paper Award at IEEE PIECON 2023 received for Instrumentation and Signal Processing for Remote Monitoring of Bio-Parameters based on Magneto-Plethysmographs, under ETP Scheme.

##### **iii) Rural Technology Programme (RTP)**

The main objectives of this scheme is to encourage and promote grass root innovators, fine-tuning their innovative ideas and providing them with technical support to raise their innovations to an enterprise level.

#### **6. Support for Women in Science and Technology**

i) Back-to-Lab Research Fellowship Programme is to provide Post-Doctoral Fellowship to women in Kerala who are having a break in their research career due to family commitments, to come back to the main stream. A total of 23 research papers have been published by women researchers under the Back-to-Lab programme in journals and conferences, out of which 21 publications are at international level.

ii) STARS (Students with Talent and Aptitude for Research in Science) programme is to encourage talented students to pursue higher education in Basic or Applied Sciences. The two programmes implemented under the scheme are *Prathibha* Scholarship and SPEED (Student programme for Excellence in Experimental Design), which is a laboratory orientation programme for *Prathibha* scholars. Under *Prathibha* Scholarship programme scheme, 198 scholarships were awarded for 130 Undergraduate students and 68 Postgraduate students in the year.

#### **III. Grant in aid to S&T Institutions**

##### **i. Sophisticated Test and Instrumentation**

**Centre (STIC)** is a grant in aid support organisation of KSCSTE with the activities in the areas of testing, calibration, material characterisation, skill development, consultancy and training. The facility is unique in nature and first of its kind under the Govt. of Kerala. Calibration and Testing Services (CTS) division has facility to undertake calibration in Electrical, Thermal and Mechanical areas and is accredited by National Accreditation Board for Testing and Calibration laboratories (NABL) under the Quality Council of India. In 2023-24, this division has carried out calibration of 4,013

instruments received from around 387 customers from industries and earned an amount of Rs.1,68,27,273. Some of the major customers include VSSC, LPSC, IPRC, KSEB, Cochin Shipyard, FACT, KMML, Govt. Analytical Laboratory, Drug Testing Laboratory, Rubber Board, Coconut Development Board, CIFT, NPOL, KEL, MPEDA, besides industries in private sector like SFO, OEN India, APTIVA, Neogen labs.

**ii. Integrated Rural Technology Centre (IRTC)** is a research and development organisation, organising interdisciplinary studies of translational research for the benefits of rural communities. It takes up problems of social relevance like energy conservation and management, green energy promotion, natural resources conservation programmes, local level interventions and technology transfer covering project. Major achievements include a vertical-axis wind turbine of 2.5 KW installed at IRTC is a modern technology for the utilisation of non-conventional energy. The IRTC has given academic support in structural engineering for land management. IRTC had developed drone-based studies and a geospatial education and training centre. *Shasthra Sameeksha* 2024 in which the "Joy of Learning" program successfully engaged 252 students and 12 teachers from 7 schools in Palakkad District. The training programs under the BIRD (Biotechnology Innovation for Rural Development) project has implemented awareness programs and training in composting, vermicomposting, and inoculum mixing skills for the people at Pullundasseri, Palakkad, Kerala. In the skill development program for SC/ST women, a group of 18 women have been empowered with the skills of electrical, plumbing, and drip irrigation package assembling.

**iii) M. S Swaminathan Research Foundation (MSSRF)** works to popularise cultivation practices that synergize the principles of ecology and economics covering project. Major achievements are:

- The MSSRF centre augmented one community conservation plot of tubers, which conserved 18 *Dioscorea* varieties with a yield of 1,360 kg and earned a gross income of Rs. 35,000.
- More than 2000 participants attended the Wayanad Community Seed Fest 2024 in which three tribal conservators were rewarded.
- Established four School Nutrition Gardens across Wayanad for awareness on nutrition-rich agrobio-diversity.
- Three new species of plants were discovered

namely *Lagenandra kunkichirayensis*, *Neanotis prabhuii* and *Impatiens salimii* from the Western Ghats.

- As part of Pachathuruthu programme in collaboration with Panchayath and Haritha Keralam initiative, the centre proposed zonal classification lay out of Cholappuram pachathuruthu in Vengappally and distributed 30 native tree species including RET (Rare Endangered Threatens), 10 climbers and six medicinal plant species with a total of 149 saplings for planting across two acres of land in August 2023.
- To observe the International Year of Millets (IYM 2023) CABc (Community Agro biodiversity Centre) took lead role in 60 acre millet farm in the Nenmeni Grama Panchayath and Pulpally Grama Panchayath.

#### IV) Biotechnology Development

Kerala's biotechnology sector is gaining prominence and experiencing growth. Academic institutions and research organisations are actively involved in healthcare, agriculture, and marine biotechnology. Biotechnology Development Programme undertakes Young Investigators Programme in Biotechnology (YIPB), Industry Linked Biotechnology Research Scheme (IBRS), Biotechnology Innovation for Rural Development (BIRD), Biotechnology Training and Workshop Programme (BTW), Kerala Biotechnology Re-entry Fellowship (K-BIREF) and Chief Minister's Career Advancement Programme in Biotechnology (CAB).

- Kerala Biotechnology Commission (KBC), partnered with College of Agriculture, Kerala Agricultural University (KAU), Vellayani in organising an International Biotechnology Conclave "The Biotech Capstone – Science-Interface" – BIOZION, August 7-11, 2023 at College of Agriculture, Vellayani, TVPM.
- The KBC has developed a liquid formulation of fungal biopesticide based on *Metarhizium pingshaense* through the YIPB project entitled; 'development of a *Metarhizium* sp.-based bio-pesticide formulation for the control of shoot borer, *Congethes punctiferalis* infesting cardamom, ginger and turmeric'.
- The KBC had initiated steps in updating / revising the Biotechnology policy of the State and the first meeting of the Kerala Biotechnology Policy revision committee was conducted on June 23, 2023.

## V) Special programmes of KSCSTE

Centre for Analytical Instrumentation-Kerala (CAI-K) provided comprehensive analytical services, including elemental analysis, chromatography, spectroscopy, and water quality testing. The centre has expanded capabilities with a new gas chromatograph and confocal Raman microscope. Sophisticated Testing has provided a wide range of advanced analytical testing services for soil, water, plant extracts, and other natural products. It has analysed 3,157 samples and generated a revenue of Rs. 13.24 lakh. The centre has conducted three internship training programs for 12 candidates. Under Dr. A.P.J. Abdul Kalam Youth Challenge programme (APJ YCP) a project entitled 'Anacis Curing Technology (ACUTE)' has reached the product development phase. In the first phase of the project Food Technology Development & Testing Facility at STIC, water quality analysis lab was set up and it has started functioning. In 2023-24 the lab analysed a total of 468 samples and served 457 users and earned Rs. 3,84,670.

State Higher Research Centres of Excellence in Science & Technology Applications (SHRESTA) envisaged nurturing a few Centres of Excellence (CoE) from the State that produce world-class research in the areas of (i) Floods and Droughts (ii) Viral Research (Biotechnology) (iii) Nanotechnology (iv) Climate Change and (v) Robotics & Artificial Intelligence.

## VI) Institute of Climate Change Studies

The Institute for Climate Change Studies, Kottayam (ICCS) is an autonomous R&D centre registered under Department of Environment to act as the State-level apex agency for climate change research and advocacy. The vision of ICCS is to empower the State of Kerala against the inevitable consequences of climate change and enhance the resilience and adaptation of the State through science, technology, innovation and self-awareness.

The following are the major achievements in 2023-24

- ICCS has prepared and released Annual Climate Statement of Kerala for the year 2023 in the 36th Kerala Science congress on February 2024.
- The institute has presented Hydrological Forecast Product for Bharathapuzha- a new tool combining hydrological and crop model outputs- which provides weekly forecasts of evapotranspiration, soil moisture, and runoff for the river basin at a detailed spatial resolution.

- Assessed the signals of climate change in the Bharathapuzha river basin using bio-climatic variables.
- A satellite based-drought prediction model has been formulated using a deep learning framework.
- Organised a three-day national workshop titled "Bridging the Knowledge Gap: Workshop on the Theory of Climate Change" at RRII campus in Kottayam with the experts from Institutions of national importance (IIT Madras, IISc Bangalore, NIT Warangal, IISER Trivandrum, and IMD Delhi).
- ICCS organised a one-day State-level workshop on the title "Towards a Healthy, Sustainable, and Climate Resilient Community" jointly with the Environment Information Awareness Capacity Building and Livelihood Programme (EIACP), KSCSTE, & School of Environmental Sciences, Mahatma Gandhi University.
- ICCS conducted a one-day consultation workshop for disseminating the research findings of the SERB project.
- ICCS has developed demonstrative/experimental setup on climate change for student outreach activities, which was displayed at the 36th Kerala Science Congress 2024 in Kasaragod.
- In 2023-24, the institution has published five papers in referred journals and eight papers in conferences.

## B. Institute of Advanced Virology

The national and international developments underscore the importance of continuous research and innovation in the antiviral drug research sector for which collaboration between Governments, research institutions, and pharmaceutical companies is essential in driving these advancements and ensuring global health security. Government of Kerala has established the Institute of Advanced Virology in 2019 in the Bio 360 Life Sciences Park, Thonnakkal, Thiruvananthapuram to find solutions to prevent the existing and emerging viral infections through vaccines, cost-effective multiplex diagnostic platforms, and monoclonal antibodies and other therapeutical measures. The Institute has eight departments to facilitate multi-dimensional study in Virology: Department of Clinical Virology, Viral Diagnostics, Viral Vaccines, Antiviral Drug Research, Virus Applications, Virus Epidemiology, Vector Dynamics & Public Health, Virus Genomics, Bioinformatics & Statistics, and Basic & General Virology.



### Major achievements and initiatives

- Phase IB building of IAV with 80,000 sqft built-up area has been operational with 8 BSL 2-level laboratories, Small Animal Experimental facility and 80-seater seminar hall in phase IB and the Innovation & Translation Facilitation Centre, the incubation facility for startups and R&D facility for the established firms. Installed 130 KWp solar power plant (grid connected) in the building.
- The institute has augmented the common instrumentation facility with the following equipment's, Fluorescent Activated Cell Sorter (FACS), Confocal Laser Scanning Microscope, Spectrophotometer and Protein Purification System.
- In 2023-24 the departments of Virus Epidemiology, Vector Dynamics & Public Health Virus Genomics, Bioinformatics and Statistics started functioning.
- It has commenced the academic programme (PhD in Virology) in affiliation with CUSAT, Kochi and RCB, Faridabad and short-term application-oriented training programmes to cater the needs of the industry and R&D organisations.
- Received an award for the work of establishment of BSL-3 Laboratory and Transgenic Experimental Animal Facility
- In 2023-24, a comprehensive research initiative has commenced under flagship research programmes to address the multitude of viral threats prevalent in Kerala: 1- Discovery and Optimization of Pan-Coronavirus Inhibitors for Nsp14 Guanine N7- Methyltransferase through Structure- Based Drug Discovery Approach, 2 - Development of high affinity human recombinant monoclonal antibodies against Nipah virus for therapeutic uses, 3 - Elucidating the regulatory role of kaempferide on the viral aetiology of cervical cancer, 4 -Metagenomics – based Virus Discovery from Symptom-specific Human Clinical Samples.
- Established Viral Bio Assay Facility (VBaF), a national facility supported under the DBT-SAHAJ program. It offers the highest quality viral assays and therapeutic services to industry and academia thereby positively contributing to public health.
- Developed the procedure for synthesising monoclonal antibodies to improve therapeutic approaches to Nipah virus infection and generated a panel of monoclonal antibodies that target Nipah virus G and F glycoproteins.
- The institute has initiated the research for

developing diagnostic kits for virus infections and also the development of monoclonal antibodies against flaviviruses.

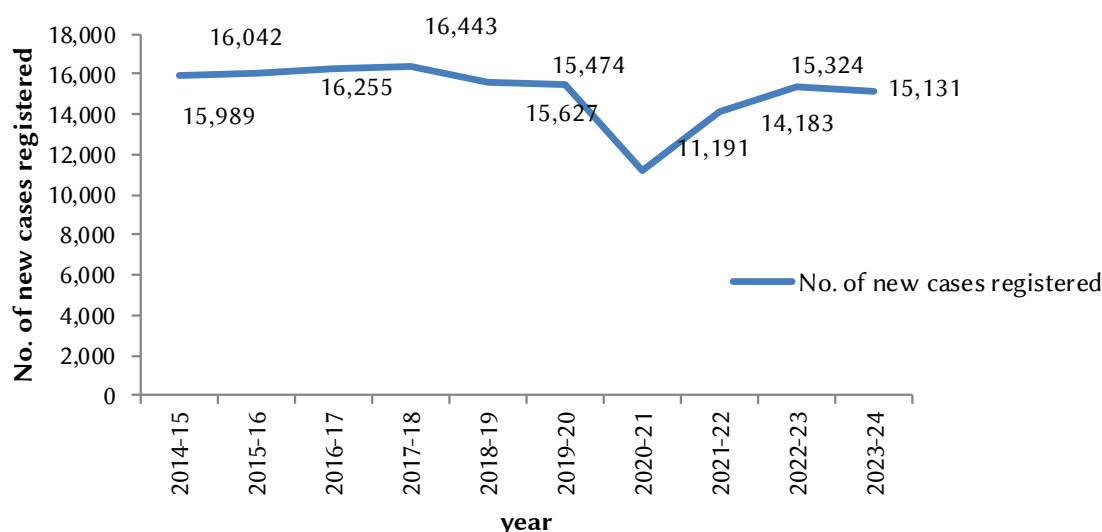
- Diagnosed and characterised the Nipah virus infection reported in the Malappuram district in July 2024 within 48 hours of the receipt of the sample.
- Standardised Real-Time PCR systems for detecting 22 viruses with in-house primers which has reduced the dependence on commercial PCR kits.
- The genetically diversified viruses such as Metapneumovirus hominis, Human mastadenovirus C, Cytomegalovirus human beta 5, Human parvovirus 4, Vesiculoviruschandipura, Gammmapapillomavirus 22, Human polyomavirus 1 (BK virus), Human polyomavirus 2 (JC virus), and SV40, were first time detected in South Asia using virus-metagenomic approach from the human clinical samples.
- Documented the sequence of virulent bacteria from the human clinical samples and initiated metagenomic sequencing of 28 insect samples collected from various locations in Kerala.
- In collaboration with Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), completed the genomic sequencing of One-health viruses such as Nairobi sheep disease virus (NSDV), Jingmen tick virus (JMTV), etc using virus-metagenomics.
- Generated low diversity Phage display antibody library against Zika virus and Nipah virus for identifying recombinant human mAb
- Optimization of expression and purification of Zika envelope domain III protein and Nipah F and G protein were carried out.
- 34 types of plants with potential antiviral property were preserved in the Antiviral plant repository of IAV.

### C. Regional Cancer Centre (RCC), Thiruvananthapuram

According to World Health Organisation, global cancer burden is increasing with 20 million new cases of cancer and 9.7 million deaths in 2022. In India, approximately one in nine people is expected to face a cancer diagnosis in their lifetime. Lung cancer is ranked highest among males and breast cancer in females (source: Indian Council for Medical Research).

In spite of cancer treatment facilities coming up in various parts of the State in the Government and Private sector, RCC has been able to maintain

**Figure 5.2.1** New cases registered in RCC from 2014-15 to 2022-23



Source: Regional Cancer Centre, Thiruvananthapuram

its number one position in Kerala. It is rated amongst the top three of the 28 Regional Cancer Centres in the country, and maintains a working relationship with international bodies such as the WHO, International Agency for Research on Cancer (France), International Atomic Energy Agency (Vienna), National Cancer Institute (USA), Institute for Cancer Research (UK), University of Leeds (UK), Health Research Foundation (Japan), and a host of other reputed organisations. The vision of RCC is to emerge as a global leader in cancer control. It aims to deliver highest quality cancer care at affordable cost, create cancer awareness among public and health professionals, generate trained manpower and organise outreach programmes in cancer control, conduct focused cancer research relevant to our society and lead cancer control activities in the State. In addition to RCC, there are two other cancer centres- Malabar Cancer Centre and Cochin Cancer Research Centre. The details of these two centres are covered in the Health section of this volume.

### RCC-Profile

In 2023-24, a total number of 15,131 new cases and 2, 63,638 review cases were registered in RCC. The number of daily average patient visit was 862 and 12,828 in-patient admissions. **Appendix 5.2.1** provides the profile of the centre for the last three years and hospital statistics is given in **Box 5.2.1**.

### Cases Registered in RCC

The details regarding cases registered in RCC in the last 10 years show that the highest number of new cases registered was in 2017-18(16443). The lowest was in 2020-21(11,191) which was 27.7 per cent lower than the previous year and it may be attributed to Covid-19 pandemic. In 2022-23, the new cases registered were 15,324 and that in 2023-24 were 15,131, indicating 1.3 per cent decrease from previous year. New cases registered in RCC from 2014-15 to 2023-24 are given in **Figure 5.2.1**.

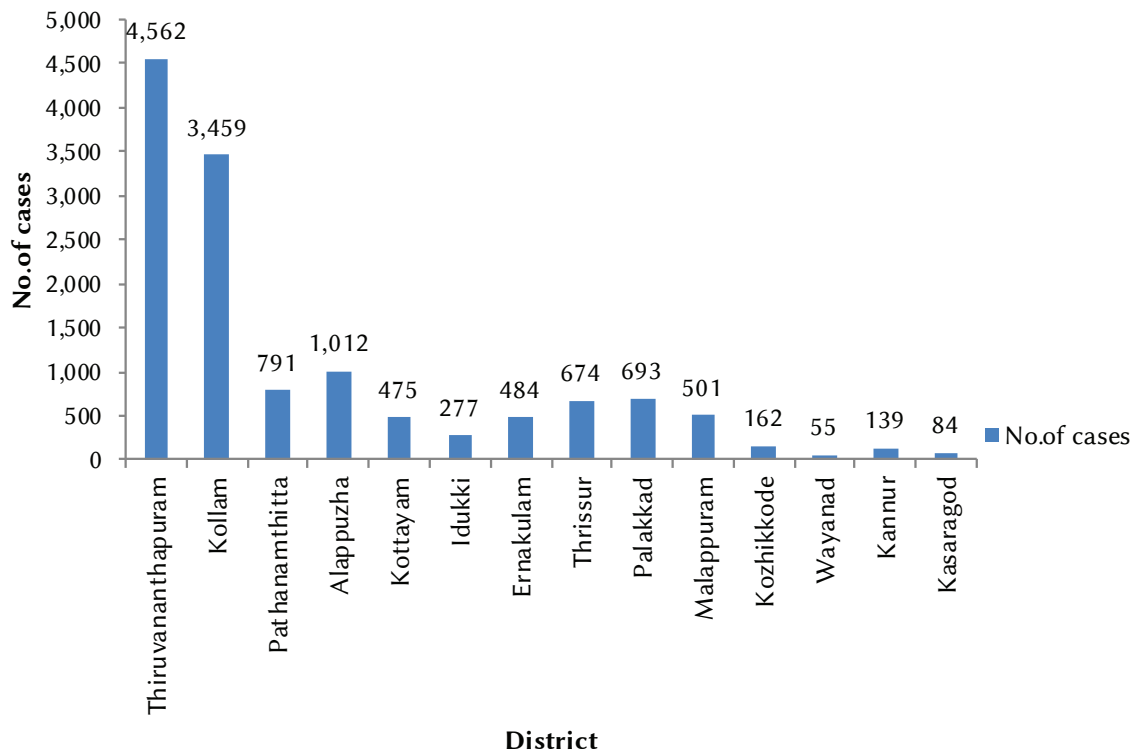
Out of the total 15,131 new cases registered in 2023-24, 13,368 cases (88 per cent) were reported from within the State, and rest were from other States. In this period, no patients were registered from outside the country. As in the previous

### Box No 5.2.1 Hospital statistics 2023-24

IP Bed strength	298
Operational bed	286
Average OP Per day	878
Average admissions per month	1069
Bed occupancy rate	95.97 per cent

Source: RCC, Thiruvananthapuram

**Figure 5.2.2** Number of new cases registered at RCC from Districts of Kerala.



Source: Regional Cancer Centre, Thiruvananthapuram

years, most of the cases in 2023-24 were referred from Thiruvananthapuram (30.2 per cent), followed by Kollam (26 per cent), and the least number of cases were referred from Wayanad (0.4 per cent). The number of cases referred from Thiruvananthapuram was 4,547 in 2022-23, and 4,562 in 2023-24. Details are given in **Appendix 5.2.2**

In addition to this, 1,644 cases in 2023-24 were referred from Tamil Nadu, One from Karnataka, Five from Lakshadweep and 113 from other Indian States. **Figure 5.2.2** represents number of new cases registered from the districts of Kerala.

#### Cases Registered in Speciality Clinics

The incidences of cancer to human body parts are increasing than the previous year. The highest per cent of new cancer cases registered was in Chest and Gastrointestinal clinics (3,574 cases) in 2023-24 followed by Gynaec, Genitourinary (2,797 cases) and Breast and Central Nervous System speciality clinic (2,545 cases). The lower number of cases was registered in Pediatric clinic (490 cases). But the incidences of female and Paediatric cancers in the State of Kerala have been on a rise for the

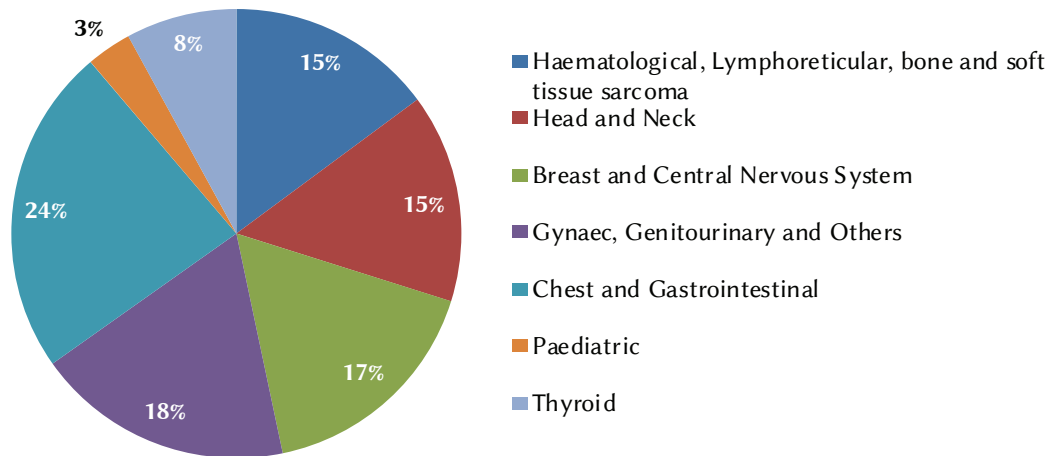
past several years. Over 70 per cent of the women report for diagnostic and treatment services were at an advanced stage of disease, resulting in poor survival and high mortality rates. **Figure 5.2.3** gives the incidence of cancer to human body parts detailed as per cent of new patients registered in speciality clinics in 2023-24.

The number of new cases registered in speciality clinics for the last three years are shown in **Appendix 5.2.3**

#### Cases Registered (Age- and Gender-wise)

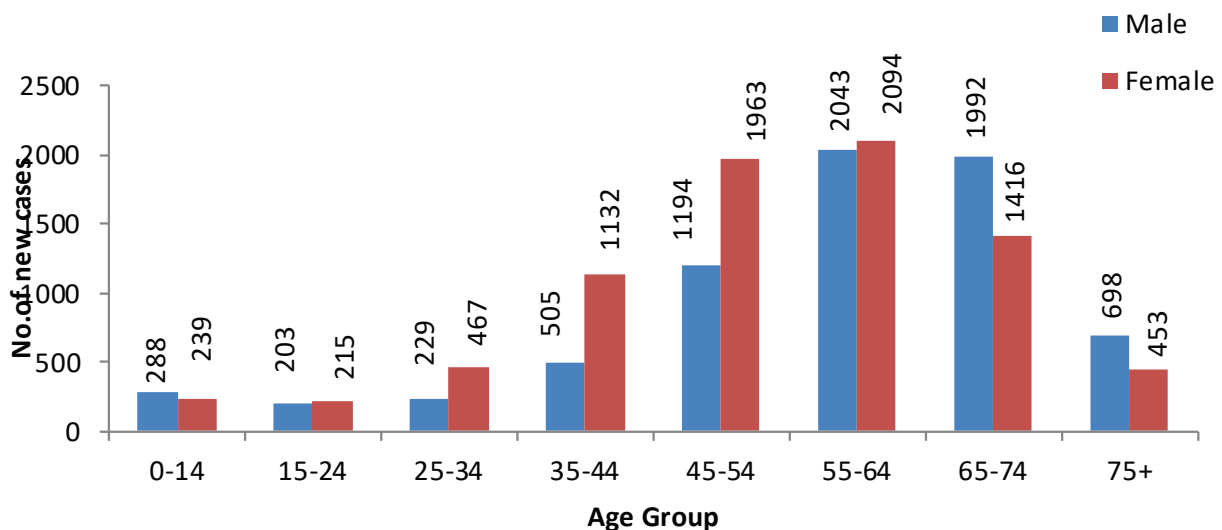
The details of age- and sex-wise number of new cases registered in 2023-24 reveals that people in the age group of 55-64 are more prone to cancer diseases (28.6 per cent of male and 26.2 per cent of female). Age group 65-74 also shows higher number of male cancer patients (27.8 per cent) while in 45-54 age group shows higher number of female cancer patients (24.6 per cent). Details of age- and sex-wise new cases registered are given in **Appendix 5.2.4**. **Figure 5.2.4** illustrates age- and sex-wise new cancer patients registered for treatment in RCC in 2023-24.

**Figure 5.2.3** Speciality clinic-wise percentage of new patients registered in 2023-24



Source: Regional Cancer Centre, Thiruvananthapuram

**Figure 5.2.4** Age- and gender-wise new cases registered in 2023-24



Source: Regional Cancer Centre, Thiruvananthapuram

### Central and State Government Schemes

Both Central and State Governments have initiated various schemes to ensure free or subsidised treatment for cancer patients. Details are given in **Table 5.2.2**.

### Initiatives of RCC in 2023-24

In addition to Government-supported schemes, RCC supports patients and families through various other schemes. The free drug bank provided full or partial help to 1,263 patients in 2023-24. In the period, 989 members (including 147 new cases) enrolled in the cancer care for

Life (CCL) scheme and underwent investigations and treatment (the scheme stopped enrolling new members in August 2014). Under Free Food ('*Akshayapathram*') scheme, free food was provided to 1,903 in-patients belonging to vulnerable socio-economic groups with the support of many philanthropic organisations and individuals. Under Indian Cancer Society Support Scheme, RCC was selected for receiving financial support from the Indian Cancer Society for the treatment of cancer. In 2023-24, 112 new patients received support under the scheme worth Rs.143.7 lakh.

**Table 5.2.2** Central and State Government schemes, 2022-23 and 2023-24

Scheme	Patients enrolled (new cases)		Total number of people benefited		Total Amount spent (Up to August 31, 2024), Rs in lakh
	2022-23	2023-24	2022-23	2023-24	
Central Government Schemes					
Prime Minister's Relief Fund	167	481	2,396	3,057	3379.85
State Government Schemes					
Cancer Suraksha Scheme	335	123	6,879	6,999	6634.13
<i>Karunya</i> Benevolent Fund	1,597	3,380	3,255	6,749	5229.48
<i>Thalolam</i>	9	1	140	141	42.48
Scheduled Tribe Patient Fund	35	45	520	530	442.70
<i>Snehasanthwanam</i> for Endosulfan Victim	3	1	67	67	51.12
<i>Karunya Arogya Suraksha Padhathi</i> (KASP)	9,052	10,985	34,485	45,790	33100.69

Source: Regional Cancer Centre, Thiruvananthapuram

### Cancer detection activities

In 2023-24, 80 cancer detection programmes and 16 cancer awareness programmes were conducted. As a result, 397 cancers and 592 pre-cancers were detected. Out of the 6400 screened people, three breast cancers, 12 oral cancers, two cervix cancers, 253 oral pre-cancers, 290 benign breast lesions, and 62 cervical pre-cancers were detected. In the period 4,139 people were examined as part of the cancer screening and early detection programmes conducted by the early cancer detection outpatient clinic. 575 cancers and 909 pre-cancers were detected through this screening.

### Human Resource Development

Over the last few years, RCC has evolved to a nationally recognized centre for teaching and training in oncology related specialities. Today the centre offers a wide range of graduate, post-graduate and post-doctoral programmes affiliated to the Kerala University of Health Sciences (KUHS) and approved by the Medical Council of India in oncology and oncology related paramedical specialities.

### Research and Development Activities

RCC is a major centre for cancer research with activities in the arena of basic research, epidemiological studies and clinical research collaborating with national and international centres of repute. RCC is committed to cancer control activities among the public and human resource generation in the various specialities

of oncology as well as cancer research which is expected to result in new treatments for cancer. In 2023-24, RCC has acquired Cytogenetic workstation, Fish hybridizer and Ventilated caging system in cancer research. In the period around 30 scholars were pursuing Ph.Ds, 60 residents undertook specialisation in medical, paediatric and surgical oncology, head and neck surgery and gynaecological oncology super speciality courses, and 48 residents undertook postgraduate courses in Anaesthesia, Pathology and Radiotherapy in the centre. RCC conducted 91 cancer education programmes and 211 cancer detection programmes. The number of on-going research projects is 249. RCC has acquired two patents and published 188 research publications. RCC has prepared hospital based and population-based cancer registries.

### Major achievements in Diagnostic and treatment facilities in 2023-24

- The Robotic Surgery Unit and HIPEC Treatment & Clinical Laboratory Tracking system were inaugurated in 2023-24 and started functioning thereby conducting 47 Robotic Surgeries and 12 Hyperthermic intraperitoneal chemotherapy (HIPEC) procedures. It is the first Robotic Surgery Unit in the public sector in the State.
- Commissioned 3-Tesla MRI & Digital 3D Mammography Machines and HIPEC Perfusion unit & Clinical Laboratory Tracking system.
- Acquired Ring Gantry (Halcyon) Linear Accelerator using the CSR fund from Power Grid Corporation of India Ltd.

- Commissioned Solar Powered Cold Storage Unit & Solar Powered Reverse Osmosis-based Water Purification System and started Serum Galactomannan Assay.
- Inaugurated the new Patient Welfare & Service Block in RCC and the new 14 storey building of RCC nearing completion (expected to be completed by March, 2025).
- Received the registration of Department of Scientific and Industrial Research (DSIR) and Obtained license to perform granulocyte apheresis procedure.
- Started Nucleic Acid Amplification Test on donated blood to detect the presence of transfusion transmissible infections.
- Started cervical cancer screening using portable binocular colposcope.
- RCC has been awarded two Indian Patents
- In 2024-25 (till August 31, 2024) the Letter of Credit has opened for RCC for the supply and installation of Catheterisation Laboratory.

make the sector vibrant and attractive. With a wide variety of programmes devised to address the varying requirements in science and technology, the State is well-placed for a big leap in this direction.

### Way Forward

The State has made progress in this sector, including the development of new institutions which focus on specific areas of research, expansion, and the augmentation of human and physical resources that drive research, and the inculcation of a scientific temper. The Water Budget brought out by CWRDM (Centre for Water Resources Development and Management) and the Climate Statement of Kerala brought out by the Institute for ICCS (Climate Change Studies) are examples of unique endeavours by the Research and Development institutions which have a direct impact. As the State moves towards *Nava Keralam*, the State seeks to carry forward the momentum the sector has accumulated in recent years.

The State will try to incorporate science and technology into economic planning. The upgradation of research infrastructure, promotion of collaborative projects, training programmes, and programmes to attract and retain skilled professionals in the sector are activities which the State is pursuing with greater vigour. The efforts to promote skill development and enhance digital literacy are bringing benefits to the State, and are being built on. Programmes to strengthen academia-research-industry linkages and cultivate talent in science among students are poised to



## 5.3 TOURISM

Tourism occupies a proud position in Kerala's development history. Kerala Tourism has, over the years, grown from a few world-class locations to include distinctive locations including hill stations, beaches, backwaters, heritage sites, and religious centres. A wide array of experiences including wellness packages, culinary tourism, responsible tourism, monsoon packages, forest experiences, homestay facilities, pilgrim tourism, and health tourism are offered. In the New York Times's annual list of places to visit (2023), Kerala was the only Indian tourism destination mentioned.

Kerala is the first State in the country to declare tourism an industry. Tourism in Kerala draws its strength from the coordinated efforts of a wide spectrum of pro-active stakeholders, led from the front by the Government of Kerala. The State Government's persistent, innovative, and value-based initiatives have produced balanced returns for investments that benefit the community and ensure environmental sustainability. The development of tourism infrastructure and destinations, promotion of products and destinations, and implementation of policies that facilitate comfortable travel are key aspects of Government involvement in the sector.

Kerala is the first Indian state to conduct a gender audit in the tourism industry, conducted with the technical assistance of the United Nations. The growth of Kerala tourism is evidenced by community-based responsible tourism initiatives, the adoption of digital and virtual marketing technologies, and the State's rise to prominence as a top destination for MICE (Meetings, Incentives, Conferences, and Exhibitions) tourism, and the

growing popularity of homestays, pilgrimage tourism, and staycations.

The 14th Five Year Plan has given thrust to key aspects in tourism including destination development, skill development and employment, development of tourism products, promotion of responsible tourism, and tourism funding. It has also placed emphasis on the need to have strategies that are responsive to the emerging trends in tourism.

Tourism has contributed significantly to Kerala's economy over the years. The total (direct and indirect) revenue generated from tourism was Rs. 43,621 crore in 2023. Basic data on the performance of the sector are in **Box 5.3.1**.

### Financial Performance

The details of Plan outlay and expenditure of the tourism sector from 2020-21 to 2024-25 are given in **Table 5.3.1**.

### Foreign tourist arrivals and visits – India and Kerala

Data on foreign tourists is available in terms of 'arrivals' (based on the use of passport and various points of arrival) and based on 'visits' (stay at various tourist destinations, with the district often as a point of reference). A tourist who arrives in the country usually visits multiple tourist destinations and she is marked as a visitor at multiple points. Hence the number of visits is a multiple of the number of arrivals. The number of foreign tourists who arrived in India has increased from 64.4 lakh in 2022 to 92.4 lakh in 2023 registering a growth



of 43 per cent over the previous period. The number of foreign tourists who visited Kerala has increased from 3.5 lakh in 2022 to 6.5 lakh in 2023 registering about an 88 per cent increase over the previous period. The number of foreign tourists who visited Kerala in 2024 (up to June 30th) is 3.6 lakh, revealing a revival of the sector from the setback of the COVID-19 pandemic.

**Figure 5.3.1** compares the annual growth rates of the visits of foreign tourists in India and Kerala from 2014 to 2023, in per cent.

**Appendix 5.3.1** shows the details regarding foreign tourist visits in India and Kerala and the annual growth rate since 2014. Month-wise foreign tourist arrivals in India and foreign tourist visits in Kerala in 2022 and 2023 are given in **Table 5.3.2**.

### Sources of Foreign Tourists

For the second consecutive year in 2023, Kerala received the largest number of foreign tourists from the United States of America (12.7 per cent) followed by the United Kingdom (12.3 per cent) and Oman (6.2 per cent). Other important sources included Germany (5.4 per cent), France (5.8 per cent), and the Maldives (5.7 per cent). The Middle East countries like Oman, Saudi Arabia, and UAE contributed significant shares of tourists to Kerala in 2023. More than 30 per cent of foreign tourists to Kerala in 2023 were from countries other than the top twelve source markets.

**Appendix 5.3.2** presents the share of major international source markets of Kerala tourism for the last three years and up to June 30, 2024. **Figure 5.3.2** illustrates the share of foreign tourists arriving in Kerala from the top ten source countries in 2022 and 2023.

#### Box No 5.3.1 Kerala Tourism at a glance

Domestic Tourist Visits (Nos) in 2022	1,88,67,414
Domestic Tourist Visits (Nos) in 2023	2,18,71,641
International Tourist Visits (Nos) in 2022	3,45,549
International Tourist Visits (Nos) in 2023	6,49,057
Total Visits (Nos) in 2022	1,92,12,963
Total Visits (Nos) in 2023	2,25,20,698
Total Revenue Generated in 2022 (Direct& Indirect)	Rs 35,168.42 crore
Total Revenue Generated in 2023(Direct& Indirect)	Rs 43,621.22 crore
Foreign Exchange Earnings in 2022	Rs 2,792.42 crore
Foreign Exchange Earnings in 2023	Rs 5,245.09 crore
Earnings from Domestic Tourists in 2022	Rs 24,588.96 crore
Earnings from Domestic Tourists in 2023	Rs 28,717.46crore

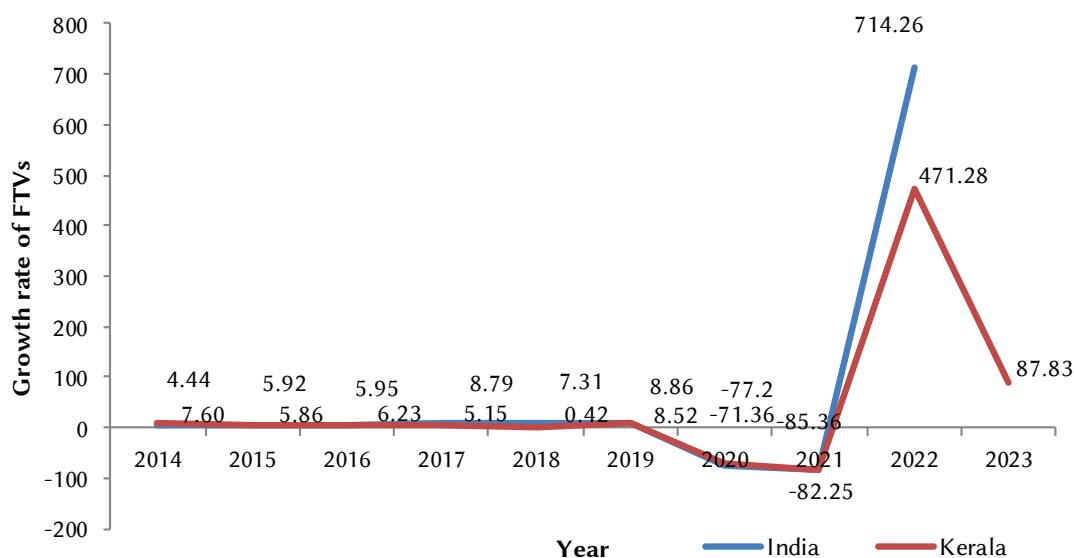
Source: Department of Tourism, Government of Kerala

**Table 5.3.1** State Plan outlay and expenditure in Tourism, Rs in crore

Year	Outlay	Expenditure
2020-21	320.14	325.63 (101.71%)
2021-22	320.14	244.49 (76.37%)
2022-23	362.15	248.58 (68.64%)
2023-24	362.15	258.47 (71.37%)
2024-25 (up to October 10, 2024)	351.42	103.99 (29.59%)

Source: Plan Space Kerala, Accounts

**Figure 5.3.1** Annual growth rates of the visits of foreign tourists in India and Kerala from 2014 to 2023, in per cent



Source: Department of Tourism, Government of Kerala

\* Notes: Number of foreign visits of India in 2023 is yet to be published

### Foreign Tourist Visits in Kerala - District-wise

For the last few years, Ernakulam and Thiruvananthapuram received the highest number of foreign tourists. In 2023, 2.8 lakh foreign tourists visited Ernakulam as against 1.9 lakh in 2022. Similarly, 1.5 lakh foreign tourists visited Thiruvananthapuram in 2023 as against 81,916 in

2022. Idukki District (1,03,644) and Kasaragod (2,291) recorded remarkable growth in foreign tourist arrivals. The districts with the least foreign tourist visits in 2023 were Pathanamthitta (941) and Palakkad (1,069). Details are in **Appendix 5.3.3**.

**Table 5.3.2** Month-wise foreign tourist arrivals in India & visits in Kerala in 2022 and 2023, in number

Sl. No.	Month	No. of FTAs in 2022		No. of FTAs in 2023	
		India (Arrival)	Kerala (Visit)	India (Arrival)	Kerala (Visit)
1	January	2,15,935	10,952	8,68,160	68,157
2	February	2,54,538	12,158	8,65,779	71,919
3	March	3,58,023	20,437	7,95,827	53,703
4	April	4,11,010	17,889	6,03,985	35,198
5	May	4,45,690	21,496	5,98,480	28,966
6	June	5,47,074	23,028	6,48,008	29,787
7	July	6,69,499	32,785	7,60,623	57,038
8	August	5,24,756	37,939	6,43,194	60,934
9	September	5,51,580	30,168	6,48,213	41,625
10	October	6,77,055	36,261	8,11,411	53,751
11	November	7,89,330	42,308	9,22,265	69,902
12	December	9,92,977	60,128	10,70,163	78,077
	Total	64,37,467	3,45,549	92,36,108	6,49,057

Source: Department of Tourism, Government of Kerala

Region-wise details of foreign tourist visits in 2023 reveal about 66.1 per cent of the total foreign tourists visited the central part of Kerala, about 28.6 per cent visited the southern part and 5.3 per cent visited the northern part. In 2022, about 66.5 per cent of the total foreign tourists visited the central part of Kerala, 27.5 per cent visited the southern part and 5.9 per cent visited the northern part. **Figure 5.3.3** presents the region-wise visits of foreign tourists in Kerala in 2023.

### Domestic Tourists

In domestic tourist arrivals, Kerala has achieved 51.1 per cent and 150 per cent growth respectively in 2021 and 2022 (the highest growth rate in the last ten years). In 2023, 2.18 crore domestic tourists visited Kerala which is higher than that of 2022 (1.88 crore), revealing a remarkable recovery in domestic tourism in the post-COVID period.

The Government of Kerala organizing grand celebrations including the Onam festival, boat races, and various fairs, along with extensive domestic campaigns, have significantly attracted domestic tourists. Special marketing campaigns to attract domestic tourists, the introduction of innovative tourism projects like caravan tourism,

the reorganization of the halted Champions Boat League, and events like the Beypore Water Fest, have contributed to the rejuvenation of tourism. The number of domestic tourist visits up to June 30, 2024, is 10.9 lakh. This is 1.6 per cent higher than the number of domestic tourist visits up to June 30, 2023 (10.7 lakh). **Appendix 5.3.4** gives the details of domestic tourist visits to Kerala from 2014 to June 2024. **Figure 5.3.4** reveals the trends in the visit of domestic tourists in Kerala during the period 2014-2023.

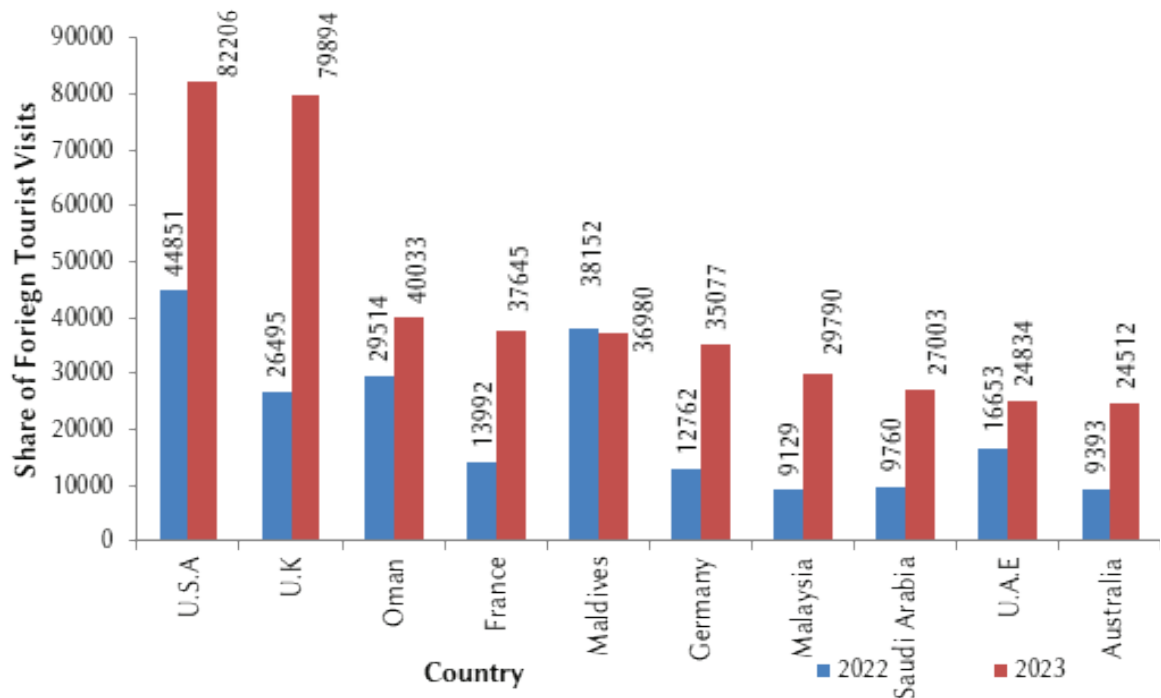
### Domestic Tourists Visits – month-wise

The month-wise data on the visits of domestic tourists in Kerala in 2023 shows that the highest number of tourists visited in December and the lowest in March. Details are given in **Table 5.3.3**.

### Source of Domestic Tourists

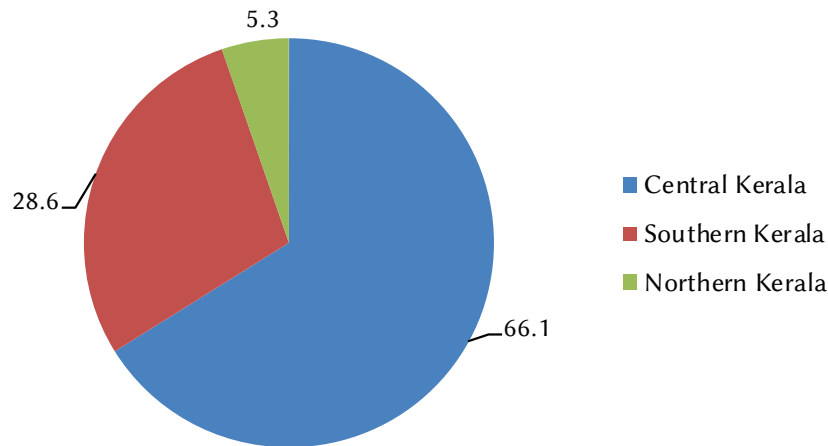
The data on domestic tourist visits in Kerala by State of origin reveals that about 68.5 per cent in 2023 and about 71.6 per cent in 2022 visitors are from within Kerala. With respect to the source from other States, in 2023, Tamil Nadu topped with a share of 10.4 per cent. Karnataka (6.6 per cent) and Maharashtra (3.6 per cent) were the other important States. These states topped the list in the previous

**Figure 5.3.2** Number of foreign tourist visits to Kerala from the top ten countries of the world during 2022 and 2023



Source: Department of Tourism, Government of Kerala

**Figure 5.3.3** Region-wise foreign tourist visits in Kerala in 2023, in per cent



Source: Department of Tourism, Government of Kerala

year also. **Appendix 5.3.5** gives the details on the State-wise share of domestic tourist visits in Kerala. **Figure 5.3.5** shows state wise domestic tourist visits to Kerala from top ten states during 2022 and 2023.

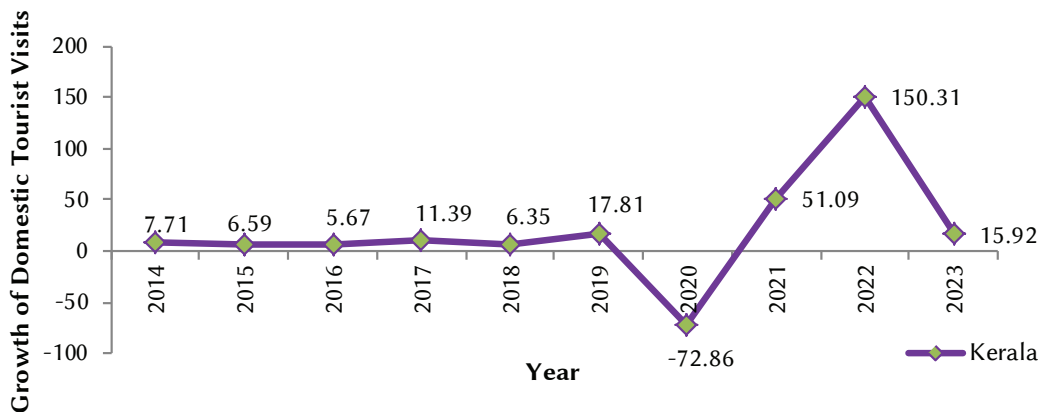
**District-wise visits of Domestic Tourists**

Ernakulam (20.5 per cent) and Idukki districts (16.6 per cent) received the largest number of domestic visitors in 2023. In 2022, Ernakulam and Thiruvananthapuram districts were in the top position. Kasargod attracted the lowest number of domestic tourists in 2023 followed by Pathanamthitta. Details are given in **Appendix 5.3.6**. Region-wise details show that a greater number of domestic tourists visited central parts of Kerala in 2023. This trend has remained the same for the last five years. **Figure 5.3.6** illustrates region-wise domestic tourist visits in Kerala in 2023.

**Impact on Tourism Earnings**

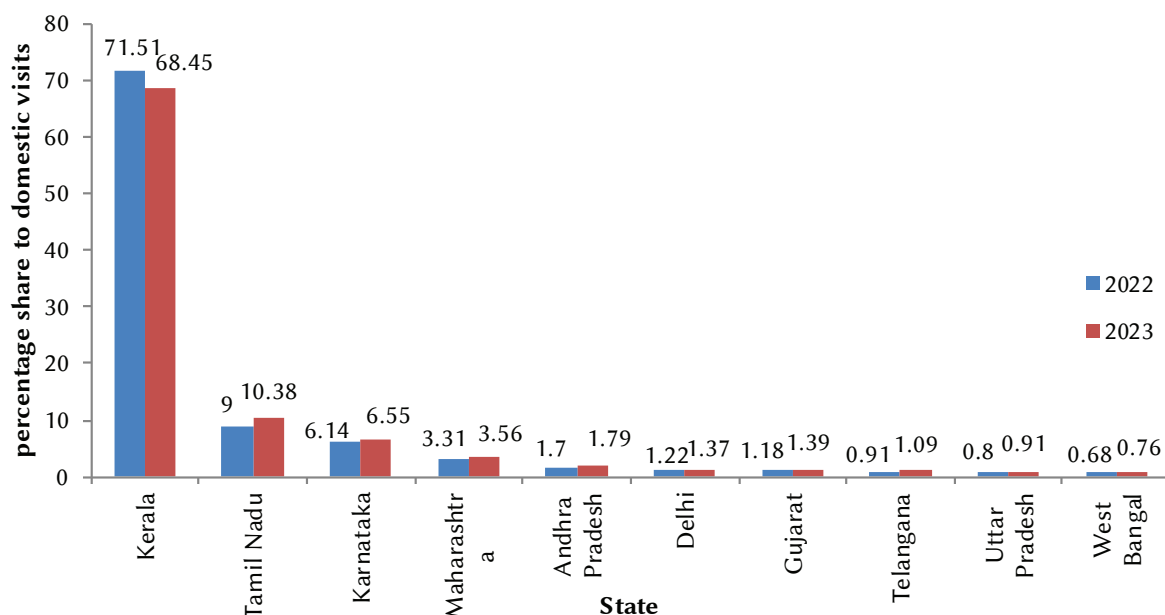
Total earnings (both direct and indirect) from tourism in 2023 was Rs 43,621.22 crore showing an increase of 24 per cent over 2022 (Rs 35168.4 crore). The foreign exchange earnings from foreign and domestic tourists increased in 2023 compared to 2022. Foreign exchange earnings from tourism and domestic tourist earnings in 2023 were Rs 5,245 crore and Rs 28,717.5 crore respectively. In 2022, the foreign exchange earnings were Rs 2,792.4 crore, and domestic tourist earnings were Rs 24,589 crore. Details are given in **Appendix 5.3.7**. Details of earnings from tourism (Direct & Indirect) in Kerala from 2014 to 2023 are shown in **Table 5.3.4**. **Figure 5.3.7** presents the total revenue generated from tourism in Kerala from 2014 to 2023.

**Figure 5.3.4** Annual growth rates in the arrival of domestic tourists in Kerala from 2014 to 2023, in per cent



Source: Department of Tourism, Government of Kerala

**Figure 5.3.5** Share of domestic tourist arrival from top ten States to Kerala during 2022 and 2023, in per cent



Source: Department of Tourism, Government of Kerala

**Table 5.3.3** Month-wise visits of domestic tourists in Kerala for the last three years

Sl. No.	Month	No. of Domestic Tourists Arrival		
		2021	2022	2023
1	January	7,88,185	12,33,862	18,28,815
2	February	7,28,204	11,62,035	15,70,857
3	March	6,83,801	13,98,917	15,36,602
4	April	3,73,290	16,11,134	19,27,700
5	May	66,711	19,10,617	21,73,589
6	June	1,20,473	15,79,028	16,46,080
7	July	4,14,189	14,32,307	16,68,625
8	August	6,26,792	14,80,642	18,94,539
9	September	7,18,945	15,72,294	17,21,809
10	October	8,55,682	17,39,286	17,95,778
11	November	9,29,262	16,82,632	18,74,362
12	December	12,32,083	20,64,660	22,32,885
	Total	75,37,617	1,88,67,414	2,18,71,641

Source: Department of Tourism, Government of Kerala

### Accommodation Units in Kerala

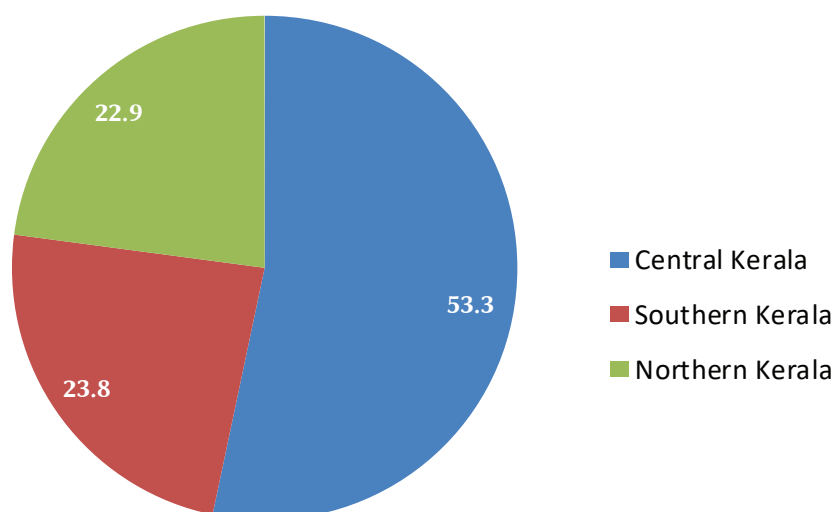
The total number of tourist accommodation units in the State as of June 30, 2024, is 8,862 with more than 1.16 lakh rooms. Idukki has the highest number of accommodation units (1,816

units) followed by Ernakulam District (1,333 units). Kasaragod has the lowest number (129) of accommodation units. Details are shown in **Appendix 5.3.8**.

### Awards and acknowledgments during 2023 - 2024

- Kerala Responsible Tourism Mission Society (former Responsible Tourism Mission) bagged many international awards in the 2023-24 financial year, (1) Gold award in International Centre for Responsible Tourism (ICRT) India and Subcontinent Awards 2023 in the Local Sourcing of Craft and Food category. (2) ICRT India and Subcontinent Gold Award – 2024 for Beypore Integrated RT Development Project in the category: Employing and Upskilling Local Communities (3) Best Rural Tourism Village Award 2024 for Kumarakom in the category: Agri Tourism, (4) Best Rural Tourism Village Award 2024 for Kadalundi in the category: Responsible Tourism.
- Kerala Tourism got awards including (1). Pacific Asia Travel Association (PATA) Gold Award for Digital Marketing Campaign – WhatsApp Maya Holiday Heist – Online Contest, 2024 (2). PATA Gold Award for Marketing Campaign (State and City - Global) – Pack Up for Kerala, 2023.
- Best Stand Award 2023 from World Travel Market (WTM), London
- Best Tourism Village Gold Award 2023 for

**Figure 5.3.6** Region-wise domestic tourist visits in Kerala in 2023, in per cent



Source: Department of Tourism, Government of Kerala

**Table 5.3.4** Total earnings from tourism (Direct & Indirect) in Kerala from 2014 to 2023 in Rs crore

Year	Total Revenue generated (Direct & Indirect)	Percentage change
2014	24,885.44	8.54
2015	26,689.63	7.24
2016	29,658.56	11.12
2017	33,383.68	12.56
2018	36,258.01	8.60
2019	45,010.69	24.13
2020	11,335.96	-74.81
2021	12,285.91	8.37
2022	35,168.42	186.25
2023	43,621.22	24.04

Source: Department of Tourism, Government of Kerala

Kanthalloor from Ministry of Tourism, Govt. of India.

- Responsible Tourism (RT) Mission has made it to the Global List of Case Studies of the United Nations World Tourism Organisation (UNWTO)
- Kochi features in Conde Nast Traveller's best places to visit in Asia in 2024.

#### Other achievements

**Tourism Investment Meet-** Kerala's first Tourism Investors Meet (TIM) was organised by the Department of Tourism, Kerala on 16 November

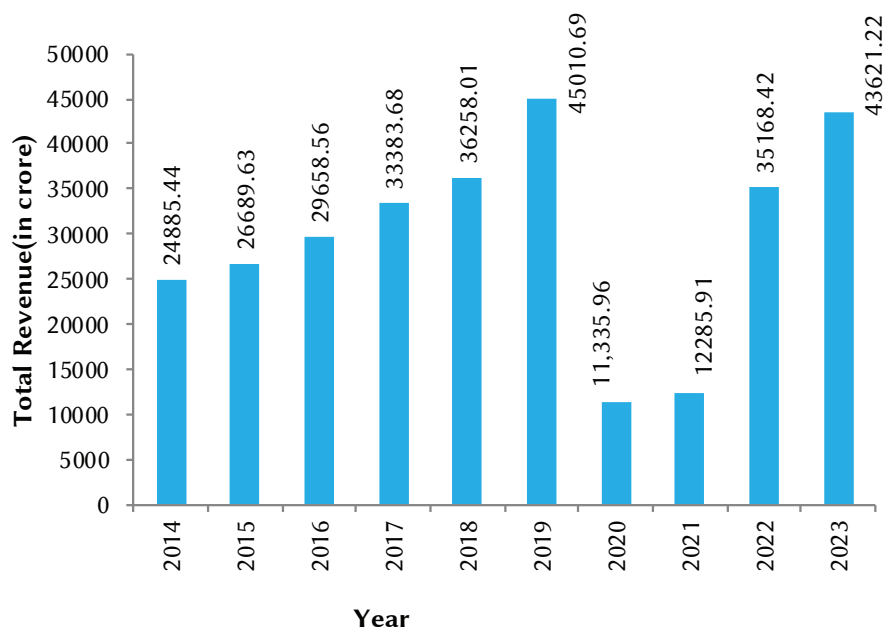
2023. Around 500 investors and entrepreneurs participated in the event, including 46 start-ups. A total of 118 entrepreneurs in the field of Responsible Tourism attended the meeting. 52 private sector projects and 23 Government projects were presented at the event. Around 15,126.7 Crore investment has been promised in the event. A Memorandum of Understanding was signed between Kerala Tourism and the Bengaluru-based hospitality group Tamara Leisure Experiences for a Rs 250-crore houseboat hotel project to be executed in the Alappuzha and Kannur districts.

Survey sketches of Alleppey Heritage Restaurant, Alleppey Waterside Resort, Water Sports Centre at Andhakaranazhi Beach in Alappuzha District, construction of tourist hub at Thuruvetikunnu, Kottayam, Munakkal wharf terminal complex, Thrissur, wellness resort Thirunelly, tourism facilitation centre Kabaneetheeram, Wayanad adventure park & eco resort Vagamon and Eco resort Idukki have been prepared after the Tourism Investors Meet.

#### Major achievements of infrastructure development projects

Tourism in Kerala aims to build resilient world-class infrastructure in tourist centres, launch new tourism products, maintain existing products, and upgrade facilities including capacity enhancement in the existing hotels. The development of tourist destinations is mainly entrusted to Kerala Tourism Infrastructure Limited (KTIL), Kerala Tourism Development Corporation (KTDC), Bekal Resorts

**Figure 5.3.7** Total earnings from tourism during 2014 to 2023, Rs in crore



Source: Department of Tourism, Government of Kerala

Development Corporation Ltd (BRDC) and the District Tourism Promotion Councils (DTPCs).

Kerala Tourism Infrastructure Limited (KTIL) is engaged in the preparation of tourism master plans, evolving strategies for new destination development, and offering consultancy services

to both the public and private sectors. KTIL has formulated the Design Policy for Kerala for the Department of Tourism & PWD and the final draft report has been submitted to the Government. In this connection, the design policy strategy workshop was conducted in September 2024 and the final draft of the report

**Box No 5.3.2** Kerala Travel Mart 2024

The 12th edition of Kerala Travel Mart (KTM) was held from 26th to 29th September 2024 at the Samudrika & Sagara convention centres of Cochin Port Authority at Wellington Island, Kochi. The main focus of the event was to promote Kerala as an important wedding and MICE (meeting, industries, conferences, and exhibitions) tourism destination. It was successful in bringing tour operators, travel agents, hospitality professionals, and media from all over the globe to familiarize themselves with the destination and tourism activities in Kerala.

The 12th edition of the Kerala Travel Mart (KTM-2024) set a record in its 24-year history by facilitating 74,867 business-to-business (B2B) meetings. The biennial event, touted as the largest of its kind in Asia, attracted a record number of buyers from around the globe and various States (2,839 buyers from 76 countries), and included 808 foreign delegates, with the largest from the UK, the Gulf countries and the United States. The event had a total of 2005 domestic registrations, 340 international buyers, 764 domestic buyers, 347 Seller Stalls, 16 Government Stalls, and 7 Sponsorship stalls. The interactions were made possible through a user-friendly QR code.

The proceedings were managed with green protocol in a paperless manner with the assistance of an app. KTM hosted a variety of business sessions and panel discussions, along with a mega exhibition. KTM 2024 concluded with a renewed sense of resilience and innovation, as the state continues to emerge as a top global tourism destination, blending sustainability, culture, and cutting-edge technology to enhance visitor experiences.

Source: Department of Tourism, Government of Kerala

on implementation strategies was submitted to the Government on 28th September 2024. The Design Policy of the State has been approved. KTIL has prepared Kerala Tourism Version 2.0 as a novel approach for tourism development in Kerala. As part of the introduction of new innovative tourism products in the State, KTIL has furnished the final draft of the Heli Tourism Policy report to the Government. The formal inauguration and flag-off of Heli Tourism services in Kerala was held on 30th December 2023. The final draft report on the development of the Cruise Tourism Policy has also been submitted to the Government in May 2024 for final approval. The draft report and policy for the development of tourist hubs in Kerala prepared by KTL has been forwarded to the Government. KTIL was the nodal agency for convening the Tourism Investors Meet 2023.

Bekal Resorts Development Corporation Ltd (BRDC) - The resort site in Malamkundu in Uduma Panchayath - is completed and is ready for operation under the "Gate Way" brand of Taj Hotels. The destination became a wedding destination with more than 50 destination weddings during 2023-24. During 2023-24 BRDC completed the works like additional facilities at Bekal Beach Park and, the renovation of Parking Bay at Bekal. The Bekal Beach festival was conducted in association with BRDC at Bekal Beach Park from 22 to 31 December 2023. Resort work in Uduma Panchayth has been completed and it is ready for operation. Thrikkannad Leisure Centre was made operational and is open for tourists. BRDC introduced a Bio gas-based waste management system at the Beach Park. Bekal has become a wedding destination and the number of domestic tourists has increased considerably.

Kerala Tourism Development Corporation (KTDC) – New trends in the hospitality sector include; online travel agents serving as digital marketplace to promote hotels/ resorts/ homestays/ other services, artificial intelligence having a transformative impact on the industry, hoteliers crafting social media content to reach the targeted segment, utilization of organic as well as paid promotions/ influencer collaborations to reach the targeted segment, mobile booking applications for OTA's and travel agents with both B2C and B2B modules. The industry is experimenting with multiple operating structures like management contracts, franchising, or revenue-sharing models, thus shifting from asset-heavy investing to multiple

asset-light options. Tourists are demanding eco-friendly products like bio-degradable, plastic-free supplies and plastic-free zones in hotel properties. This demand results in hoteliers adopting renewable energy methods, reducing waste, and recycling programs that minimize ecological footprints.

KTDC has constructed a conference hall at Waterscapes, Kumarakom, and hosted the G20 Sherpa meeting. Other major projects of KTDC are the renovation of Samudra Hotel phase III, the upgradation and renovation of the convention centre at Mascot Hotel, the construction of Caravan Parks at Bekal and Bolgatty Palace, and the renovation of 45 rooms at Raindrops, Chennai.

Department of Tourism - The achievements in the form of Infrastructure project completion includes beautification and construction of security fencing at Vengathanam waterfalls ( Kottayam), Valiyamada waterfront project Kumarakom (Kottayam), renovation of KTDC Kumarakom gateway- (Kottayam), development of break water tourism project at Thankassery (Kollam), basic amenities at Azhimala Sivakshethram, Vizhinjam, (Thiruvananthapuram), construction of amenity centre for Vettucaud Madre De Deus church (Thiruvananthapuram), construction of Edathavalam facilities at Sree Mahadeva Temple, Kazhakoottam, (Thiruvananthapuram), construction of amenity centre at Chittoor Thampuram Sree Bhadrakali Temple at Powdikonam (Thiruvananthapuram), construction of convention centre and multi-purpose tourist facilitation centre at Veli (Thiruvananthapuram), construction of amenity centre at Beemapalli (Thiruvananthapuram), development of Perumathura beach (Thiruvananthapuram), construction of world class toilet at Varkala Beach (Thiruvananthapuram), construction of childrens park at Manappattuchira, Malayattoor (Eranakulam), Thalasseri Heritage projects - development of Museum- Thodeekkulam Temple (Kannur), development of Pazhasi Museum and gallery at Mridangasaileswari Temple (Kannur), boat terminal at Mukkuvanchery (Kannur), water recreation centre at Meenkuzhi (Kannur), pilgrim tourism development at Lokanarkave Temple (Kozhikode), International Kayaking Championship Centre at Arippara ( Kozhikode), Sarovaram nature learning centre phase I (Kozhikode), world class toilet blocks at



Karappuzha, Pookode (Wayanad), Bhutt road beach park (Kozhikode) and Bekal (Kasaragod), boat terminals at Madakkal and Kottapuram (Kasaragod), kite beach development, Kanjangad (Kasaragod), Botanical Garden at Munnar Phase III (Idukki), beatification of existing children's park walkway and other infrastructure facilities in the bank of Muthirappuzha river at Munnar (Idukki), and construction of Jalakam Ecopark at Amappara (Idukki) and Chungam Chakkarappurakkal Kayalchira pathway and boat landing facility.

### **Human Resource Development**

The hospitality industry in India and Kerala requires a steady supply of well-trained professionals. New hotels, resorts, and tourism ventures continue to open across the country, creating a need for institutes that can provide specialized education and cater to the diverse needs of the industry, such as front-office management, culinary arts, and hospitality management. The major institutions for HR development in tourism are the Kerala Institute of Tourism and Travel Studies (KITTS), the State Institute of Hospitality Management (SIHM), and Food Craft Institutes (FCIs). KITTS offers skill development programs focusing on Travel, Tourism, and Hospitality.

KITTS offers i) an MBA (Travel and Tourism) approved by the All India Council for Technical Education (AICTE), ii) 3 three-year BBA (Tourism Management), and iii) 3-year B.Com (Travel and Tourism), all affiliated with the University of Kerala. KITTS courses are Diploma in Logistics Management and Diploma in Airport Operations. During 2023-24, 28 and 18 students were admitted to these courses respectively. In 2023-24 KITTS trained 276 participants in various training programmes. In addition, the Institute offers other short-term courses like Post Graduate Diploma in Public Relations in Tourism, Post Graduate Diploma in Tourism and Hospitality Management, Post Graduate Diploma in Digital Marketing, a Certificate course in Front Office Management, Multi skill Tourism & Hospitality course, and International Air Transport Association (IATA) courses. During this period KITTS completed the construction and inaugurated the new academic block. The library has been upgraded. As part of Gender initiatives, almost 100 women are given training to get income-earning opportunities from tourism. From the 2020-23 batches, the students got placed in 21 companies like Airlines, Airports, Tour Operators, Hospitality,

and allied sectors. A total of 43 jobs were offered to 37 students.

SIHM - Kozhikode offers BSc. Degree (Hospitality & Hotel Administration), Diploma in food production programs, and training programs are conducted focusing on different aspects of hospitality, including front office operations, food production, housekeeping, and tourism management. The institute is affiliated to the National Council for Hotel Management & Catering Technology (Ministry of Tourism, Government of India) and the Degree is awarded by Jawaharlal Nehru University New Delhi. Admission to a Degree program is through an all-India entrance test conducted by NCHMCT. SIHM Kozhikode not only creates job-ready graduates but also fosters entrepreneurial skills. Many graduates go on to start their hospitality ventures such as boutique hotels and restaurants, thus contributing to the local and national economy. The Institute conducted HSRT, STC, and entrepreneurship courses like skill testing - housekeeping, HSRT (traditional snacks and savory maker), entrepreneurship - cook tandoor, and Swadeshi Dharshan - skill testing food productions which are sponsored by the Ministry of Tourism, GOI in 2023-24 academic year. 101 students were qualified for these courses. Women Empowerment Scheme of State Government Batch 1, Traditional Snack & Savory Maker is the course sponsored by the Department of Tourism, Govt. of Kerala in which 44 students have participated. Forty-seven students of SIHM were offered placements from the campus placement offered by various luxury hotels.

Food Craft Institute provides basic skill training to job aspirants in various trades of the hotel and tourism industry in Kerala. Food Craft Institute in Kerala has 13 centres from Kasargode to Thiruvananthapuram. The construction work of Food Craft Institute, Kozhikode is completed. The institute has conducted 12 women-oriented programs in 2023-24.

### **Marketing in Tourism**

The marketing activities of Kerala Tourism include international and national promotional campaigns, branding, partnerships and collaterals, and sponsorship for marketing events. It has participated in regional, national, and global marketing programs, ensures the presence of Kerala tourism at the international level, and provides financial support for various events and

programs based on social media, website activity, and public relations activities. As a result of the timely showcasing of new products and new-age digital marketing, Kerala Tourism's Facebook page, Instagram account, and Twitter account are leading in India for social media marketing. It has 5.1 million Facebook Followers, 749K Instagram Followers (which is Second place in India), and 1.9M followers in X (leader). The "Holiday Heist" was a month-long interactive bidding game conducted via Kerala Tourism's WhatsApp ChatBot, Maya. The campaign quickly gained widespread popularity, attracting 80,000 bids from travellers across India, eager to explore Kerala's prime destinations at remarkably low prices. Marketing campaigns like "Land of Harmony", "Summer Holidays", and international road shows in Barcelona, Milan, Paris, London, Prague, and Vienna have also made an impact. Kerala Tourism also participated in the National Trade Fair in Kolkata, Visakhapatnam, Pune, Mumbai, Surat, Rajkot, Delhi, Bhopal, Bengaluru, Ahmedabad, Lucknow, and Chandigarh.

### **Destination challenge**

Chirakkulam Madhuram Poonkavanam in Kanakkari Grama Panchayat, Kottayam, Manachal tourism project, Elavally Grama Panchayat, Podumbuchira tourism project, Muriyad Grama Panchayat, Thrissur, Children's adventure park, Thakur Grama Panchayath, Malampuzha master plan, Palakkad, Nizhaladum, West Kallada Grama Panchayath, Kollam, Edavaka village tourism destination, Wayanad District, Tourism Destination and Open Gym at Manikyamangalam, Renovation of Mangalampuzha park and Kodampally chira in Ernakulam and Nedumkulamkadav koodali Grama Panchayat, Kannur are the major ongoing projects under Destination Challenge Project of Tourism Department.

### **Responsible Tourism (RT)**

The Responsible Tourism Mission is working to ensure local people's participation in the tourism sector based on the basic principles of the concept of responsible tourism, which are economic, social, and environmental responsibilities. The main objective of the Responsible Tourism Mission is to transform tourism as a tool for rural development, poverty alleviation, and women empowerment. The mission has transformed into the Kerala Responsible Tourism Mission Society (KRTM Society), an autonomous body under the

Department of Tourism. It started functioning independently on 01 April 2024. The Society aspires to provide an additional income and a better livelihood to farmers, traditional artisans, and marginalised people along with creating a social and environmental equilibrium.

The KRTM Society provided training for skill development to 4200 people (online and offline) in 2023-24. The trained people are registered as RT units and linked with the industry through various platforms of the Society directly or indirectly. The production, procurement, and purchase mechanism links the grassroots level community members like farmers, plantain leaf suppliers, local souvenir producers, etc with the tourism industry. The Experiential Tourism packages of KRTM Society not only provide authentic experiences to the tourists, it are also a source of income for the local community, support to maintain the cultural heritage of the society, and environmental protection.

The Kerala Agri Tourism Network, Experience Ethnic/Local Cuisine Network, RT Art and Cultural Forum, Women Friendly Tourism Initiative, RT Clubs, and Women RT clubs are some of the unique initiatives of the agency. With the advisory and technical support of the UN Women State team, a safety gap assessment study has been conducted at 68 destinations to understand the gaps in the destinations, and the training needs have been identified. Based on the report, measures will be taken by the Government to incorporate the gap-filling components in the infrastructure development projects and the upcoming design policy of the State. The society has organised a global conference on Responsible and Gender Inclusive Tourism and with an aim to declare a minimum of 10 tourism destinations in the State as 100 per cent women-friendly.

In 2023-24, there were 25,188 individual or group units registered with KRTM society (including 1,402 new units registered) out of which 17,884 are women-owned or leading units under various categories like cloth bag-making units, paper bag-making units, handicraft-making units, various farming units, farm supply units, artists, artisans, chauffeurs, community tour leaders, farm visit units, home stays, farm stays, accommodation units, ethnic cuisine units and so on. Through these units over 1, 50,090 local community members and more than 1,50,000 families are

connected directly or indirectly to tourism and are generating income. Out of the total 1,50,767 beneficiaries (including 52,344 direct and 98,423 indirect beneficiaries), 19,988 were new beneficiaries included in the 2023-24 financial year. KRTM Society is facilitating the units by linking their products and services with the tourism industry and tourists through online platforms and offline. KRTM Society has 5 online platforms to facilitate the units to get revenue. RT Mission Units have earned a total of Rs 82.6 crore from 2017 August to 2024 August and Rs 22.8 crore during this financial year. The activities of RT Mission are well appreciated as model responsible tourism practices/activities and are recognised by various national and international awards and recognitions.

### **Eco-tourism in Kerala**

Ecotourism in Kerala was developed as part of the Participatory Forest Management for the benefit of the forest-dependent communities. The service charges collected from the visitors of these sites constitute the Eco-system Management Fund which is utilized for the maintenance and protection of the ecotourism centres, removal of waste, providing basic visitor amenities and security to the visitors, and remuneration to the members of VSS/EDCs engaged in various activities in the ecotourism sites. The VSSs and EDCs are grassroots-level organizations where forest-dependent families are members participating in the planning and implementation of various forestry and community development programs. The tourist visits to ecotourism destinations are mostly domestic and the number of visitors at major ecotourism sites has reached its carrying capacity.

Thenmala has continued as a high-demand destination. In 2023 a total of 1,61,423 tourists visited Thenmala and that in 2024 (up to June) was 81,967. The number of tourists visiting Thenmala has crossed the pre-Covid level of 2019 (1,45,109). Punnappara, Alappuzha is an ecotourism program that is focusing for the first time on the coastal belt of Kerala. Four training programs were sanctioned for the managers of ecotourism destinations and field staff in the Forest Department for the first time. In 2023-24 more attention was given to ecotourism programs outside forest areas.

Schemes like Thenmala Musical Dancing Fountain, Munderikkadavu Bird Park, Gavi ecotourism, and Arippa ecotourism are nearing completion. An eco-friendly program at Thooganpara, Thiruvananthapuram has been conceived. Carrying capacity study of a few destinations and training programs under the Nelliampathy landscape scheme for eco-development committee members and Vanasamrakshana Samithi members who manage the ecotourism destination are entrusted to KITTS. For the promotion of the bird-watching initiative, an evening seminar was organised in connection with the biography of renowned ornithologist Shri. Induchoodan. Ecotourism programs were also promoted during the Onam festival and Kerala Travel Mart.

### **Way Forward**

To elevate Kerala to a premier global tourist destination, tourism development in the State prioritises upgrading infrastructure, providing innovative offerings, promoting sustainable tourism practices, supporting local entrepreneurship, preserving the State's natural beauty and cultural heritage sites, and fostering community-based tourism. Kerala's efforts in improving infrastructure, developing new destinations and upgrading existing ones, better connectivity between destinations, transportation, and accommodation options in less-visited areas are being taken forward. Measures being taken to enhance the tourism sector by efficiently utilising Government and private sector resources are bringing positive results. A customer-centric product management approach, technological integration, adaptability and resilience to changing trends, policies and regulations that support sustainable tourism, responsible business practices, and the protection of natural and cultural heritage are emerging as key areas of intervention.

The Covid 19 pandemic had adversely affected the tourism sector in Kerala. However, the sector is witnessing a revival and staging a come-back. The number of international tourists visiting Kerala has increased, on track to reach pre-Covid levels. The flow of domestic tourists to Kerala reached an all-time high in 2023. These facts highlight the resilience of the tourism sector in Kerala. With an increase in tourist visits, and new experiences being offered, the sector is expected to do well in the immediate future.

## 5.4 EXTERNAL TRADE

The global trade has slowed, and the global economy has been significantly impacted by two crises since 2020. First, the coronavirus (COVID-19) outbreak that year caused businesses and merchants to close, which led to a global economic catastrophe. Then, in February 2022, just as the economy was starting to recover from the impacts of COVID-19, the war in Ukraine led to a sharp increase in inflation. The COVID-19 pandemic and the Russia-Ukraine conflict have affected the global economy, with trade growth decreasing in 2022 and remaining poor in early 2023. Since then, Global trade has had a highly volatile pattern. The trade decline in the first half of 2023 has been experienced in many economies as a fall in the growth rate of exports. This includes both developed and developing countries. According to the World Trade Organization (WTO), world merchandise is expected to grow from 2.6 per cent in 2024 and 3.3 per cent in 2025, after a contraction in the year 2023. The World Trade Organisation estimates that the world trade in goods and services amounted to \$24 trillion in 2023. World trade has been remarkably resilient in recent years despite the presence of several major economic shocks. Commercial services also increased with annual US dollar values up 21 per cent between 2019 and 2023.

Merchandise imports were down in most of the economies, partly due to falling prices for commodities such as natural gas, the price of which fell 63 per cent on average in 2023. The US dollar value of world trade in commercial services was up 9 per cent to 7.5 trillion as spending on

travel and other services continued to recover from the COVID-19 pandemic. Macroeconomic conditions and the war in Ukraine dictated that inflationary pressures would constrain real wages and incomes in 2022 and 2023. The volume of international trade looks optimistic, showing a favorable trend in the first quarter of 2024. The value of trade in goods increased by around 1 per cent quarter-over-quarter, while services saw a 1.5 per cent growth. This increase is primarily due to the United States, China, and India, with exports from China rising by 9 per cent, India by 7 per cent, and the US by 3 per cent. The market for green energy and AI-related products is witnessing substantial expansion, marked by a 25 per cent rise in the trade value of high-performance servers and electric vehicles. Trade in developing nations and trade between South-South countries rose by approximately 2 per cent for both imports and exports in the initial quarter of 2024. The increase in Global travel is expanding the volume of trade in the services sector, with the United States, China, and India at the forefront. This session reviews the overseas trade patterns of India in 2023 and the outlook for trade in 2024, with a special focus on trade from Kerala ports.

### **External Trade in India**

The Ministry of Commerce and Industry has estimated that India's overall export increased from \$676.2 billion in 2021-22 to \$770.2 billion in 2022-23, with a growth rate of 13.2 per cent. The total export during the 2023-24 was \$776.7 billion registering a growth of 0.8 per cent over the 2022-23. India's over all export growth at present is

**Table 5.4.1** India's Overall Exports and Imports: 2017-18 to 2023-24, Value in US\$ Billion

Year	Exports			Imports		
	Merchandise Exports	Services Exports	Overall Exports	Merchandise Imports	Services Imports	Overall Imports
2017-18	303.5	195.1	498.6	465.6	105.2	570.8
2018-19	330.1	208	538.1	514.1	126.1	640.2
2019-20	313.4	213.2	526.6	474.7	128.3	603.0
2020-21	291.81	206.1	497.9	394.44	117.52	511.96
2021-22	421.80	254.4	676.2	611.89	144.79	756.68
2022-23	447.46	322.72	770.18	714.24	177.94	892.18
2023-24	437.06	339.62	776.68	677.24	177.56	854.80

Source: Ministry of Commerce and Industry GoI

very promising estimated at \$468.3 billion during April-October 2024 compared to \$ 436.5 billion in April-October 2023.

The Merchandise export in 2023-24 was \$437 billion as against \$ 447.5 billion in 2022-23. Services export was \$ 339.6 billion in 2023-24, showing growth of 4.4 per cent over the previous period. Merchandise imports in 2021-22 was \$611.9 billion which increased to \$ 714.2 billion in 2022-23 and further declined to \$ 677.2 billion in 2023-24. Services import was \$178 billion in 2022-23, which marginally declined to \$177.6 billion in 2023-24. (**Table 5.4.1**).

For the Financial Year 2023-24, under merchandise exports, 17 of the 30 key sectors exhibited positive growth. These include Iron Ore (117.7 per cent), Electronic Goods (23.6 per cent), Tobacco (19.5 per cent), Ceramic Products & Glassware ( 14.4 per cent), Fruits and vegetables (13.9 per cent), Meat, Dairy & Poultry products (12.3 per cent), Spices (12.3 per cent), Coffee (12.2 per cent), Drugs & Pharmaceuticals (9.7 per cent), Cereal Preparations and miscellaneous processed items (9 per cent), Oil Seeds (7.4 per cent), Oil meals (7 per cent), Hand Made Carpet (6.7 per cent), Cotton Yarn/Fabs/Made Ups, Handloom Products etc (6.7 per cent), Carpet (2.1 per cent), Engineering Goods (2.1 per cent) and Tea (1 per cent).

Under merchandise imports, 16 of the 30 key sectors exhibited negative growth in 2023-24 as compared to 2022-23. These include Cotton raw and waste (-58.4 per cent), Fertilisers, Crude and Manufactured (-39.2 per cent), Sulphur and

unroasted iron pyrites (-37.5 per cent), Vegetable Oil (-28.6 per cent), Pearls, Precious and semi-precious stones (-22.4 per cent), Coal, Coke & Briquettes, etc (-21.8 per cent), Organic and inorganic chemicals (-20.1 per cent), Newsprint (-18.4 per cent), Project goods (-17.6 per cent), Petroleum crude and products(-14.2 per cent) Transport equipment (-14 per cent), Textile Yarn Fabric, Made up articles (-13 per cent), Pulp and waste paper (-12.3 per cent), wood and wood products(-11.3 per cent), Leather and leather products (-11.3 per cent) and Artificial Resins, Plastic materials, etc (-5.5 per cent). Services exports is projected to grow positively at 4.4 per cent during the FY 2023-24 over FY 2022-23. As per the PIB report of Ministry of Finance, the overall trade deficit reduces to US dollar 78.1 billion in FY 24 from US dollar 121.6 billion in FY 23.

#### **External Trade in Kerala**

Kerala plays a major role in the export prospects of the nation by contributing marine products, coffee and spices products exports. The external trade in Kerala is mainly through Cochin Port. Coffee, tea, cashew kernels, seafood, coir products and spices are the major items of export through Cochin port. In 2023-24, the total traffic, coastal and foreign handled by Cochin Port was 363.2 lakh MT as against 352.6 lakh MT in 2022-23 registering a growth of 3 per cent compared to 2 per cent in the previous year. Out of the total traffic in 2023-24, total coastal traffic increased by 4 per cent with 126 lakh MT as against 121.1 lakh MT in the previous year. Total foreign traffic increased by 2.5 per cent with 237.2 lakh MT in 2023-24 compared to 231.5 lakh MT in 2022-23. (**Table 5.4.2**)

**Table 5.4.2** Cargo handled at Cochin Port, 2021-22 to 2023-24, quantity in lakh MT

Traffic	Export			Import			Total		
	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24
Coastal	49.38	43.7	56.91	68.97	77.36	69.01	118.35	121.06	125.92
Foreign	35.88	29.65	26.18	191.27	201.84	211.05	227.12	231.49	237.23
Total	85.26	73.35	83.09	260.24	279.2	280.06	345.5	352.55	363.15

Source: Cochin Port Trust

Total export, both coastal and foreign, through Cochin Port was 83.1 lakh MT in 2023-24 as against 73.4 lakh MT in 2022-23, recording a positive growth of 13.3 per cent compared to 14 per cent negative growth in the previous year. Out of this, coastal export accounts for 57 lakhs MT in 2023-24 as against 43.7 lakh MT in 2022-23, which records a positive growth of 30.2 per cent. However the foreign export fell to 26.2 lakh MT in 2023-24 from 29.7 lakh MT in the previous year, recording a negative growth of 11.7 per cent.

Export of merchandise through Cochin Port shows an increase in quantity traded and growth rates in 2023-24. The total quantity exported in 2022-23 was 73,34,871 MT. This has increased to 83,09,890 MT in volume of trade and a 13.3 per cent growth rate in 2023-24. A very drastic growth is visible in the trade of coir products, which is 148.1 per cent in 2023-24. This is followed by Tea, spices, and miscellaneous. Coir products, Tea, Spices, Cashew Kernels and miscellaneous are in a better position in 2023-24. Coir products have improved from 1,19,350 MT of trade volume and (-) 50.4 per cent growth rate in 2022-23 to 2,96,137 MT of trade and 148.1 per cent growth rate during 2023-24. Tea shows a positive growth rate of 23.0 per cent in 2023-24. Details are given in **Appendix 5.4.1**.

Import through Cochin Port increased by 0.3 per cent in 2023-24 from 2,79,20,360 MT volumes in 2022-23 to 2,80,05,576 MT in 2023-24. The import of iron and steel grew by 26 per cent in 2023-24. The quantity imported in 2022-23 was 31,327 MT and 39,467 MT in 2023-24. The import of fertilisers and raw materials increased by 11.0 per cent in 2023-24. The import of fertilisers and raw materials was 1,71,110 MT in 2022-23 and 1,89,842 MT in 2023-24. Details of major items of import through Cochin port are given in **Appendix 5.4.2**.

#### Export of Marine Products

Export of marine products from India increased from 17,35,286 MT in 2022-23 to 17,81,602 MT in 2023-24. Total export value decreased from Rs 63,969.1 crore in 2022-23 to Rs 60,523.9 crore in 2023-24. This shows a growth rate of 2.7 per cent in quantity exported and (-)5.4 per cent decrease in value generated.

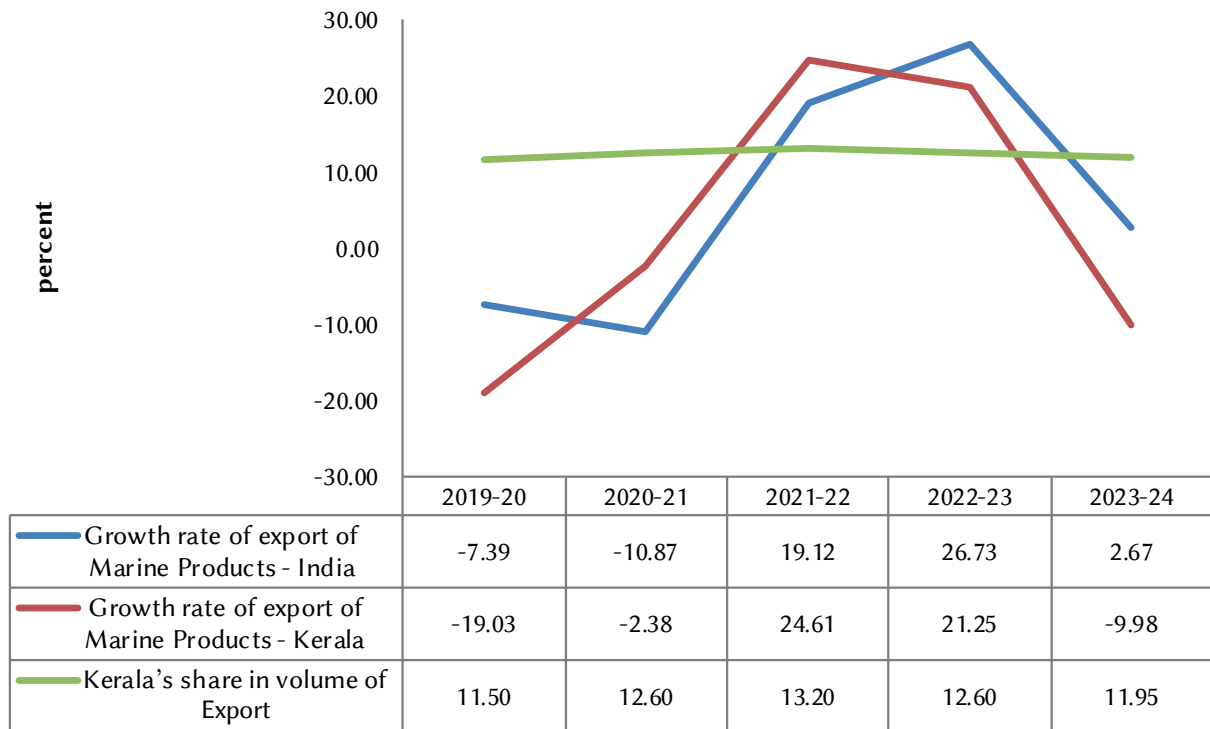
Kerala's marine export decreased from Rs 2,18,629 MT in 2022-23 to Rs 1,96,807 MT in 2023-24, and value decreased from Rs 8,285 crore in 2022-23 to Rs 7231.8 crore in 2023-24. This shows a decreased growth rate of (-)10.0 per cent in volume of export and (-)12.7 per cent in value generated. The details are given in **Table 5.4.3**.

**Table 5.4.3** Export of marine products in India and Kerala 2019-20 to 2023-24, quantity in MT and value in Rs crore

Year	India		Kerala		Kerala's share (per cent)	
	Quantity	Value	Quantity	Value	Quantity	Value
2019-20	1289651	46662.9	148226	5020.30	11.50	10.80
2020-21	1149510	43721.00	144700	5039.90	12.60	11.50
2021-22	1369264	57586.50	180315	6396.20	13.20	11.10
2022-23	1735286	63969.15	218630	8285.03	12.60	13.00
2023-24	1781602	60523.89	196807	7231.84	11.05	11.95

Source: Marine Products Export Development Agency (MPEDA), 2023

**Figure 5.4.1** Trend in the quantity of export of marine products, India and Kerala, 2019-20 to 2023-24

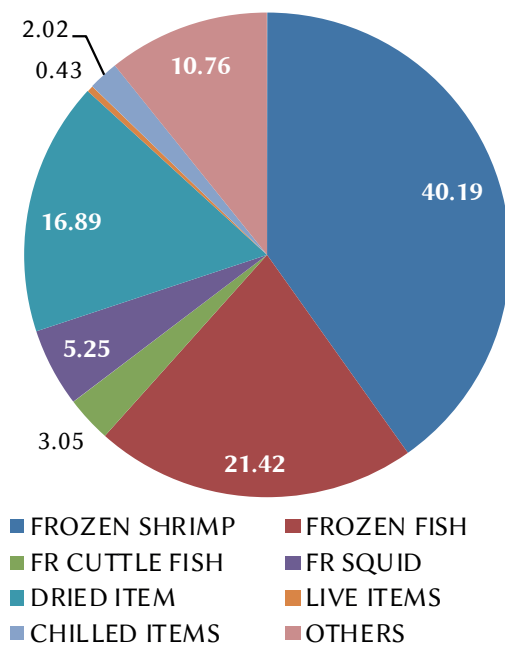


Source: Marine Products Export Development Agency (MPEDA)

In general terms, the export of marine products in quantity from India and Kerala increased considerably, except for COVID-19 years, and the rebounds of the sector were prompt. The State of Kerala has a decisive share in the export basket of marine products from India in quantity terms. It was 13.2 per cent in 2021-22, 12.6 per cent in 2022-23, and 11 per cent in 2023-24. During the last two years, we have seen a decrease in marine exports. The features associated with climate change like a rise in sea surface temperature, change in season and intensity of monsoon, and ocean acidification are the reasons for the decrease in marine exports. **Figure 5.4.1** depicts the trends in marine exports of the nation and Kerala, along with the share of the State in the national export of marine products.

The item-wise export of marine products from India in 2023-24 shows that frozen shrimp continued to be the top export item with a market share of 40.2 per cent in quantity and 66.1 per cent in value, followed by frozen fish with a share of 21.4 per cent in quantity and 9.1 per cent in value. India exported frozen shrimp to the tune of 7.2 lakh tonnes valued Rs 40,013.5 crore in 2023-24

**Figure 5.4.2** Market share of item-wise export of marine products from India in 2023-24, in per cent



Source: Marine Products Export Development Agency (MPEDA)

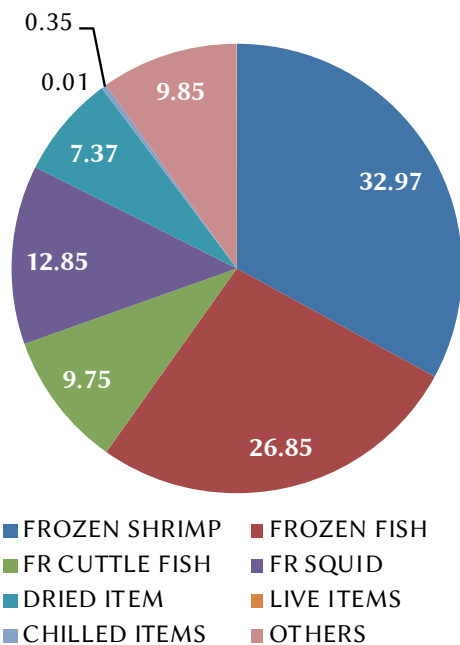
(Appendix 5.4.3). **Figure 5.4.2** depicts the market share of item-wise export of marine products from India in 2023-24.

In 2023-24, 64,895 MT of frozen shrimp was exported from Kerala, which accounts for 33 per cent of the total trade volume. This is followed by frozen fish with 52,833 MT of quantity and 26.9 per cent of total trade volume in 2023-24. In the value generated base, frozen shrimp held a 49 per cent in total value generated and frozen fish held 12.3 per cent of total value generated in 2023-24. **Figure 5.4.3** shows the market share of item-wise exports of marine products from Kerala in 2023-24.

The largest export market for India's marine products in 2023-24 was China with 4.6 lakh MT of volume followed by South East Asia (3.8 lakh MT), USA (3.3 lakh MT), other countries (2.4 MT), Japan (1.1 lakh MT) and Middle East (0.8 lakh MT). Major markets of India's marine products and their share are depicted in **Figure 5.4.4**.

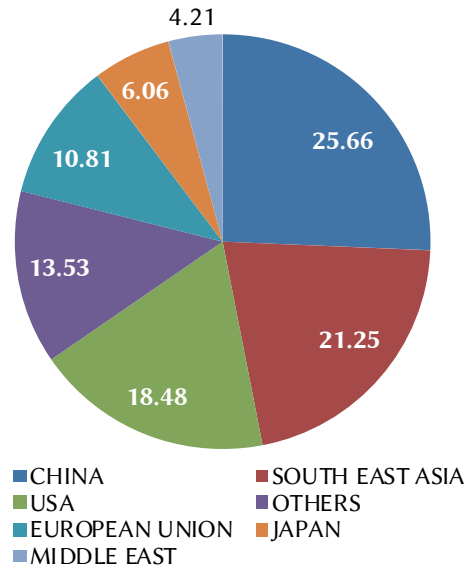
The largest export market for Kerala's marine products in 2023-24 was China (43964 MT) followed by the European Union (42705 MT), Southeast Asia (38868 MT), Other countries

**Figure 5.4.3** Market share of item-wise export of marine products from Kerala in 2023-24, in per cent



Source: Marine Products Export Development Agency (MPEDA)

**Figure 5.4.4** India's market-wise export of marine products in 2023-24, in per cent



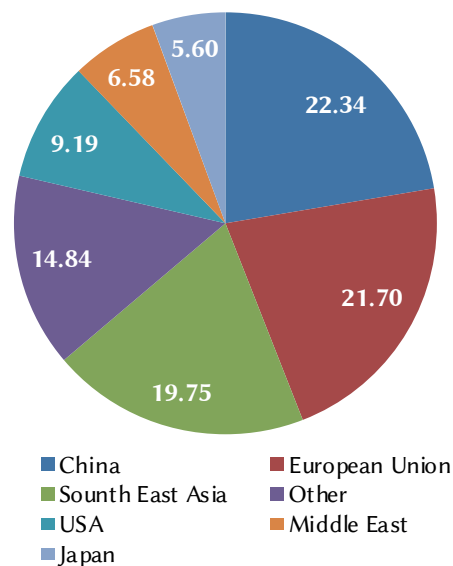
Source: Marine Products Export Development Agency (MPEDA)

(29210 MT), USA (18083 MT) Middle East (12949 MT), and Japan (11029 MT). Major markets of Kerala's marine products and their share are depicted in **Figure 5.4.5**.

### Export of Cashew

India is among the largest cashew producing countries in the world. India exports cashews to more than 60 countries. As per the Directorate

**Figure 5.4.5** Kerala's market-wise export of marine products 2023-24, in per cent



Source: Marine Products Export Development Agency (MPEDA)



**Table 5.4.4** Export of cashew kernels, 2016-17 to 2023-24, in Rs crore

Year	Kerala		India		Share of Kerala (per cent)	
	Quantity (MT)	Value (Rs crore)	Quantity (MT)	Value (Rs crore)	Quantity	Value
1	2	3	4	5	6	7
2016-17	38,054	2,415.3	82,302	5,168.8	46.2	46.7
2017-18	36,930	2,580.4	84,352	5,871.0	43.8	44.0
2018-19	29,062	1,892.6	66,693	4,434.0	43.6	42.7
2019-20	30,478	1,742.5	67,647	3,867.2	45.1	45.1
2020-21	*23,368	NA	49,992	2,907	46.7	NA
2021-22	*24,299	NA	53,770	3,175.2	45.2	NA
2022-23	*21,858	NA	44,948	2,718	48.6	NA
2023-24	*22,753	NA	46,235	2,620.2	49.2	NA

Source: Cashew Export Promotion Council of India/\* Cochin Port Trust

General of Commercial Intelligence and Statistics, the quantity of cashew export from India in 2023-24 is 46,235 MT and the value is Rs 2,62,021 lakhs. This was 44,948 MT and Rs 2,71,800 lakhs in 2022-23.

Cashew cultivation spread along the coastal regions of peninsular India. Kerala has an important role in production, processing, and export of cashew. The export of cashew kernels from Kerala increased to 22,753 MT in 2023-24, from 21,858 MT in 2022-23, registering a positive growth of 4 per cent over the same period last year (Table 5.4.4).

After Ivory Coast, India is the second largest producer and exporter of cashew nuts with a share of more than 15 per cent, followed by Vietnam

in the world's cashew export. United Arab Emirates (UAE) continued to be the largest export market for Indian cashews followed by, Japan, Netherlands, Saudi Arabia, Spain, Qatar, Kuwait, USA, and Germany. India primarily exports Cashew Kernels with small quantities of Cashew Nut Shell Liquid. The composition of export of cashew export from India is detailed in Table 5.4.5

The export of cashew nuts kernel whole and Cashew Nuts Fresh/Dried In Shell together contribute 64,582 Kilograms of export volume and Rs 276,659.4 lakhs value in 2023-24. This was 58,604 Kilograms in 2022-23 with the value of Rs 2,82,044.1 lakhs. The export of cashew items except Cashew nut shell liquid (CNSL), crude & Cashew kernel, broken from India shows an

**Table 5.4.5** Composition of Export of major Cashew items from India for 2022-23 and 2023-24 Quantity in Kilograms and Value in Rs Lakh

Product	2022-23		2023-24	
	Qty	Value	Qty	Value
Cashew kernel, whole	44,281.63	2,67,747.15	45,625.91	258,820.40
Cashew Nuts Fresh/Dried In Shell	14,322.04	14,283.04	18,955.75	17,839.01
Purified and distilled Cashew shell liquid (CNSL), Cardanol	6,607.05	5,708.32	9,714.10	6,119.18
Cashew shell liquid (CNSL), crude	10,641.81	5,638.61	3,508.17	1,601.97
Cashew kernel, broken	676.44	4,052.82	608.59	3,201.08
Cashew nut, Roasted and / or salted	1,987.94	15,056.01	2,548.12	18,897.66
Total	78,516.91	312,485.95	80,960.64	30,6479.3

Source: Directorate General of Commercial Intelligence and Statistics

**Table 5.4.6** Composition of Import of major Cashew items from India for 2022-23 and 2023-24 Quantity in Kilograms and Value in Rs Lakh

Product	2022-23		2023-24	
	Qty	Value	Qty	Value
Cashew Nuts Fresh/Dried In Shell	13,29,751	14,24,773.94	1251321.88	1163262.63
Cashew kernel, whole	2,025.31	11,126.69	3,526.58	18,572.87
Cashew Nut Shell Liquid (CNSL), crude	3,176.39	1,099.51	5,132.72	1,842.08
Cashew kernel, broken	278.15	926.6	241.27	969.88
Cashew nut, Roasted and/or salted	69.86	533.53	103.57	718.23
CPurified and distilled Cashew shell liquid (CNSL), Cardanol	0.5	36.97	0	0
<b>Total</b>	<b>13,35,301</b>	<b>14,38,497.24</b>	<b>1,260,326</b>	<b>11,85,366</b>

Source: Directorate General of Commercial Intelligence and Statistics

increasing trend in 2023-24.

Import of Cashew kernel, whole & Cashew Nuts Fresh/Dried in Shell together constitute 12,54,848.5 Kilograms in 2023-24. This was 13,31,776.3 Kilograms in the previous year. For the same items, the value of import was Rs 11,818,35.5 lakhs in 2023-24 and Rs 14,35,900.6 lakhs in 2022-23. It shows a negative growth in the import of Cashew kernel, whole & Cashew Nuts Fresh/Dried in Shell. Ivory Coast, Tanzania, Guinea Bissau, Benin, Ghana, Mozambique, Nigeria, Senegal, etc. were the major import sources of raw cashew nuts.

### Export of Coir and Coir Products

The export of coir and coir products from India is 12,32,097 MT in volume and the value is Rs 3,39,690.9 lakhs. This is a -2.6 per cent growth over the previous year's export of 12,64,784 MT of coir and coir products. The export of coir and coir products from Kerala through Cochin Port showed an increasing trend in 2023-24. The quantity exported through Cochin Port in 2023-24 was 2,96,137 MT and recorded a positive growth of 148.1 per cent over the previous year. The export of coir and coir products through Cochin Port in 2022-23 was 1,19,350 MT.

The available records of item wise export of coir products in 2023-24 show that exports of handloom matting, Coir Rugs & Carpets, Coir rope and coir sorts from India registered growth both in terms of quantity and value, whereas, coir fibre, coir yarn, power loom mat, tufted mat, curled coir and rubberised coir showed a decline in

terms of quantity and value. Handloom mat, coir geotextiles, and coir pitch show growth in terms of quantity and decline in terms of value. Coir pits with export earnings of Rs 1,83,737.8 lakhs constituted 54.1 per cent of the total export of coir products from the country. Tufted mats products, constituted 4.9 per cent in quantity and 17.5 per cent in terms of value. Coir fibre with an export value of Rs 48344.8 lakhs constituted 32.9 per cent in quantity and 14.2 per cent in value.

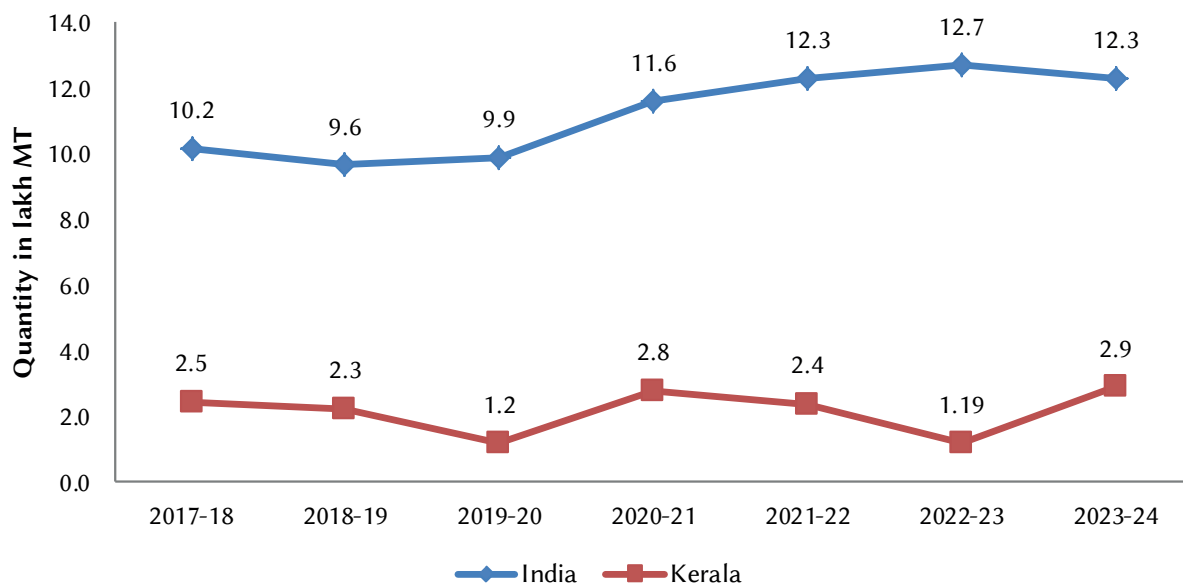
In 2021-22, 120 countries imported coir and coir products from India. China topped among the importing countries with 23.3 per cent in value and 43.7 per cent in quantity. The USA was the second largest importer of coir products from India with a share of 25.2 per cent in value and 11.5 per cent in quantity. The other countries, that imported substantial quantities of coir and coir products, were the Netherlands, South Korea, the UK, Spain, Australia, Italy, Germany, France & Canada. The export trend of coir and coir products from India and Kerala is given the **Figure 5.4.6**.

### Export of Tea

The export of tea from India in 2023-24 was 2,50,724 MT and the value for export was Rs 6,47,638 lakhs. This shows growth from 2,28,397 MT and a value of Rs 6,38,581 lakhs in 2022-23. The major export market was the Russian Federation followed by Iran, Saudi Arabia, USA, and UAE. This shows a 9.8 per cent growth in quantity exported and 1.4 per cent growth in value generated.

Export of tea from Kerala ports in 2023-24

**Figure 5.4.6** Export trend of coir and coir products from India and Kerala (through Cochin Port), 2017-18 to 2023-24, quantity in lakh MT



Source: Coir Board and Cochin Port Trust

is 87,649 MT worth Rs 1,87,766 lakhs from 69,107 MT worth Rs 15,3,179 lakhs in 2022-23 registering a growth of 26.8 per cent in terms of quantity and 22.57 per cent in terms of value. (Table 5.4.7).

#### Export of Coffee

In 2023-24, a total quantity of 3.8 lakh MT of coffee worth Rs 3618952 crores was exported from India as against 3.9 lakh MT of coffee worth Rs 3621549 crores in 2022-23 registering a growth of (-)2.6 per cent in quantity and -0.07 per cent in value. Italy, Germany, Belgium, and the Russian Federation are the major importers of coffee from India. The export of coffee from Kerala through Cochin port shows a fall in quantity exported by 34211 MT and growth by (-) 27.6 per cent, in

2023-24 compared to 47245 MT volume and (-)23.9 per cent growth in the previous year.

#### Export of Spices

In 2023-24, the export of spices and spice products from India was 15,39,692 MT valued Rs 36,95,880.5 lakhs as compared to 14,04,357 MT valued Rs 31,76,138 lakhs in the previous year. This registers a increase of 9.6 per cent in volume and an increase in value by 16.4 per cent. The export of spices from Kerala in 2023-24 was 1,19,434 MT and the value of export was Rs 6,41,092.9 lakh. This shows an increase in quantity traded by 7.5 per cent and value by 16.2 per cent over the previous year. (Table 5.4.8).

The export basket of spices and spice products from India includes about 52 spices and its products. The exports of chilli, cumin, spice oil & oleoresins, mint products, turmeric, curry powder, cardamom (small), and pepper altogether contribute 80 per cent of the total export earnings from spices. In 2023-24, the export of spices like fenugreek, other seeds, tamarind, and other spices, have shown a decrease both in quantity and value compared to the previous year. All other spices like chilli, ginger, coriander, celery, fennel, garlic, nutmeg & mace, and curry powder/paste have shown an increasing trend in quantity export.

**Table 5.4.7** Export of tea from Kerala ports and India 2019-2023, quantity in MT, Rs In lakhs

Year	India		Kerala	
	Qty	Value	Qty	Value
2019-20	2,41,344	5,45,710	76,983	1,47,082
2020-21	2,03,791	5,31,153	70,398	1,56,595
2021-22	2,00,785	5,41,577	64,854	1,46,841
2022 -23	2,28,397	6,38,581	69,107	1,53,179
2023-24	2,50,724	6,47,638	87,649	1,87,766

Source: Tea Board

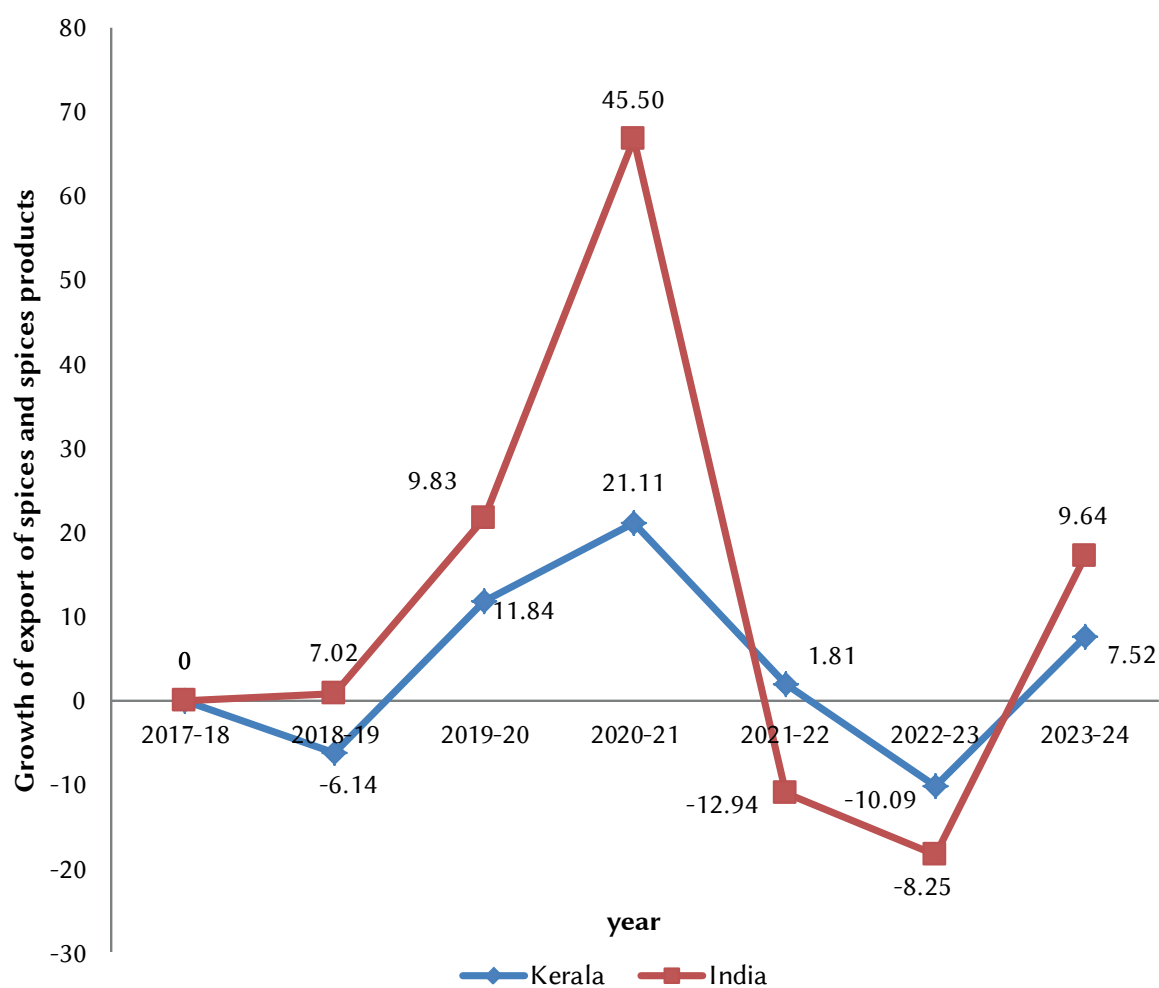
China is the largest importer followed by the USA,

**Table 5.4.8** Export of spices, India and Kerala, from 2017-18 to 2023-24, quantity in MT and value in Rs lakh

Year	Kerala		India		Kerala's share (per cent)	
	Quantity (in MT)	Value (Rs lakh)	Quantity (in MT)	Value (Rs lakh)	Quantity	Value
1	2	3	4	5	6	7
2017-18	95,455.90	4,15,296.10	10,28,060	17,98,016.2	9.30	23.10
2018-19	89,590.80	3,78,560.40	11,00,250	19,50,581.1	8.10	19.40
2019-20	1,00,195.80	4,05,421.30	12,08,400	22,06,280.0	8.30	18.40
2020-21	1,21,348.90	5,00,633.60	17,58,266	30,96,771	6.90	16.20
2021-22	1,23,547.93	5,66,643.60	15,30,661	30,32,432.4	8.10	18.50
2022-23	1,11,080.13	5,51,521.02	14,04,357	31,76,138.2	7.90	17.36
2023-24	1,19,433.95	6,41,092.88	15,39,692	36,95,880.50	7.75	17.34

Source: Spices Board \* Provisional

**Figure 5.4.7** Trend in the growth of export of spices and spice products from India and Kerala, 2017-18 to 2023-24, quantity in percent



Source: Spices Board

Bangladesh, UAE, Thailand, Malaysia, Indonesia, UK, Sri Lanka, Nepal, Germany, Saudi Arabia, Nepal, and the Netherlands, which accounts for 77 per cent of exports of spices from India.

Kerala's export of spices and spice products, in quantitative terms, showed an increasing trend onwards 2018-19 and it continue up to 2020-21. A decline was registered during the year 2021-22. The year 2022-23 registered a negative growth of (-)10 and registered a positive growth of 7.5 for the year 2023-24. With regard to India's exports in spices shows negative growth for two consecutive years of 2021-22 and 2022-23 and then it shows a positive growth during the year 2023-24 (9.6 per cent). **Figure 5.4.7** depicts the trend in the growth of exports of spices and spice products from India and Kerala.

In 2023-24, the export of individual spices like cardamom small, cardamom large, ginger, fenugreek, mint products & miscellaneous spices from Kerala showed a decrease both in volume and value as compared to the previous year. A total volume of 4,001.4 MT of cardamom (small) valued Rs 698 crore was exported from Kerala in 2023-24 as against 4,345.1 MT valued Rs 550 crore in 2022-23. Export of chilli 28,867.18 MT valued Rs 906.3 crore in 2023-24 shows an increase from 25,717 MT valued Rs 659.7 crore from the previous year. The export of pepper increased to 15568 MT valued Rs 649.8 crores in 2023-24 as against 12,491.2 MT valued Rs 575.2 crores in 2022-23.

In the case of value-added products export of curry powder & mixture and spice oil & oleoresins products showed an increase in volume and value in 2023-24 in terms of quantity as compared to 2022-23. Export of curry powder and mixture in 2022-23 was 17,505.2 MT valued Rs 408.6 crore which rose to 18,663 MT valued Rs 504.5 crore in 2023-24 recording an increase in volume and value of export. Export of spice oil & oleoresins products in 2022-23 was 9766.4 MT valued Rs 2,365.4 crore which rose to 10,587.2 MT valued Rs 2,636.8 crore in 2023-24 recording an increase in volume and value of export.

## 5.5 PUBLIC SERVICES

### Survey and Land Records

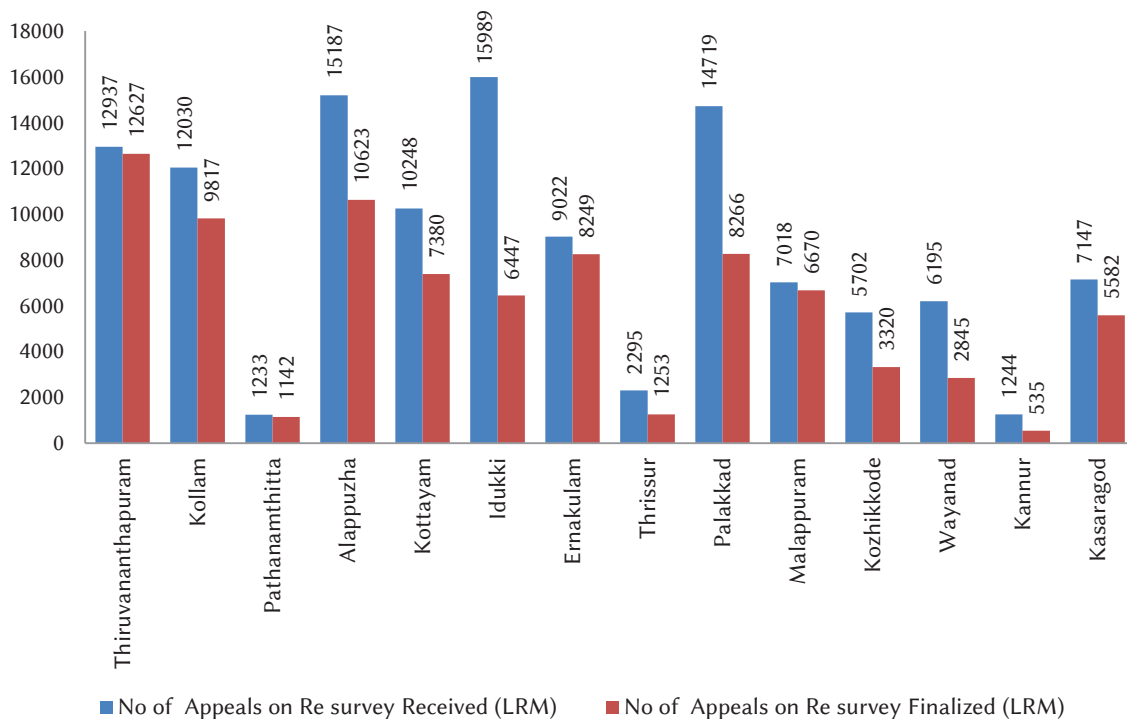
Effective land administration is the responsibility of the Government, which must ensure the safeguarding of land ownership and provide user-friendly, efficient mechanisms for citizens to buy, own, mortgage, sell and transfer land ownership. Good land governance significantly impacts the social development index, social harmony and economic growth. Therefore, generating error-free digital land records is essential for the overall development of the State. As part of the digital transformation process in governance, the Department of Revenue has formulated three comprehensive vision statements such as “Land for all”, “Deed for all land”, “All services are smart”.

The main functioning of the Department of Survey and Land Records is to complete the resurvey process of all land holdings in the State within a stipulated period. Along with this, the Department also works on land management, digitisation of land survey records, survey of land for facilitating distribution of *pattayam* (ownership deed of land), land assessment and land acquisition, forest land survey, and survey of land in accordance with Government policy for special projects. The Department had completed resurvey of land in 922 villages out of the 1,666 villages till 2024, with the resurvey work of 744 villages remaining to be completed. The resurvey works are progressing with the help of modern gadgets such as Continuously Operating Reference Stations (CORS) and Real Time Kinematic Rover (RTK-Rover). The advanced mapping infrastructure greatly enhanced the accuracy and efficiency

of land survey programs. The CORS network, comprising 28 stations across Kerala, revolutionised traditional survey methods, making them faster and more precise. Recognising the significance of digital surveying, the State has established a dedicated control centre, setting it apart from other States. This specialised centre ensures that, even if the main control centre of the Survey of India experiences downtime, Kerala’s control centre can provide signal corrections, ensuring uninterrupted digital surveys. The CORS network is analytic infrastructure, supporting a wide range of applications and will serve as a hub for processing, storing and distributing data collected by the 28 reference stations installed across the State.

The Digital Land Survey of Kerala is a pioneering e-Governance initiative by the Kerala Government aimed at modernising land administration and governance in the State. The project focuses on safeguarding land ownership, enabling user-friendly land transactions, and producing error-free digital land records. Key objectives include conducting a comprehensive land survey across the entire State within four years, providing accurate and up-to-date Land Parcel Maps (LPMs) to stakeholders, including pre-mutation sketches, and integrating revenue, survey, and registration systems through a single portal (ILIMS) for seamless land transactions. Additionally, the program aims to establish a conclusive titling system with a Record of Rights (RoR) for transparent land dealings and create a multipurpose cadastral database for various Government functions, including disaster management.

**Figure 5.5.1** District-wise number of Re-survey appeals received and finalised in 2023



Source: Directorate of Survey and Land Records

Details of resurvey from 2020 to 2024 (up to August 31, 2024) are given in **Appendix 5.5.1**. The Department also acts as the authority on resurvey appeals and Land Acquisition (LA) appeals. The District Collectors take final decision on the recommendation of the District Survey Superintendents on such appeals. In 2023, the District offices have finalised 84,756 cases (70.1 per cent) out of 1,20,966 appeals on resurvey. **Figure 5.5.1** shows the District-wise details of resurvey appeals received and finalised. Details of resurvey appeals received and finalised in 2023 are shown in **Appendix 5.5.2**.

The Survey Department imparts training to IAS officers and officials of Revenue Department, Survey Department and Deputy Collectors. Details of training imparted are shown in **Appendix 5.5.3**

### Digitisation of Legacy Land Records

The digitisation of land records is a crucial step in modernising land administration, with legacy maps serving as a reference layer for the digital land survey. To support this process, all cadastre land records are being digitised and uploaded to the 'Ente Bhoomi' portal. This allows easy access for accurate and updated land information. In

### Box 5.5.1 Progress in the Integrated Land Information Management System (ILIMS)

Apart from the digital survey, an Integrated Land Information Management System (ILIMS) is being developed through the 'Ente Bhoomi' initiative to provide a single-window service for citizens in all land transactions. ILIMS will serve as a comprehensive, one-step online platform, minimising manual intervention and integrating land services across the Registration, Revenue, and Survey Departments. Through ILIMS, landowners will have access to accurate, authentic, and continuously updated land mapping services, including spatial and textual data and land sketches. Key components like the digital land survey, ILIMS, the settlement system, and the Record of Rights (RoR) are crucial steps toward achieving the State's goal of 'conclusive land titling.' Testing of the ILIMS module is almost complete, and it is expected to launch in October 2024.

addition, the public can purchase legacy maps through the portal to meet their needs, ensuring greater transparency and efficiency in land transactions and management.

The Survey Department is entrusted with the work of the digitisation of Survey records. Details of digitalisation of records are given in **Appendix 5.5.4**. The existing land records are scanned and kept in digital form. In 2022 and 2023 the number of Field Measurement Book (FMB) scanned are 2,01,969 and 11,583 respectively. In 2024, the number of Field Measurement Book (FMB) scanned are 2,77,538.

Under the Digital Resurvey Project (*Ente Bhoomi* Project), field surveys have already been completed in 207 villages, and published Section 9(2) of the Survey and Boundaries Act 1961. Survey work is progressing rapidly in an additional of 191 villages. In this short period, over 441614 lakh hectares of land, covering 32.4 lakh land parcels, have been measured using advanced survey equipment such as RTK (Real-Time Kinematic) and RETS (Robotic Electronic Total Stations).

*Ente bhoomi* portal is an initiative of the Government of Kerala intended to provide all land related services to the public through online. The "*Ente Bhoomi*" Portal, developed by the National Informatics Centre, is a key component of Kerala's digital survey program, utilising advanced survey infrastructure such as Continuously Operating Reference Stations (CORS), Real-Time Kinematic (RTK) Rovers, Robotic Total Stations, and Tablet PCs. By learning from past resurvey experiences, the programme ensures that survey records are meticulously prepared using an entirely IT-based approach. The "*Ente Bhoomi*" portal (<https://entebhoomi.kerala.gov.in>) serves as an end-to-end solution for managing all activities related to the digital survey. It offers several benefits, including access to legacy survey data for surveyors, eliminating the need for physical visits to collect records, and enabling paperless operations that contribute to environmental sustainability. The portal also provides real-time information to landowners during field surveys, allowing them to access crucial details about their properties, while citizens can verify their records online without visiting Government offices. Additionally, the portal includes a complaint resolution feature for addressing land-related discrepancies and ensures easy future updates due to its digital format.

Integration with other Government departments further enhances collaboration and data sharing, making the system adaptable and efficient. The progress in the first two phases of "*Ente Bhoomi*" portal is given in **Appendix 5.5.5 and 5.5.6**.

### **Registration Department**

The Registration Department is mandated to facilitate registration of documents and preserving evidentiary records relating to deeds, special marriages, chits, societies and partnership firms. It also has the specific duty of permanently preserving these records so that authentic certified copies can be made in the future. In addition to its service delivery function, the Registration Department possesses 2nd rank among the Revenue Earning Departments to the State exchequer through the collection of revenue receipts. The Department had successfully implemented e-payment system for the collection of registration fee. In 2023-2024, the department collected a total of Rs 1,38,219.3 crore as document registration fee. Out of this Rs 88,758 crore is for sale conveyance which is the major component. Details of documents registered in 2023-24 are given in **Appendix 5.5.7** and details of fees collected in 2023-24 are given in **Appendix 5.5.8**.

The Property Registration system viz. PEARL was made capable of comprehensive integration between Registration, Survey and Revenue departments to expand the area of operation and to make the system more citizens friendly and efficient. The present system of document registration is characterised by detailed write up involving complex sentences, physical pasting of photographs, signing and endorsement by the Sub Registrars. These processes also delay the document registration and it takes approximately one week to return the registered documents. To make an immediate impact on citizens' lives, it is critical to identify and simplify important processes and services, which are currently cumbersome, prone to unnecessary delays and long waiting time. Thus it is proposed to replace the existing registration process with newer, simpler and easier ways for improving service deliveries from the Sub Registry offices with minimum physical touch points.

To achieve this, the Registration Department has been proposed to replace the physical stamp papers with electronic stamps and to facilitate auto generation of completed deeds and endorsements using specific templates directly



from the system with biometric identification of parties. The ultimate objective of this feature will be the delivery of registered deeds on the day of registration. This template based registration not only simplifies the registration but also reduces the total turnaround time.

- The major achievements of the Registration Department in 2023-24 are as follows.
- Registration process completely online and paperless
- Integration of Registration system with Land Records
- All Legacy Registries Online and Searchable by Citizens

### **Revenue Department – e-governance initiatives**

Revenue Department envisions "Land for All, Record of Right for All Lands, and All Services are Smart." To realise this vision, the department has implemented various e-Governance initiatives that deliver smart services to citizens and officers. Key features include web portals for (i) Collection Services, (ii) Citizen Services, (iii) Employee Services, and (iv) Inventory Services. With fully digitised land records, the department facilitates efficient management of land tax payments, Aadhaar linking, certificate issuance, land conversion, acquisition, and conservancy.

### **Towards Building a Sustainable Revenue Model: Digital Transformation and Financial Self-Sufficiency**

Citizens can apply for social service pensions, submit grievances, and pay building taxes online. They can also use an advanced, UI/UX-friendly mobile app to manage land tax payments. Non-Resident Keralites (NRKs) in 10 countries-USA, UK, Canada, Singapore, Saudi Arabia, UAE, Oman, Qatar, Kuwait, and Bahrain can manage land tax payments, building taxes, additional taxes, and tharam matta via the revenue web portal. The [www.revenue.kerala.gov.in](http://www.revenue.kerala.gov.in) portal enables any citizen worldwide to check land status, ensuring transparency for buyers and sellers. Business users can log in using their PAN for secure transaction management.

All Revenue Offices are digitally interconnected through e-Office, supported by a centralised employee database that facilitates online transfers based on station seniority in 2023 and cadre seniority in 2024. The department improves service delivery through modules for surprise inspections, grievance handling, innovation sharing, and

paperless progress monitoring. The Revenue Recovery digital payment module was successfully pilot-tested in Vilappil Village, Kattakada Taluk, and the Kerala Building Tax appeal module is set for State-wide launch after comprehensive officer training.

High-bandwidth KFON networks have been sanctioned to enhance infrastructure further. Citizen engagement has increased, with over 500,000 registrations in 2022 and 2023. The Electronic Mortgage Recorder is now fully operational, generating revenue for the Government. The department operates not only on the Annual Plan fund allocated by the State Government but also actively pursues funding from the Central Government. This includes securing 3 crore for the State data center, 1.83 crore for revenue e-Courts, and 20 crore for initiatives like data digitalisation, modern record rooms, Aadhaar linking, and more.

In addition, the revenue department has successfully integrated its database with the banking sector to facilitate marking and releasing land-based mortgages, generating revenue for the department. In just one month, the revenue exceeded six digit figures. In 2024-25, the department will focus on new e-Governance initiatives, including Revenue e-Courts, Vertical Property Land Ownership, the Pattayam e-Module, and a Unique Thandapper Card. An e-literacy campaign will improve digital skills and promote data exchange between departments, supported by Government funding and sustainability efforts.

### **Excise Department**

The Excise Department is one of the Departments in the State that contributes a major share of the State Revenue. This Department is administering laws related to liquor, narcotic drugs and psychotropic substances and medicinal preparations containing alcohol and narcotic drugs etc. The department has 69 Excise Circle Offices, 138 Excise Range Offices, 40 check posts and 19 special squads. 'Vimukthi' is one of the important programmes being implemented by the Excise Department for the eradication of substance abuse. All the licensing services provided by the Department are now available online and have been successfully integrated with e-payment. It detects cases related to Abkari Act 1950, Narcotic Drugs and Psychotropic Substance (NDPS) Act

1985 and Cigarettes and Other Tobacco Products (COTPA) (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act 2003. The Excise Department has implemented e-payment and e-licensing facilities.

In October 2016, the Government of Kerala launched the *Vimukthi* Mission to raise awareness about the dangers of drug abuse and promote a '*Lahari Muktha Keralam*'. Led by the Excise Department and in collaboration with various organisations, the Mission focuses on preventing addiction among adolescents and youth. Key initiatives include anti-narcotic clubs in schools and colleges, '*Nerkkoottam*' and '*Sraddha*' committees, the '*Unaru*' project, and student competitions.

**Major highlights of *Vimukthi* Mission are as follows.**

- Setup 14 de-addiction centres in 14 Districts
- Each de-addiction centre is attached to District/ Taluk Hospitals.
- Separate de-addiction facilities for women and children are available at the Neyyattinkara District Hospital in Thiruvananthapuram and the Government Beach Hospital in Kozhikode.
- Setup three zonal counselling centres
- Zonal Counselling Centres have been functioning in Thiruvananthapuram, Eranakulam and Kozhikode Districts. These centres provide counseling both in person and over telephone.
- Toll free number 14,405 is available for counselling with specific interventions for minor NDPS cases involving individuals under 21 years.
- Started 6,287 Anti-Narcotic Clubs in Schools.
- Started 899 Anti-Narcotic Clubs in Colleges.
- As a first step to eliminate the possibility of drug use among students at the college-level, a committee named "*Nerkkoottam*" under the leadership of the Principal/Vice Principal and a committee named "*Sraddha*" in college hostels have been formed in all the colleges and hostels.
- Up to August 31, 2024, 1,020 "*Nerkkoottam*" and 512 "*Sraddha*" committees were formed.
- The '*Laharimuktha Gramam*' initiative focuses on integrating tribal and coastal communities into mainstream society while addressing health problems caused by drug use. The project includes sports training, library facilities, career guidance, and parallel education promotion.
- A key aspect of '*Laharimuktha Gramam*' initiative is the "Parallel Education Promotion and Career Development (PSC Training)" project, led by the *Vimukthi* Mission. This project aims to provide career opportunities and employment to educated students from tribal and coastal regions, thereby integrating them into society.
- Government jobs have been secured for 38 individuals who participated in career development/PSC training conducted by the Excise Department/*Vimukthi* Mission through *Janmaithri* Excise Offices in Idukki, Palakkad, Malappuram, and Wayanad Districts.
- Mini fitness centres have been established in Kollam, Idukki, Thrissur, Malappuram, Wayanad, and Kannur Districts
- As part of the awareness activities, two handbooks have been prepared titled "*Karuthal*" for parents to create awareness and "*Kavacham*" to educate students. There are 75,000 books of *Kavacham* and 75,000 books of *Karuthal* have been already distributed. 50,000 books of *Karuthal* and 50,000 books of *Kavacham* have been printed and distributed in Districts in this year.
- As part of the 4th phase of 'No to Drugs' campaign, inspection has been strengthened in the school premises to find out if any drugs and other prohibited products are being sold. From June 1 to August 31, 9,813 shops in the school premises were inspected and 1,198 cases of COTPA, 5 cases of Abkari and 8 cases of NDPS were recovered from the shops in the school premises.
- As part of the 4th phase of 'No to Drugs' campaign up to August 31, 2024 Awareness classes have been organised for 82 drivers of school/private vehicles transporting students.
- Steps have also been taken to provide treatment, counseling etc. to the children if they fall into drug addiction. Some 343 drug victims found in schools have been counselled and 10 children have been given de-addiction treatment.
- Anti-drug campaign programmes, 97 were also organised in schools with the participation of role models for children.
- Awareness classes, 588 have been conducted for parents.

- Janajagrathasamithies, 570 were met at the Local Government-level.
- *Vimukti* Mission is conducting many awareness programmes for children, parents and general public. As part of the fourth phase of the 'No to Drugs' campaign, 26,948 awareness programmes at school-level, 1,772 awareness programmes at college-level and 6,182 awareness programmes for general public have been organised.

The numbers of Abkari cases in the State were 18,592 in 2022 and 19,016 in 2023, it reduced by 12,485 in 2024. The highest number of cases is reported in Kozhikode District (1,269). With respect to NDPS cases in 2024, the rate of decrease is 39 per cent compared to previous year. The NDPS cases were recorded highest decline as compared to 2023 in Alappuzha District (-) 59.2 per cent. In case of COTPA cases, an overall decrease of 47.4 per cent was recorded in the State. The highest number of cases is reported in Thiruvananthapuram District (6,241). In 2024 (from January 01, 2024 to August 31, 2024), it registered 12,485 cases under Abkari act, 4,945 cases under NDPS Act and 45,251 cases on COTPA. It was 19,016 and 8,104 and 86,014 respectively in 2023. District-wise case details for the year 2022, 2023 and 2024 are in Appendix 5.5.9. Percentage change over previous year (i.e. 2022 and 2023) in number of cases detected by Excise Department under COTPA, NDPS, Abkari

Act are given in **Appendix 5.5.10**.

The department seizes and destroys contrabands from various illegal sources. It includes spirit, arrack, IMFL, toddy, arishta, ganja and ganja powder. District-wise details of contrabands seized and destroyed for the year 2024 (up to August 31, 2024) is given in **Appendix 5.5.11**

Excise department conducts public awareness campaign for schools, colleges and for public. A total of 53,326 awareness campaigns were conducted in 2024 (up to August 31, 2024). It was 37,168 in 2023. District-wise and sector-wise details are given in **Appendix 5.5.12**.

#### **Gaps and challenges in the sector and the way forward**

The Excise Department faces challenges such as insufficient staff, lack of vehicles, vast jurisdiction, outdated weapons, and poor communication systems. In contrast, drug and liquor mafias utilise modern weapons and communication technologies for their illegal activities. To address these issues, the department is working to provide modern facilities and upgrades.

#### **Police Department**

Kerala Police has a reputation for being one of the best-managed State police forces in the country. It is an important agency of the State Government

#### **Box 5.5.2** Details of new initiatives, success stories and innovative projects of Excise Department

The '*Unarv*' project, implemented by the *Vimukti* Mission in schools, aims to eradicate drug abuse among students. Currently, arts and sports training facilities have been established in 30 schools across the State as part of this initiative. Additionally, sports teams under the name 'Team Vimukthi' have been formed in 1,000 schools to provide training without distracting students toward undesirable behaviors. The "*Balyam Amuliyam*" project, launched at the primary school-level, instills good habits and life skills in children from an early age. This project has been implemented in 140 schools across the State, with 10 schools per District. Conceived to combat drug abuse, it serves as a model for other States.

A Standard Operating Procedure (SOP) has been developed to identify drug use among children, provide necessary counseling, prevent drug access in and around schools, offer drug-free treatment, and ensure the protection of drug-free children in coordination with various Government departments. The SOP includes information for parents to monitor and report.

The Kerala Excise Department and *Vimukti* Mission also conducted a public opinion survey titled "Public Opinion Survey on Substance Abuse," focusing on the prevalence and sources of drugs, as well as drug trafficking. Recommendations based on the survey's findings were submitted to the Government, which approved the report and directed various departments to take necessary action

entrusted with the duty of maintaining law and order along with crime investigation. The Department has different wings, such as the General Executive Wing, Crime Branch, Armed Police, State Crime Record Bureau, Training Wing, Special Branch and 11 specialised wings. The specialised wings include Forensic Science Laboratory, State Women Cell, Traffic and Road Safety Management Unit, Watch and Ward, Coastal Security Unit, Anti-Terrorist Squad, Temple Police, Tourism Police, Mounted Police Unit, Dog Squad, and Police Band. The general executive wing works among the people and it has headquarters in Thiruvananthapuram, North and South Zones, four police ranges and 20 police Districts and one Railway District.

The Department implements gender sensitive schemes. It has 14 Pink Control Rooms and 31 counseling centres. The Pink Patrol System aimed to prevent crimes against women, and Pink Control Rooms are functioning in all Districts round the clock. Self-defense training was imparted to more women. *Nirbhaya* volunteers were entrusted for assisting the police stations to ensure security of women. In order to protect the women in public, private and digital space, Pink Protection Project has been introduced in the State. “Women Self Defence Training Programme” is a unique initiative of Kerala Police under the Community Policing Project. The “Hope” project was conceived as a collaborative effort of Kerala Police and Civil Society to enhance the confidence, self-worthiness and skills of children who fail/drop out of schools before successful completion of XII standard. In order to create an invisible wall of protection around every child, Children and Police (CAP) activities are initiated in the State. Child Friendly Police Stations (CFPS) are Police Stations that demonstrate child friendliness in attitude, infrastructure, procedure and enforcement. There are 14 Child Friendly Police Stations functioning in Kerala. The ‘Kerala Police Blood Bank’ is functioning in the State from 2021 onwards to cater the Blood requirements in emergency cases inside and outside the Department. There are 205 *Nirbhaya* Volunteers working along with the Police Department. Details of gender sensitive schemes is given in **Appendix 5.5.13**

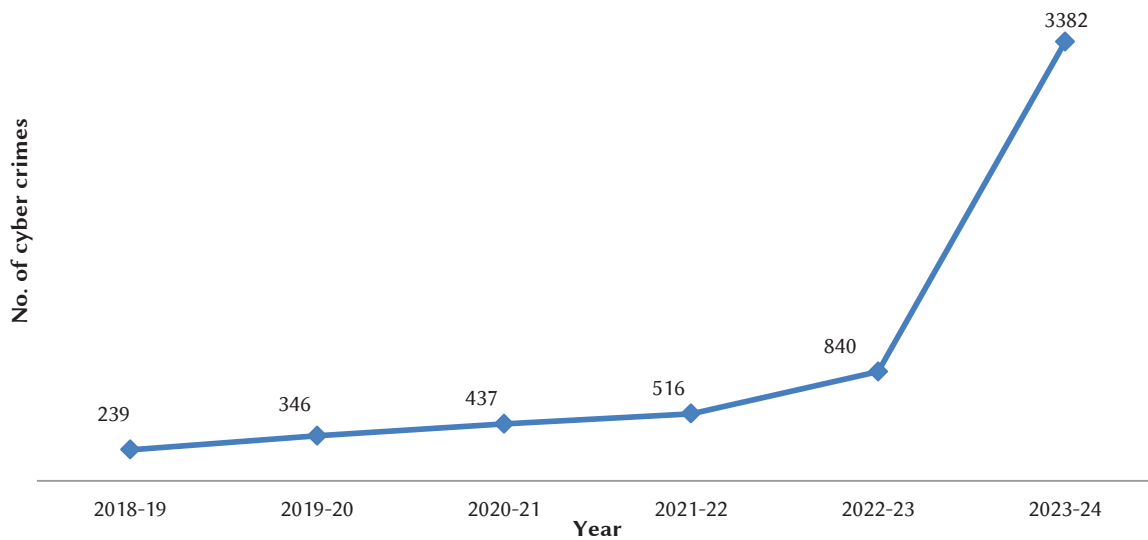
Women Police Stations were set up in all Revenue Districts except Wayanad. A woman Police Battalion was also established in the State. Emergency Response Support System (ERSS) has

been established in the State. Public can request for emergency assistance by dialing to the Emergency Number 112. Swift and effective police assistance is ensured through this system. *Janamaithri Suraksha* Project is being implemented in all the Police Stations across the State. All the 485 police stations have been converted as *Janamaithri* police stations. There are 6,500 men and 2,552 women in *Janamaithri Suraksha Samithi*. Details of community policing scheme is given in **Appendix 5.5.14**

The Student Police Cadet (SPC) Project is a school-based initiative by Kerala Police, implemented jointly by the Departments of Home and Education, and supported by Departments of Transport, Forest, Excise and Local Self-Government. The project trains high school students in the fields of law, discipline and civic sense, and encourages students to develop empathy for vulnerable sections of the society. It also strengthens commitment towards family, community, and the environment, enabling them to resist negative tendencies such as substance abuse, deviant behaviour, intolerance, and other social evils. The Project was launched on August 2, 2010 in 127 High Schools and Higher Secondary Schools across Kerala. Presently, there are 84,930 cadets in 998 schools in which SPC is implemented. Out of 998 schools, 543 are Government schools, 434 are aided schools and 21 are unaided schools. Details of schools with SPC are shown in **Appendix 5.5.15** and District wise details of SPC project implemented in schools is shown in **Appendix 5.5.16**.

The NRI Cell of Police registered 8 cases in 2023-24 (up to August 2024). Highest number of NRI cases is reported in Ernakulam District (5). Details of cases registered in the State as per direction from NRI cell is shown in **Appendix 5.5.17**. The Cyber and high-tech enquiry cell had registered 1,369 cases in 2024-25 (up to August 2024), it was 3,382 in 2023-24. **Figure 5.5.2** shows the increasing trend of cybercrimes reported during the period from 2018-19 to 2023-24. Online cheating, social media abuse, hacking of bank accounts and e-mail ids, creation, publishing and sharing of child pornography, cyber offences done through smart phones, are the major cyber-crime cases reported during the period under review. The highest number of cases is reported in online cheating (1101 cases). Details are given in **Appendix 5.5.18**.

**Figure 5.5.2** Number of Crimes Registered in Cyber Cell from 2018-19 to 2023-24



Source: Police Department

### **Kerala Development and Innovation Strategic Council, (K-DISC)**

The Kerala Development and Innovation Strategic Council, (K-DISC) is a strategic think-tank and advisory body constituted by the Government of Kerala. Launched on March 24, 2018, K-DISC was given the mandate of promoting innovation in the State. K-DISC aims at bringing out path-breaking strategic plans that reflect new directions in technology, product and process innovations, social shaping of technology and creating a healthy and conducive ecosystem for fostering innovations in the State. The mission of K-DISC can broadly be classified as holistic and quality human development in Kerala, a knowledge centred, technology based local economy with global connect and enhanced inclusion, participation and self-reliance through cutting edge knowledge and technology. In order to achieve this, K-DISC has come up with a programme framework including competency development programmes based on design thinking, and active learning initiatives making Kerala ready for Industry 4.0, and programmes for enhancing inclusion, participation and self-reliance through livelihood strategies.

The State has embraced innovation as a key driver of economic growth. Innovation is necessary to address second-generation development narratives such as the high rate of educated unemployed, high social consciousness of environmental rights, ageing population, among others. Kerala today faces a myriad of unique and “wicked” problems.

Challenges such as urban sprawl, social inequalities of the outliers and immigrants, complex micro regional issues demand integrated and innovative solutions.

Selected Projects Related to transitioning Kerala to a Knowledge Society are described below project wise.

#### **1. Kerala Knowledge Economy Mission (KKEM)**

The Government of Kerala launched the Kerala Knowledge Economy Mission (KKEM) with the goal of providing employment to educated youths of Kerala. The Kerala Development and Innovation strategic council (K-DISC) was entrusted with the implementation of the scheme. As part of the Kerala Knowledge Economy Mission, the Government envisions creating gainful employment opportunities for the jobseekers through local demand generation and employment facilitation at both local and international levels. Leveraging the strengths of these various partners and enhancing their capabilities will enable the mission to achieve the desired scale. Till September 2024 13,25,084 jobs have been created. 1,20,586 people were given employment along with KKEM partners. Direct employment was provided to 45,370 people. A digital platform was created for employers, job seekers, skill providers and systems that prepare job seekers for employment. Mechanisms have been created through Local Governments and academic institutions to mobilise job seekers.

Special mechanisms were prepared by the respective departments to organise the career break women, marginalised sections including SC, ST, transgenders, fisherfolk. Career fairs and road shows were organised to bring in employers. A new model scheme called Recruit-Train-Deploy was also implemented for industry relevant and meaningful employment.

## **2. Kerala Genome Data Centre (KGDC)**

Steps have been initiated to establish the Government announced Kerala Genome Data Centre, intended to utilise Kerala's biodiversity to create a repository of genetic information of Kerala's fauna and use that information to make effective interventions in the fields of agriculture, animal husbandry, fisheries and health. Its detailed project document has been approved by KIIFB. The steps to establish KGDC as a part of Science Park in collaboration with Digital University are progressing rapidly.

## **3. Centre of Excellence in Microbiome (CoEM)**

In collaboration with RGCB, the initial steps to establish a Center of Excellence for studying the unique microbiomes associated with animals, fish, organisms and humans are completed.

## **4. Center of Excellence in Nutraceuticals (CoEN)**

A Center of Excellence for preparation of nutraceuticals that can be effectively used for health and well-being in the pharmaceutical sector, utilising Kerala's health heritage and biodiversity, has been initiated with the assistance of RGCB and KSIDC.

## **5. Carbon Neutral Coffee in Wayanad**

A working group with scientific and technical experts has been appointed to address the problems of coffee farmers in Wayanad and to ensure better prices with the goal of carbon neutral coffee. The initial works for creating the park and commercial track have started by KINFRA and the Industries Department.

## **6. Kerala Medical Technology Consortium (KMTC)**

Kerala Medical Technology Consortium intends to create an ecosystem for manufacturing medical devices by coordinating Kerala's improved IT technology infrastructure, improved research network and effective start-up systems. Kerala Medical Technology Consortium has been able to carry out effective activities to attract expert entrepreneurs to Kerala by communicating with

leading industrialists and networks in this field globally.

## **7. Intervention in the Energy Sector**

Under the leadership of CSIR-NIIST, initial work has been done to find bio-ethanol from sources other than food products. Using water hyacinth, widely found in backwaters and other areas in Kerala, cellulose and semi-cellulose are converted into various types of sugar products using accelerators and enzymes developed by NIIST, and processing them to produce Ethanol has started. An innovative programme has been initiated in collaboration with College of Engineering Thiruvananthapuram to produce biogas under high pressure and use it for transportation. Efforts are being made to develop a model high-through put biogas unit using agricultural and household waste. Preliminary prototypes of the plant have already been created.

## **Selected Projects Related to strengthening the Innovation Ecosystem of Kerala**

### **8. Young Innovators Programme (YIP)**

Young Innovators Programme (YIP) promotes innovation among students in school, colleges, University, Departments and research institutions in the State aged 13 to 37. Enrolment in this program has been steadily increasing since 2018 and the project is poised to have a wide student impact accordingly. The objective of the programme is to develop an ecosystem for identifying youth with bright minds for solving real world problems in identified themes, mentoring them, attaching them to domain partner institutions with scholarships and help them build a career around the innovations, researching, re-discovering, incubating and accelerating the innovation. YIP has had seven cohorts so far. Over 8,000 educational institutions and 5,00,000 students have been registered in the program and over 60,000 ideas have been submitted by student teams. Seven of the State-level winners' ideas have been filed for patents.

### **9. One District One Idea (ODOI)**

This is an innovative programme for the growth of micro, small and medium industrial enterprise clusters in Kerala. In contrast to the conventional programme for growth of clusters, new technology and market development activities are being undertaken to increase productivity and increase agricultural efficiency. Efforts are being made with the help of the Enterprise Development Institute

of India (EDII) and the Digital University Kerala, to prepare action plans to move away from gradual growth of enterprises and ensure exponential growth.

#### **10. One Local Government One Idea (OLOI)**

Twenty five years of people planning system has contributed significantly to the functioning of Local Governments but many core issues of Local Governments remain to be addressed. In order to solve such complex problems, systematic work has been started in collaboration with the Department of Local Self-Government to bring together the research institutes across the country to make efforts for problem solving with their help. Activities for implementation of Hackathon as part of Garbage-free Kerala programme have also been undertaken as part of this programme.

#### **11. Interventions in the Education Sector**

*Manchadi* and *Mazhavillu* programmes that promote mathematical skills based on student-centered activities and problem-based scientific investigations based on a holistic approach are being pursued by Model Residential Schools (MRS) under the SC and ST Departments. Realising the effectiveness of *Manchadi* programmes, the Education Department has taken a special initiative extending them to more schools. *Manchadi* and *Mazhavillu* classrooms are characterised by special learning methods in which students examine, analyse, present and draw conclusions in groups, unlike lecture-style presentations in the classroom.

#### **12. Electric Vehicle Consortium**

The Electric Vehicle Consortium consisting of VSSC, CDAC, Travancore Titanium Products Limited, and Trest Park is actively progressing. With the help of VSSC, the production of Lithium Titanate batteries have started. This program has achieved significant progress in establishing the footprint of Kerala in the electric vehicle sector by developing battery management systems, drivetrain systems, and retro-fit techniques for the production of lithium titanate battery, a large-scale helpful system for start-ups and other enterprises.

#### **13. Accelerated Adoption of Emerging Technology Solutions in Government**

This programme aims to integrate new technologies like Machine Learning, Internet of Things, Artificial Intelligence, Augmented reality, Virtual reality, Data Analytics and Block

Chain in Government departments. Some key project implemented include – Water Authority's consumer billing application, chat bot to run antibiotic policy, smart crop system to improve agriculture and insurance system, programme undertaken at Athiramala to reduce revenue losses in drinking water supply chain. Programme for Screening Diabetic Retinopathy using AI to make Diabetic Retinopathy investigation effective, Robot-based G-gaiter program for in-patient gait rehabilitation, Mapping system for patients to easily locate hospital facilities, Tissue Culture Traceability Programme, Drippo programme for informing nursing stations whether drips are working as per requirement, Heka-Flow for providing oxygen to infants and sick adults as part of postnatal care Programme, Traffic Intelligence techniques to systematise traffic signal control systems are the main areas of work of the Emerging Technology Project and have been able to make significant progress in improving governance and delivery of services to citizens.

#### **14. Innovation by Youth with Disability (I-YwD)**

The Innovation by Youth with Disability Programme, which provides training in the process of innovation to the youth with disability is now in its third cohort with the support of NISH. This is a unique initiative that does not exist anywhere else in the world.

#### **15. The Miyawaki Afforestation Programme**

The Miyawaki Afforestation Programme created a new model of urban afforestation. Effectively completed in 10 centres.

#### **16. Accelerated Blockchain Competency Development (ABCD)**

The Accelerated Blockchain Competency Development (ABCD) programme was established to make Kerala a Blockchain hub. K-DISC, ICTAK, Digital University Kerala, Blockchain Education Network MLG Blockchain Consulting, Canada, Linux Foundation, Intel Corporation are founder partners. The ABCD programme has led to many large companies setting up Global Centres of Excellence in Blockchain in Kerala and small companies relocating to Kerala due to the availability of quality talent.

#### **Prisons and Correctional Services**

Kerala Prison Department was established in 1956 following the formation of Kerala State

on 1st November 1956. The Kerala Prison Act was enacted in 2010, and rules were enacted in 2014. A model prison manual was framed in 2016 based on the report of two expert committees. There are 57 jails including 4 central prisons and correctional homes, 2 open prison and correctional homes, 3 women's prison and correctional homes, 1 women's open prison and correctional home, 1 high-security prison, 13 District jails, 16 special sub jails, 1 borstal school. The authorised accommodation capacity of all the jails is around 8000. As of March 2024, there were 10,271 prisoners, of which 217 were women. There were 537 inmates in the three open jails, 128 inmates in women's jails, and 1872 inmates in special sub-jails. Details of prisoners in jails are given in **Appendix 5.5.19. Table 5.5.1** shows the number of prisoners from 2016 to 2024 (up to March 31, 2024).

### Overview of the Department Schemes in 2023-24

The prison department has achieved remarkable progress on its way to custody, correction, reformation and rehabilitation of prisoners. The Jails Department implements various programmes under two Government schemes, namely, the modernisation of jails and the welfare of prisoners. The State Government has allotted Rs 8 crore for the welfare of prisoners and Rs 13 crore for the modernisation of prisons in 2023-24.

Prisoners can be reformed as good citizens only if a sense of dignity and dignified life atmosphere is created among them, thereby sending them to society as good citizens. Based on this perspective, various projects for providing infrastructure facilities and modernisation were implemented under this scheme.

In 2023-24, significant improvements were made to jail infrastructure across Kerala:

- District Jail, Alappuzha: Repairs and renovations were carried out on old jail buildings, enhancing

the facility's safety and functionality.

- High-Security Prison, Viyyur: A new strong room building with an attached guard room was constructed, strengthening security measures at the facility.
- Central Prison and Correctional Home, Kannur: The power supply was upgraded from LT to HT connection, ensuring more reliable and efficient power access.
- Central Prison and Correctional Home, Thavanur: A drainage system was constructed to dispose of surplus water, improve sanitation, and address water accumulation issues within the facility.
- Central Prison and Correctional Home, Thiruvananthapuram: The old kitchen block was renovated, enhancing food preparation facilities and hygiene standards for inmates and staff.
- Central Prison and Correctional Home, Viyyur: The multipurpose auditorium was completed, providing a space for various activities and programmes for inmate rehabilitation.
- Various Jails: Generators were installed, ensuring a reliable power backup system to maintain security and essential services across multiple facilities.

These improvements contribute to better living conditions, safety, and support for rehabilitation activities within Kerala's prison system.

Various programmes for the welfare and rehabilitation of inmates, such as initiatives for providing basic education, vocational training, and welfare of the prisoners, etc. have been taken up under the welfare scheme. This scheme also aims at promoting and utilising the skills and interests of the inmates in the fields of arts and sports. In 2023-24 an amount of Rs 6.6 crore was spent out of Rs 8.1 crore allocated. Various vocational training/skill development programmes were offered to rehabilitate prisoners by training

**Table 5.5.1** Number of prisoners from 2016 to March 31, 2024

Prisoners	2016	2017	2018	2019	2020	2021	2022	2023	2024
Female	213	200	196	181	193	148	163	185	217
Male	7,770	7,413	7,686	7,786	7,470	6,047	7,287	9,111	10,054
Total	7,983	7,613	7,882	7,967	7,663	6,195	7,450	9,296	10,271

Source: Prisons and Correctional Services



them in vocational knowledge and skills which will strengthen their will to work. These training provide opportunities for the inmates to engage themselves in fruitful pursuits during the term of their sentence in jail. These trainings make the prisoner learn skills which would enable them to follow a vocation on release from the jails and lead them towards earning an honourable livelihood after release from prison. An amount of Rs 39.1 lakhs was utilised in the previous year for imparting training in various skills such as classical and commercial arts, screen printing and spiral binding, electrical wiring, aluminium fabrication, food processing, garments making, two-wheeler mechanism, vertical gardening, plumbing and drip irrigation and precision, beautician course, cookery course, interior designing, sericulture, mushroom culture etc. As part of the mental transformation of the inmates, Jail Welfare Day, Yoga class and continuing educational programmes etc. were also conducted in the previous year.

### Probation and Aftercare Services

Probation and aftercare services are programmes that help offenders rehabilitate and reintegrate into society after being released from custody. It is a non-institutional treatment method designed to facilitate the social readjustment of offenders. Probation is a method of dealing with specially selected offenders. It consists of the conditional suspension of punishment while the offender is placed under the personal supervision of the probation officer and is given individualised treatment.

The Probation of Offenders Act was enacted in India in 1958. The Act stipulates the appointment of probation officers to give a pre-sentence report to the Magistrate and supervise the convict during his probation. The administrative control of probation services and institutions had been under the control of the Prisons Department, and it was transferred to the Social Welfare Department in 1975.

As per the Kerala Prisons Rules, the State Government may release certain life prisoners from prison through an executive order and keep them under the supervision of the probation officer concerned for a stipulated period. The probation officer observes his/her daily living pattern and helps the person to reintegrate into society. This system is called executive probation in Kerala. **Table 5.5.2** shows the District-wise number of

**Table 5.5.2** Number of Judicial and Executive Probationers in Kerala in 2023-24

Name of District	Number of Judicial and Executive probationers
Thiruvananthapuram	85
Kollam	57
Pathanamthitta	34
Alappuzha	81
Kottayam	76
Idukki	78
Ernakulam	67
Thrissur	69
Palakkad	51
Malappuram	120
Wayanad	35
Kozhikkode	41
Kannur	56
Kasaragod	25
Total	875

Source: Social Justice Department, GoK

judicial probationers (adults) as of March 2024. The capacity development in the probation system includes training for judiciary, prison and police officials in cooperation with the Kerala Judicial Academy. The Department was also looking for successful innovative probation practices from other countries and States. During the 13th Five-Year Plan period, the system initiated schemes for basic and professional education assistance to the children of convicts and psycho-social rehabilitation programmes for cured and controlled mentally ill ex-prisoners who continue in mental health centres for a long time.

### Nervazhi – Modernisation and Strengthening of Probation System

The project is intended to rejuvenate and modernise the probation system in the State. The project follows a protocol for regular identification of offenders eligible for probation, undertakes comprehensive investigation reports to ascertain whether they are amenable to correction, provides necessary psychological treatment whenever necessary, and ensures effective supervision to enhance the likelihood that the probationers will be integrated back into society. The process helps to reduce recidivism, reintegrate the offenders back into mainstream society, reduce overcrowding in

prisons and increase the efficiency of the criminal justice system. An amount of Rs 51.1 lakh has been expended for the implementation of this scheme in 2023-24.

#### **Thanalidam – Probation Home**

Prisoners face many hardships after release as they are often stigmatised as ex-offenders. Family members may not be ready to accept them back. This is a hindrance to the successful community re-integration of ex-prisoners. As per Section 20 (1) of the Kerala Probation of Offenders Rules, 1960, it is mandatory to operate institutions or homes which ensure a temporary place of residence for those offenders who are eligible for probation, parole, premature release and bail if they do not have a fixed place of abode. The Social Justice Department has devised a novel initiative known as “Thanalidam” Probation Home for such persons. Admission will be granted in Thanalidam Probation home based on a consent letter from Probation Officers and Jail Superintendents. An amount of Rs 2.7 lakh has been expended for the project in 2023-24.

#### **Transit Home**

Transit home has been commissioned by the Social Justice Department to temporarily accommodate foreign nationals entering the country illegally, those staying back in the country even after the expiry of passport/visa date, those who had completed their jail term, were on parole, had been released from jail, or needed other forms of protection. One such home has been made functional at Kottiyam, Mayyanad Panchayath in Kollam District. In 2023-24, an amount of Rs 66.9 lakh has been expended for the working of transit home.

These initiatives have supported the education, financial independence, and overall well-being of beneficiaries, fostering rehabilitation and empowerment for those affected by incarceration and crime.

#### **Achievements of Aftercare Services and Victim Rehabilitation in 2023-24**

- Educational assistance was provided to children of prisoners for 164 beneficiaries utilising an amount of Rs 8,63,000
- Under the Education Assistance Scheme for the children of victims of crime, an amount of
- Rs 96,000 was utilised for 17 beneficiaries.

- Marriage assistance was provided for daughters of prisoners at Rs 30,000 per person. In 2023-24, an amount of Rs 1.5 lakhs was utilised for 5 beneficiaries.
- By providing self-employment for dependents of prisoners, an amount of Rs 19.8 lakh was utilised for 66 beneficiaries.
- Under the Jeevanam scheme, financial assistance was given to 12 dependents and victims of crime for self-employment.
- Mithram scheme provided skill training to probation beneficiaries to earn a steady income through self-employment. In 2023-24, an amount of Rs 3.3 lakhs was utilised for 26 beneficiaries.

#### **Way Forward**

Although the prison department has made great efforts in ensuring safe custody of prisoners, this correction process and rehabilitation, there is still a long way to go to achieve its objectives. To address the overcrowding in the prison institutions more infrastructure facilities are required. For this more prisons are being constructed by the department. Institutional support, vocational training, education, livelihood support programmes and better follow-up would also help smooth the reintegration of offenders into society. Strengthening the probation system can be yet another aspect of the solution to the problem of overcrowding in prison institutions.



## 5.6 OUTREACH TO PUBLIC

The Department of Information and Public Relations serves as a crucial conduit between the Government of Kerala and its citizens. It serves as a bridge, disseminating timely and accurate information about the Government policies, programmes, and initiatives through traditional and digital media. The Department plays a pivotal role in shaping public opinion and fostering transparency, accountability and public trust in governance. It engages with the public through various channels, including print media, electronic media, and social media platforms. Department's role extends beyond mere information dissemination. It actively engages with the public, seeking their feedback, suggestions, and grievances. This valuable input is then channeled to the Government, enabling policymakers to make informed decisions and implement policies that cater to the needs and aspirations of the people. The Department has adopted innovative approaches to public relations. Mobile journalism, for instance, enables the Department to capture and share news and events quickly and efficiently. In recent years, the Department has embraced the power of digital media to enhance its communication efforts. Social media platforms, such as Facebook, Twitter, and Instagram, have become vital channels for engaging with the public, particularly the younger generation. By sharing informative content, responding to queries, and conducting online campaigns, the Department has been able to create a vibrant online community. On the occasion of the Government's second anniversary, the Department successfully conducted 'Ente Keralam' exhibition and trade fairs in 14 Districts.

### **State Initiatives on Public Relations**

**Visual Media** – Visual Media Division comprises the News Wing, Programme Production, Audio-Video Documentation and Electronic Media. Activities of this division include the production and distribution of video news clippings and advertisements to television channels, production of short videos, radio advertisements, documentaries, short films, info-videos, posters, documentation and archiving of contents produced and released by the division. This division also undertakes the production of the Hon'ble Chief Minister's weekly interactive television programme – *Naam Munnott* as well as the weekly development-based television programme – *Navakeralam* and news –roundup – *Priyakeralam*. There is also a weekly radio-based programme called *Janapatham*.

**Web-Based Media** – The Web and New Media division of I&PRD undertakes the content management of the Government web portal – [www.kerala.gov.in](http://www.kerala.gov.in). This bilingual (English and Malayalam) portal provides relevant details regarding the Hon'ble Governor, Hon'ble Chief Minister, Ministers, various departments, field agencies, PSUs and is also a gateway to more than 40 e-services of the Government. The portal is also a repository of documents comprising Government orders, Cabinet decisions, CMDRF orders, notifications, circulars, application forms, policy documents, publications, acts and rules, reports and tenders. Daily Government press releases and announcements also feature as part of the portal. The portal also has useful content on demography, geographical, socio-cultural, economic and historic aspects of the State.

The Web and New Media division also maintains the official website of the Hon'ble Chief Minister of Kerala – [www.keralacm.gov.in](http://www.keralacm.gov.in) – as well as the official websites of ministers. The division also manages its official website – [www.prd.kerala.gov.in](http://www.prd.kerala.gov.in) – and the exclusive news portal – [www.keralanews.gov.in](http://www.keralanews.gov.in). Publication of annual results of SSLC, Higher Secondary and Vocational Higher Secondary through the Government web portal and that of election results are also undertaken by this division. The Web and New Media division also manages the social media accounts of I&PRD viz. Twitter ([Twitter.com/iprdkerala](https://twitter.com/iprdkerala)), Facebook ([Facebook.com/keralainformation](https://facebook.com/keralainformation)), Instagram ([Instagram.com/iprdkerala](https://instagram.com/iprdkerala)), YouTube ([YouTube.com/iprdkerala](https://youtube.com/iprdkerala)) and Dailyhunt ([Dailyhunt.com/iprdkerala](https://dailyhunt.com/iprdkerala)).

**Media Relations** – The Press Release Division issues and manages day-to-day media relations, in the form of multi-lingual news reports of Government functions, decisions, notifications, and announcements. Convening press meets, setting up media centres on special occasions, media accreditation services, providing facilities on special occasions to media reporters for coverage and reporting, and organising State media awards functions are major responsibilities of this Division. The Photography wing of the Division covers Government programmes across the State, releases images to the media daily, and archives photographs. A Scrutiny Wing undertakes daily scrutiny of news and stories that appear in print and electronic media that have a bearing on Government policies, decisions, programmes and social issues.

**Publications** – The Department brings out periodicals: Kerala Calling (English) and Samakalika Janapatham (Malayalam). The division also publishes newsletters, pamphlets, brochures, reports, and books on Kerala culture, history, art, and eminent personalities. It also has a Circulation wing to take care of the promotional works of its periodicals.

**Field Publicity and Culture** – Field publicity within and outside the State, trade and cultural festivals in metro cities as part of the inter-State public relations, exhibitions, seminars, workshops, International Trade Fair held in New Delhi, social media and multimedia campaigns, art and cultural events are organised as part of publicity works. Observations and celebrations such as

Gandhi Jayanti, Reading Week, Official Language, and Malayalam Week are undertaken by this Division. Tagore Theatre in the capital city is being developed as a cultural hub and is a major venue for hosting the National Theatre Festival and the International Film Festival of Kerala. This division also coordinates the management of the Kerala pavilion at the annual India International Trade Fair held in New Delhi.

**Research and Reference** – The Research and Reference wing regularly maintains registers of newspapers and periodicals published in the State as per the directions in the Press and Registration of Books Act (PRB Act). This division focuses on new trends and domains in public relations such as crisis communication, campaign planning, brand building, mobile journalism, data analysis, and provides capacity building to staff.

**Kerala Media Academy** – Kerala Media Academy is an autonomous institution that facilitates study and research programmes in the field of journalism and conducts training programmes, workshops, seminars, publication of books and periodicals, distribution of media awards, and grants fellowships for conducting advanced research in journalism.

**Advertisement** – The I&PRD is the official agency to release Government advertisements to the media. Production of print, visual and audio advertisements and fixing Government rates for advertisements are also done by them. Other functions include fixing the Government rate for advertisements in print, electronic and Online media and maintenance of media lists.

### Major Achievements in 2023-24

- 7,340 press releases were prepared and disseminated in 2023-24. Media coordination work was done by conducting 43 press conferences during the period.
- The major events covered by the photography wing are *Navakerala Sadas* and *Loka Kerala Sabha*. The photography wing has covered 889 programmes and 1,40,726 images were captured, and 2,647 images were released to the media. During this period photo documentation of 31,533 images of 419 programmes was done.
- More than 1,500 Government orders and circulars were uploaded to the State portal. Circulars, notifications, tenders, Government

reports, Government policies, news, videos, pictures and banner news in the Government sub portals, noticeboard.kerala.gov.in and document.kerala.gov.in.

- As part of the News Clip Video Project, the Central News Desk documented and edited a remarkable 600 events in 2023-24.
- 48 episodes of the *Navakeralam* weekly television programme were produced and broadcast through Asianet News and Kairali News television channels. The *Priyakeralam* television programme delivered comprehensive weekly reports on the developmental and welfare activities in the State by the Government. Doordarshan broadcast 51 episodes of this programme.
- Based on the developmental and welfare activities of the State Government, 77 short/info videos were produced. These videos, created in collaboration with Government departments, received extensive promotion through the relevant institutions and I-PRD's social media channels.
- Special editions of the *Samakalika Janapatham* journal were released, focusing on Government initiatives for development and welfare. Tourism and *Malayaladinaghosham* bhashapathippu was also published. A Coffee Table Book on the development and welfare activities of the Government, a media handbook 2023 and a brochure about the welfare of fisherman '*Kadalolam Karuthal*' have been published. Booklets about '*Vaikom Sathyagraha*', '*Chattupaattu*', and Welfare schemes for expatriates were also published. The Government's progress report, with details of sector-wise achievements, was published during the second-anniversary celebrations of the Government. The English editorial wing of I&PRD publishes 'Kerala Calling' monthly in English. Kerala Calling published special issues on K-FON and Tourism. The English division also released coffee-table books: *On The Move*, *Vaikom Sathyagraha*. A brochure on Transforming Lives was also published.
- The department successfully conducted '*Ente Keralam*' exhibition and trade fair in 14 Districts. Cultural performances were also organised in the Districts. For the promotion of the fair, advertisements have been given through hoardings across the State. Advertisements in Kochi Metro pillar, shopping mall and KSRTC bus branding were also used. Campaigns were

organised through the District Information Offices of the department for 'Vana Souhrida Sadas' and '*Taluk Adalats*'. Various programmes were organised in association with the PN Panicker Foundation in the Districts to mark the State-level '*Vayanavaaram*'. Large-scale publicity has been given for the *Keraleeyam* event. Publicity was given through hoardings at 177 locations at the State-level for the programme. Advertisements through hoardings at 465 locations across the State were given for *Loka Kerala Sabha*.

- Kerala participated as a partner State for the first time in the India International Trade Fair 2023. A pavilion has been set up with the theme *Vasudaiva Kudumbakam – United by Trade* 10 theme stalls and 34 commercial stalls were set up in the pavilion. Cultural programmes were also organised during this fair.

### Way Forward

The vision of the Department should be to incorporate the best among newer avenues of communication technologies and seamlessly integrate them for effective audience reach and strengthening of the feedback system. Enhanced and updated online presence will be the key to the Department's overall functioning.



CHAPTER

06

HUMAN DEVELOPMENT





# HUMAN DEVELOPMENT

## 6.1 EDUCATION

Kerala's achievements in human development are the basis of its national and international fame. In Kerala, Education is inclusive in nature and accessible to all sections of the population. The State, having attained very high rates of literacy and schooling, has a well-developed schooling system that addresses the requirements and demands of all children up to 18 years. Kerala has achieved a far better position in social indicators such as education and health than other Indian States. Kerala has a higher literacy rate, a higher enrolment rate of students, higher percentage of girl, SC, and ST students in schools and colleges and a low dropout rate among students. The State Government and Local Self-Government institutions of Kerala are committed to providing good quality infrastructure and maintaining a hygienic environment in educational institutions. Kerala's education system has succeeded in achieving gender equity in enrolment.

The State has also taken keen interest in addressing the needs and requirements of children from diverse sections with special focus on the marginalised and vulnerable sections through targeted approach. Specially designed schemes backed by professional expertise and assistance are being implemented to address the needs of children with disabilities. In addition to the curriculum, arts and sports are also given significant attention. Flagship programmes of the *Vidya Kiranam*, a component of the Nava Kerala Mission that is a

continuation of *Pothu Vidyabhyasa Samrakshana Yajnam*, and Kerala Knowledge Economy Mission are also expected to bring major changes in the standards of school and higher education.

The 14th Five-Year Plan envisages improving the quality of education, attaining academic excellence, ending the digital divide, ensuring better connectivity to school education, and ensuring access to digital study material and library networks on a completely new scale. Kerala has made remarkable progress in addressing the issue of digital divide and in ensuring that benefits of technology reach to all segments of society. Schools are considered to be the nucleus of social development and education is given top priority. Understanding the growth and progress of Kerala's educational profile is crucial to discussing the state's educational system.

### Literacy

The most essential indicator of the quality of a country's human capital is literacy. As regards literacy, Kerala ranks first in the country with literacy rate of 94 per cent closely followed by Lakshadweep (91.9 per cent) and Mizoram (91.3 per cent) (Census of India, 2011). Kerala's literacy, which was only 47.2 per cent in 1951, has almost doubled by 2011. The male- female literacy gap which was 22 per cent point in 1951 has narrowed down to 4.0 per cent in 2011. Kerala holds the first place in the country in female literacy with

92.1 per cent and Bihar records the lowest female literacy rate (51.5 per cent) (Census of India, 2011). Literacy rate of the State from 1951 to 2011 is shown in **Appendix 6.1.1**. Variation in literacy among the districts of Kerala is not significant. While Kottayam District (97.2 per cent) reports the highest literacy rate in the State, followed by Pathanamthitta (96.6 per cent) and Ernakulam (95.9 per cent), Wayanad District has the lowest literacy rate in the State (89.0 per cent). Literacy rates by gender for Districts in 2001 and 2011 are given in **Appendix.6.1.2**.

Kerala State Literacy Mission Authority (KSLMA) works to implement literacy, continuing education and lifelong learning programmes in the State. Illiterates, neo-literates, school drop-outs, people who are interested in life long education or continuing education are the main beneficiaries of these programmes. KSLMA has diversified its efforts beyond traditional literacy programmes. During the years, the activities of Literacy Mission have been expanded to vulnerable and marginalized sections of society with a special focus on women, scheduled caste, scheduled tribes, transgenders, coastal area people, and migrant workers. Literacy is not merely the ability to read and write, but in a broad sense it is the basic awareness of how to lead a healthy and progressive social life. Keeping this in mind, KSLMA has launched social literacy programmes in the fields of health, environment, gender, Indian Constitution, and e-learning. The adult learners under literacy and continuing education programmes are the direct beneficiaries of these programmes.

### 1. Literacy programmes

This programme aims to make illiterate people literate. Various types of literacy projects have been implemented for the eradication of illiteracy. This year the literacy project has given special attention to learners from coastal, tribal, scheduled caste areas/ settlements. KSLMA has also implemented a central government project Padma Likhna Abhiyan (PLA) for the eradication of illiteracy.

### 2. Special projects for the marginalised sections of the society

a. Attappadi Tribal Literacy programme: As part of this, KSLMA conducted classes in 192 tribal settlements at Attappadi and 1,458 learners became literates. During the period a survey has been completed, and 2,000 learners are now prepared to join the class.

b. Wayanad Tribal Literacy programme: This programme is designed to eradicate the illiteracy among tribal people in Wayanad. Three phases of this project have been completed and more than 20,260 tribal learners attained literacy. Phase IV identified 1000 people for Literacy Class IV Equivalency Study.

c. Navachethana – Special Literacy programme for scheduled castes- Navachethana is a specially designed programme aimed at enhancing the educational development of Scheduled Caste individuals in Kerala. Equivalency classes for the fourth standard were implemented through the project last year. Classes were held in 14 Districts and 3801 students attended the exam.

d. Changathi - Special Literacy programme for Migrant Labourers: Kerala is the state where huge number of labourers come from other States such as West Bengal, Bihar, Assam, Tamil Nadu, Karnataka etc to work and find their earnings. They are mostly manual labourers who have become almost inevitable in our day to day life and therefore it has become necessary to make them conversant with our language and society. The Pilot Programme for this has been launched in 2017 at perumbavoor in Ernakulam district. Classes were held in 14 districts and the fourth phase of the project has been completed. In Palakkad District, Changathi Project is being implemented as a special project with the cooperation of the district panchayat Palakkad. 691 Students attended the exam and 687 students passed out. In the remaining 13 Districts 2,696 students attended the exam.

e. Samanwaya - Special Project for continuing education for Transgenders: As part of this project, Literacy Mission conducted equivalency classes and various types of awareness programmes for transgenders. A residential study centre known as “Paddanaveedu” is currently operational in Pandalam, situated in the Pathanamthitta district. This centre is dedicated to providing education and support to transgender individuals on their educational journey.

### 3. Equivalency Programmes

Equivalency programmes are organised with a view to providing an alternative education equivalent to the existing formal system of education.

a. 4th class and 7th class Equivalency Classes  
Candidates who passed the Literacy Exam and people who dropped out of the school from the primary level can enroll in the 4th standard equivalency course. Candidates who passed the fourth standard equivalency and people who dropped out of the school from the upper primary level get admission to the 7th class equivalency programme. For 4th class equivalency, 778 people benefitted. For the 7th standard equivalency course, the 16th batch (2023) with 4,836 learners registered and 1,697 learners appeared in the exam, 1642 learners were eligible for Higher studies.

Because of the focused efforts of KSLMA, Preraks could identify the persons in need and enroll them into various levels of equivalency programmes. KSLMA is making efforts to bring a large number of persons back to their studies and to enroll them in 10th and Higher Secondary equivalency courses (Table 6.1.1). The details on the number of people who benefitted from the 10th and Higher Secondary Equivalency programme of Kerala State Literacy Mission in 2023-24 are given in Appendix 6.1.3

It is seen that out of the total number of persons benefitting from these programmes, SC and ST population constitute a major portion. Because of the special efforts of KSLMA for the last few years to include transgenders into the programmes, a total number of 52 transgenders benefitted from the 10th and higher secondary equivalency programmes in 2024. Likewise, a significant participation of persons with disabilities can also be seen.

#### 4. Social Literacy Programmes

The Kerala State Literacy Mission Authority (K.S.L.M.A) is focusing not only on alphabets and numerical literacy, but also on other social

literacy programmes. Realizing the fact that the state is not fully literate in terms of social security, environmental issues, legal awareness, and gender equality, KSLMA took the initiative to spread various literacy programmes among the people in the state other than helping them in reading and writing.

a.Environmental Literacy Programme: Literacy mission conducted many programmes such as environmental literacy surveys, awareness classes, seminars, exhibitions, waste management, water literacy classes, etc. as part of the environmental literacy programme. Kasargod, Kannur, Wayanad, Kozhikode, Palakkad, Thrissur, Alappuzha are the districts which have already organised Environmental Learning camps.

b.Pouradwani: Pouradwani is a programme designed to educate the general public and raise basic awareness about Fundamental Rights, Duties, Gender perspectives, and the Indian Constitution. As part of a pilot programme, a 7-day camp was organized in Thiruvananthapuram, Palakkad, Wayanad, Malappuram, Ernakulam, Kasaragod, Alappuzha districts.

c.Cyber Literacy Programme: The Kerala State Literacy Mission Authority has implemented the E-Muttam Project in association with KITE to eliminate digital divide in Kerala. The Project was implemented in all the 14 districts of Kerala (One panchayat in each district) and 26,971 people became beneficiaries.

d. Braille literacy programme: The objective of this project is to eliminate illiteracy among visually challenged individuals and integrate them into the education system, with the ultimate goal of making Kerala a fully Braille-literate State in the coming years.

**Table 6.1.1** Number of persons who benefitted from higher secondary and 10th equivalency courses in 2023 and 2024

Course		Female	Male	Trans-gender	Total	SC	ST	Persons with disabilities
Higher Secondary	2023	18,619	8,178	33	26,830	5,563	799	388
	2024	15,624	5,695	26	21,345	3,655	587	334
10th	2023	18,144	8,971	16	27,131	5,112	955	676
	2024	11,412	5,161	26	16,599	2,625	449	392

Source: KSLMA

- e. Munnettam: This is a women's empowerment project in association with Mahila Samakhya Society. The scheme is aimed at empowering women in society by enhancing their dignity and competence through the improvement of education, critical life skills and employment skills.
- g. Gender literacy: The Gender Literacy Scheme works with the objective of creating awareness of gender equality among learners, motivators and teachers, ensuring gender equality everywhere and taking gender awareness to the grassroots level of society.

### 5. Certificate Courses

KSLMA launched three new certificate courses, viz, Pacha Malayalam, Achchi Hindi and Good English aiming at those who are interested in improving their language skills. This project is a four months course which intends to equip people to handle three languages- Malayalam, Hindi and English with ease. During 2024, the number of learners for good English is 1,087 and for achchi hindi is 100.

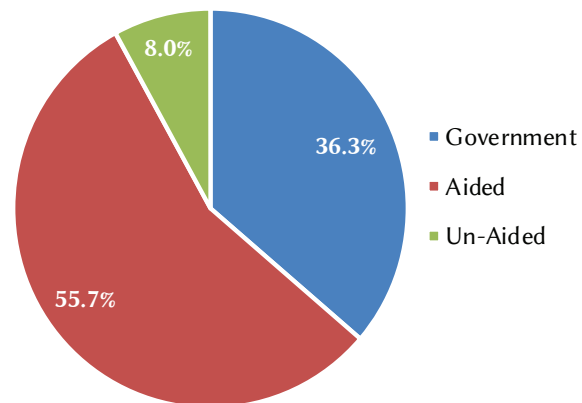
### School Education

Directorate of General Education coordinates all the activities of public education from class 1 to 10, higher secondary and vocational higher secondary education. Earlier, classes from 1 to 10 were under the administrative control of Directorate of Public Instruction. The separate directorates for higher secondary and vocational higher secondary education have been now merged to Directorate of General Education.

There were 12,948 schools in Kerala in 2023-24, out of which 4,697 (36.3 per cent) are Government schools, 7,208 (55.7 per cent) are aided schools and 1,043 (8 per cent) are unaided schools (**Figure 6.1.1**). More lower primary (LP) schools are in the government sector compared to schools in upper primary (UP) or high schools (HS). Aided schools outnumber government schools in all sections

In 2023-24, Malappuram District had the largest number of schools (1,571) in the State followed by Kannur (1,303) and Kozhikode (1,278). Malappuram also has the largest number of Government (556) and unaided schools (210) in the State. But the largest number of aided schools is functioning in Kannur District (963). Details of District-wise, management-wise and stage-wise number of schools in Kerala in 2023-24 are given

**Figure 6.1.1** Management-wise percentage of schools in the State, 2023-24



Source: Directorate of General Education

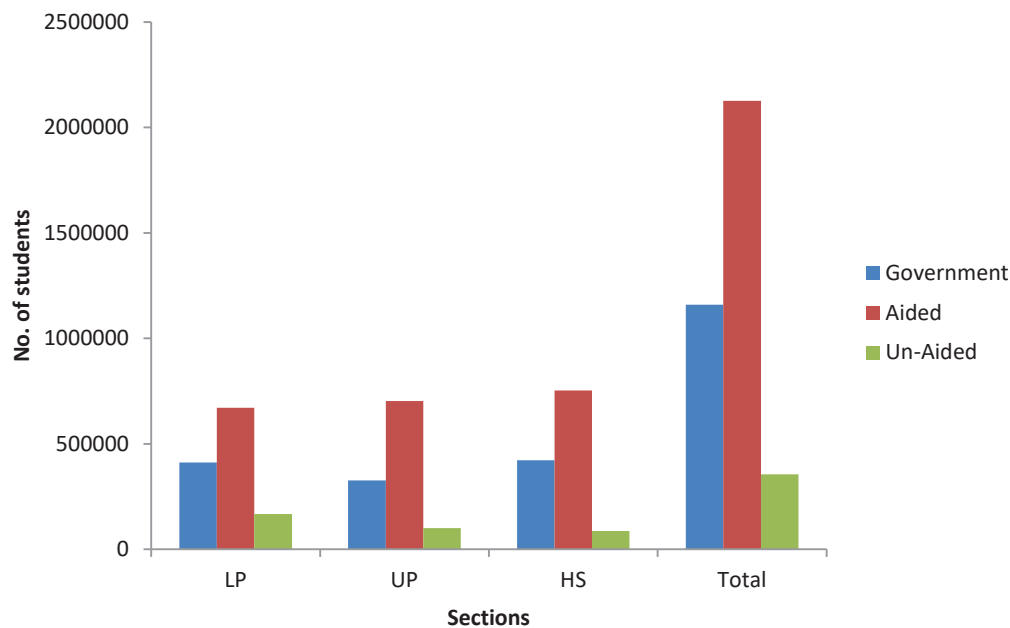
### in Appendix 6.1.4.

In 2023-24, there are 1,591 schools in the State, offering syllabi other than the one prescribed by the State Government. These include 1,370 CBSE schools, 167 ICSE schools, 40 Kendriya Vidyalayas and 14 Jawahar Navodayavidyalayas. District-wise details of schools with syllabi other than the State syllabus in 2023-24 are given in **Appendix 6.1.5**.

### Physical infrastructure and facilities in Government Schools

Most government schools in Kerala in 2023-24 are functioning in pucca buildings. 103 Government schools are working in rented buildings. District-wise details of Government schools having building facilities are given in **Appendix 6.1.6**. Local Governments and programmes like Sarva Shiksha Abhiyan (SSA) have contributed much to the overall development and improvement of physical infrastructure and common facilities in government schools in the State. An amount of Rs 5 crore, Rs 3 crore and Rs 1 crore each have been allotted for the infrastructural development of 141, 386 and 446 number of schools respectively under KIIFB. Under Rs 5 crore category construction of buildings has been fully completed in 138 schools. In the Rs 3 crore category construction of buildings has been completed in 178 schools and in Rs 1 crore category construction of buildings has been completed in 192 schools. Construction of buildings of 52 schools has been completed, with the aid of NABARD, by utilising Rs 104 crore. It is seen that 99.8 per cent of government schools have

**Figure 6.1.2** Management-wise and section-wise enrolment of students in Kerala in 2024-25



Source: Directorate of General Education

access to drinking water and all government schools have urinals/latrines facilities. District-wise details of government schools having drinking water/latrines/urinal facilities in Kerala in 2023-24 are given in **Appendix 6.1.7**.

### Enrolment of Students

There is a small decrease in the enrolment of students in 2024-25(provisional) to 36.4 lakh from 37.5 lakh in 2023-24. This decrease is seen in all sections but a large quantity is in the LP section. This may be attributed to the low birth rate of the State. The stage-wise enrolment of students in schools in Kerala from 2018-19 to 2024-25 are given in **Appendix 6.1.8**. Details of management-wise and standard-wise enrolment of students in schools in 2024-25(provisional) are given in **Appendix 6.1.9**. In all sections, the students in government aided schools outnumber the students in Government and unaided schools (Figure 6.1.2). District-wise, stage-wise and sex-wise enrolment of students in schools in the State in 2024-25 is given in **Appendix 6.1.10**. Boys outnumber girls in all sections and districts.

During the academic year 2024-25 27,426 new students sought admission in Government and Government Aided schools in Kerala. The total number of new students sought admission in Government and aided schools for the last five

years is 5,27,554. (**Table 61.2**).

### Enrolment of Girls in Schools

In 2024-25, girls constitute 49.1 per cent of the total student enrolment in schools. Boys outnumber girls in all the districts. But the gender gap is very narrow in Kerala in terms of enrolment.

### Strength of Scheduled Caste and Scheduled Tribe Students

In 2024-25, Scheduled Caste (SC) students constitute 9.9 per cent of total students in the State which shows a slight increase over previous year (9.86 per cent). The percentage of SC and ST students in Government schools is higher than that of Government aided and private unaided schools. The percentage of SC students in Government schools, Government aided schools and private unaided schools are 12.6 per cent, 9.6 per cent, and 3.4 per cent respectively. (**Table 6.1.3**). ST students constitute 1.9 per cent of total enrolment in schools in 2024-25. The percentage of ST students in Government schools, Government-aided schools and private unaided schools are 3.5 per cent, 1.2 per cent, and 0.5 per cent respectively in 2024-25. The standard-wise strength of SC & ST students in the State in 2024-25 is given in **Appendix 6.1.11**. Out of the total number of SC & ST students in the State, only 3.4 per cent of SC and 2.5 per cent of ST students are enrolled

**Table 6.1.2** New Students who sought admission in public-funded schools in Kerala, from 2019-20 to 2024-25

Management	Standards			
	I-IV	V-VII	VIII-X	Total I-X
	From 2019-20 to 2020-21			
Government & Government. Aided	53,832	67,503	7,169	1,28,504
	From 2020-21 to 2021-22			
Government & Government. Aided	1,06,320	97,112	53,016	2,56,448
	From 2021-22 to 2022-23			
Government & Government. Aided	-11,401	56,158	37,691	82,448
	From 2022-23 to 2023-24			
Government & Government. Aided	-12,786	23,077	22,437	32,728
	From 2023-24 to 2024-25			
Government & Government. Aided	-11,185	17,916	20,695	27,426
Total new students during the last 5 years				5,27,554

Source: Directorate of General Education

**Table 6.1.3** Proportion of SC & ST Students in Schools in Kerala, 2024-25 (provisional)

Management	Others	SC	ST
Government	83.91	12.59	3.50
Government Aided	89.22	9.55	1.23
Private Unaided	96.12	3.40	0.48
State Average	88.20	9.92	1.88

Source: Directorate of General Education

in private unaided schools. The rest are enrolled in Government and Government aided schools. Out of the total ST students, 59.2 per cent is enrolled in Government schools, while 40.4 per cent of SC students are enrolled in Government schools.

### Dropout rate

Kerala has achieved the distinction of having the lowest dropout rate of school students among

the Indian States. As per the Ministry of Human Resource Development (MHRD) report on Educational Statistics at a Glance - 2018, the all-India average dropout rate of primary school students is 4.1 percent while it is 4.0 percent in upper primary and 17.1 percent in secondary levels. Similar to 2022-23, the dropout rate in Kerala remains at 0.08 in 2023-24. In Kerala the dropout ratios in the lower primary stage and high school stages are slightly higher compared to that of the Upper Primary stage. Drop-out ratio in high school classes has declined from 0.2 per cent in 2019-20 to 0.09 per cent in 2023-24 (**Table 6.1.4**). This declining trend is seen at all stages of school education.

District-wise/stage-wise dropout ratio in schools in 2023-24 is given in **Appendix.6.1.12**. The dropout ratio of ST students is still higher than that of students from the 'others' category (**Table**

**Table 6.1.4** Stage-wise Drop-out Ratio in Schools in Kerala

	2019-20	2021-22*	2022-23	2023-24
Total	0.11	0.04	0.08	0.08
L.P	0.10	0.03	0.09	0.09
U.P.	0.06	0.02	0.06	0.05
H.S.	0.15	0.05	0.09	0.09

Source: Directorate of General Education

\*Data for 2021-22 were non-comparable due to COVID -19.

**6.1.5).** Dropout ratio among SC students in Kerala in 2023-24 is 0.06 percent and that of ST students is 0.67.

The total dropout ratio are highest in Wayanad District (0.4 percent) followed by Idukki (0.3 percent) in 2023-24. The dropout ratio of SC students is highest in Idukki District (0.4 percent) followed by Wayanad District (0.3 percent), whereas the dropout ratio of ST students is the highest in Ernakulam District (1.4 percent) followed by Wayanad District (1.1 percent). District-wise and management-wise details of dropout among SC and ST students in Kerala in 2023-24 are given in **Appendices 6.1.13 and 6.1.14.**

### Number of Teachers

The number of school teachers in Kerala in 2023-24 was 1, 56,506. Out of this 89,878 (57.4 percent) teachers are working in aided schools and 13,302 (8.5 percent) teachers are working in private unaided schools. The remaining 53,326 (34.1 per cent) teachers are working in government schools. Out of total teachers in the State 50 percent are teaching in high schools, 25.7 percent in upper primary schools, and 24.4 percent in lower primary schools. 76 per cent of total teachers in the State are women. Stage-wise and

management-wise number of teachers in Kerala in 2023-24 is given in **Appendix 6.1.15.**

### Inclusive Education in Schools

As per the statistics given by Directorate of General Education, there were 45 special schools functioning in Kerala in 2023-24. Total number of students in these special schools during the period was 2,973(out of which 93 are normal students) and the number of teachers was 561. Out of the total 2,880 students, 384 are having visual disability, 2,477 are hard of hearing, 5 are mentally challenged and 14 suffers from other disabilities. Apart from this there are 330 special schools functioning under various NGOs, LSGD and Deendayal Disabled Rehabilitation Scheme (DDRS) in the State. Also, 63,883 students with disabilities are studying in government, aided, and unaided schools all over Kerala. Among them, 38,270 are boys and 25,613 are girls. When taking the district wise details, highest number of students under IED category is in Malappuram district (9,016), followed by Kozhikkode (7,150) and Palakkad (6,012). Apart from the free uniform and mid-day meal, financial assistance is given for meeting the expenses towards traveling, hostel facilities, excursion for students etc,. Various programmes for people with disabilities such as barrier free campus, disabled friendly equipment,

**Table 6.1.5** District-wise Dropout Ratio among students in Kerala in 2023-24

District	SC	ST	Others	Total
Thiruvananthapuram	0.02	0.00	0.02	0.02
Kollam	0.05	0.44	0.01	0.02
Pathanamthitta	0.03	0.87	0.04	0.04
Alappuzha	0.03	0.00	0.03	0.03
Kottayam	0.11	0.75	0.10	0.11
Idukki	0.38	0.69	0.24	0.29
Ernakulam	0.10	1.39	0.25	0.24
Thrissur	0.09	0.56	0.06	0.07
Palakkad	0.03	0.41	0.04	0.05
Malappuram	0.01	0.27	0.04	0.04
Kozhikode	0.02	0.31	0.04	0.04
Wayanad	0.28	1.08	0.22	0.42
Kannur	0.08	0.62	0.03	0.05
Kasaragod	0.22	0.12	0.06	0.07
State Average	0.06	0.67	0.06	0.08

Source: Directorate of General Education



services from resource centres, services of resource teachers etc are also provided to ensure inclusive education in schools.

Samagra Shiksha Kerala (SSK) also implements various programmes for students with disabilities as part of inclusive education. SSK supports them by setting up Autism centres, home-based education, adapted learning, and providing equipments. Medical camps, therapeutic service, empowerment of resource teachers, distribution of aids, developing teaching-learning methods, providing reader allowance, stipend for girls, empowerment of parents etc, are the other services provided by SSK for developing the inclusive education.

### **Schools with Less Number of Students**

In 2024-25, the total number of schools with average strength of fewer than 25 students was 1,197 and out of these, 452 were in the Government sector and 745 were in the aided sector. There were 34 Government lower primary schools having an average number of students of less than 10 while the number of schools in this category was 160 in aided sector. District-wise analysis shows that the highest number of schools with a lesser number of students was in Pathanamthitta (216) followed by Kottayam (168) and Kannur (148). The highest number of schools with fewer students in the aided sector is in Pathanamthitta (152) followed by Kannur (122). In the Government sector, Kottayam has the largest (71) number of schools with a lesser number of students followed by Pathanamthitta (64) and Alappuzha (50). Lower primary schools constitute large chunk of the schools with a lesser number of students. Among the Government schools with a lesser number of students, majority (91.4 percent) are lower primary schools. In the aided sector also 86.6 percent of schools with fewer students are from the lower primary section. District-wise details of schools with a lesser number of students in the State in 2023-24 are given in **Appendix 6.1.16**.

### **Kerala Infrastructure and Technology for Education (KITE)**

Kerala Infrastructure and Technology for Education (KITE) is a State Government enterprise, set up to foster, promote and implement the modernisation of educational institutions in the State of Kerala. KITE has revolutionised the education system of the State with its decade-long operations and its spectrum include information

and communication technology, capacity building, content development, connectivity, e-Learning, satellite based education, support and maintenance mechanism, e-Governance and also physical infrastructure upgradation of schools. With the efforts of KITE, schools in the State are now equipped with the latest ICT gadgets supported by high speed broadband connectivity, necessary digital resource portals, trained teachers thereby having a total ICT-enabled eco-system. KITE has enabled the State Education Department to ensure the continuance of education to over 43 lakh students during Covid-19 pandemic time through the First Bell Digital Classes of the KITE VICTERS channel, followed by the Online Classes using customised GSuite platform.

### **Major achievements/ highlights of KITE during 2023-24**

**Capacity Building for Teachers through the KOOL platform:** KITE had introduced KOOL (KITE's OPEN ONLINE LEARNING) platform for teacher trainings, which is the first Official MOOC Course by Government of Kerala. Through the KOOL platform, 10,528 teachers were trained during 2023-24, in various courses, taking the total tally of teachers trained through KOOL to 44190.

**KITE LENS Content Creation Hub at Regional Resource Center Ernakulam:** KITE Lens-Educational Content Creation hub facilitates the creation of attractive and knowledgeable educational content and will provide support to teachers in developing their innovative and creative content. Teachers with an idea for creating an educational content can walk into the hub and receive training on how to create the content, access to a fully equipped studio, and the necessary equipment for shooting and editing. The hub also supports low-cost educational content creation, simple tools like smartphones to create videos, animations, whiteboard videos, and even AR and VR content.

**Content Dissemination through KITE VICTERS & 5 PM eVidya channels:** KITE has been operating KITE VICTERS educational channel since 2006 and it played a critical role in ensuring continuity of education for 43 lakh students during the Covid-19 pandemic times, through its First Bell Digital Classes. KITE VICTERS continues to be depended on by lakhs of students and teachers for a variety of educational

content in tune with the school curriculum. From 2023 onwards, KITE has been operating the 5 PM eVidya channels allotted for the State, using the limited resources of KITE VICTERS.

**Empowering Little KITEs students, Exposure at UNICEF partner events, and release of updated Little KITEs Activity book.:** The State Camp for the Little KITES members was held on 15th & 16th May 2023 at Startup Mission in Kochi. 130 Little KITES champions selected from 1200 Little KITE members from the District camps participated in the State Camp, which was conducted in association with the Kerala Startup Mission. The camp also featured an exhibition of products created by students using Animation and Robotics. There were interactive sessions and expert classes on Artificial Intelligence, Virtual Reality, Augmented Reality, Animation, 3D character modeling, 3D printing etc. As part of the camp, the Little KITES students also visited the FabLab, Maker Village, Maker Lab in the Startup mission facility.

**Digital Edu Conclave 2023:** KITE organised a 2-day event viz Digital Edu Conclave 2023 on 15th & 16th August 2023, to showcase the

State's achievements in ICT education, use of free and open digital technologies and best practices in integrating digital technologies in education. Over 15 delegates from various States and Union Territories including Chandigarh, Meghalaya, Uttar Pradesh, Andhra Pradesh, Dadra and Nagar Haveli and Daman and Diu (UT), Maharashtra, Karnataka attended the 2-day event.

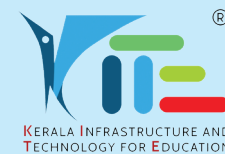
**Digital Score Board as part of State School Art-festival:** KITE had made the State School Art Fest Hi-Tech for past two years. This year KITE developed and integrated a Digital Score Board which highlighted a detailed Live updations on the district wise scores for various competitions in both HS and HSS categories.

**Crack the Entrance'- Entrance Exam Training programme:** KITE launched 'Crack the Entrance' programme, which includes online classes and an interactive portal, to help students prepare for medical and engineering entrance exams.

**Deployment of 20,000 Robotic Kits to schools:** During August 2024, KITE commenced the deployment of 20000 more Arduino Robotic Kits to schools, in addition to the 9000 kits deployed

#### Box 6.1.1 Artificial Intelligence (AI) in Kerala School Education by KITE

Kerala has taken a big leap in education by integrating Artificial Intelligence (AI) in school education. KITE oversees the AI integration in school education in Kerala, through a holistic intervention of AI training for teachers & students, AI integrated textbooks for Grade-7 and the development of own AI engine for school education in Kerala, the prototype of which has been completed. KITE has already initiated the AI training for 80000 Secondary teachers and AI has been included in the ICT textbook of Class 7. With respect to the own AI Engine for school education, KITE has completed the development of the prototype, of which the testing is progressing, which would be followed by the full-set data generation.



The AI initiative by KITE made use of several AI Software applications such as ChatGPT, ChatPDF, Gemini, Leonardo, Pictoblox, Worksheetzone, DiD, Anuvadini etc. Also, the G-Suite accounts created for teachers by KITE earlier during the Online classes were used to ensure data privacy while using AI tools, and they don't have to use their private email ids and other credentials. Through this process, the security and privacy of teachers were ensured.

By covering a wide range of AI applications, the AI inclusion provides a holistic approach to integrating technology in education. The training module's alignment with pedagogical methods ensures that the use of AI tools enhances rather than disrupts traditional teaching practices. KITE has also completed the prototype of the development of the State's own AI Engine for school education, which is also unique. While challenges like data privacy and the potential for job displacement exist, the ethical and responsible integration of AI in education holds the promise of creating more inclusive, effective, and equitable learning environments for all students.

Source: KITE, 2024

last year.

- Kunjzhuthukal' by Class I students telecast on KITE VICTERS channel
- Artificial Intelligence (AI) learning included in school curriculum
- Little KITEs Awards distributed and UNICEF Little KITEs Study report published
- New version of FOSS based OS suit KITE GNU Linux 22.04 released.

### **Samagra Shiksha, Kerala (SSK)**

Samagra Shiksha Kerala, the Centrally Sponsored Scheme, has been instrumental in popularizing the General Education Rejuvenation campaign. On November 1, 2018, the Integrated School Education Project titled Samagra Shiksha Kerala (SSK) project was launched in the State by merging the Centrally Sponsored Schemes Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE) on the orders issued by the Central Department of Education and the Government of Kerala. Samagra Shiksha Kerala has been able to lead extensive management activities by coordinating various levels from Pre-primary to Higher Secondary. The decentralized implementation of projects during this period was carried out by the strengthening of 168 Block Resource Centers (BRCs) and 1385 Cluster Resource Centers (CRCs). Samagra Shiksha Kerala has undertaken a number of activities to ensure equality, equity of opportunity, and quality, which are the second generation issues in the field of education.

All the activities by the SSK are undertaken to achieve the broader objectives of Pothu Vidyabhyasa Samrakshana Yajnam and to bridge the academic lacuna for ensuring age-appropriate education as envisaged in the Right to Education Act.

### **Major Initiatives/achievements of Samagra Shiksha Kerala in 2023-24**

*Science Park:* Samagra Shiksha Kerala launched several programmes for the enhancement of scientific attitude among students. The establishment of Science Park in selected schools is one of the prestigious activities of SSK. Through Science parks, students got hands-on experience on the subject. They could understand the concepts of science with the support of the equipments set up in the park. For this, the teachers were also fully equipped to use the devices properly.

*POCSO - Awareness Programme for Higher Secondary Teachers:* POCSO stands for the Protection of Children from Sexual Offences Act, which is an Indian law enacted in 2012. The primary objective of this act is to provide legal protection for children under the age of 18 from sexual abuse and exploitation. It addresses various forms of sexual offenses against children and establishes a stringent legal framework to ensure their safety and well-being. Under the guidelines of the Department of General Education, Samagra Shiksha Kerala conducted an awareness programme for the higher secondary and vocational higher secondary teachers across the state. This programme aimed to empower children to recognise and resist sexual violence and exploitation and it focused on the legal aspects of POCSO, to familiarise the rules and its possibilities among teachers and students.

*Budding Writers Program: Cultivating Creative Minds and Literary Enthusiasts:* SSK has once again set a benchmark in educational innovation with its unique programme aimed at enhancing creative thinking among students of Upper Primary (UP) and High School (HS) classes. Aptly named "Budding Writers," this programme was a continuation of the highly successful "Vayana Changatham" initiative, further solidifying SSK's commitment to nurturing young talents. "Budding Writers" was designed to foster creative writing skills, interweaving personal experiences with the knowledge gained from reading various books.

*Nipun Bharat Mission-Enhancing the competencies in literacy and numeracy:* Under the leadership of the Central Government, the most significant and prominent initiative in Kerala for comprehensive education is the Nipun Bharat Mission. The mission aims to ensure proficiency in basic language and mathematics for primary class students by the year 2025. Kunju Vayana, Kunju Ezhuthu, Hello English, Malayalathilakkam, Classroom Library, Measure and Learn, Ullasaganitam, Ganitha Vijayam, DIGI Showcase, SM.C. meetings, Quiz Programmes, Ganitha Park, Empowering Parents, and Poster Making are some of the activities.

*Mansoonum Kuttikalum:* Samagra Shiksha Keralam has implemented the project named

“Mansoonum Kuttikalum” in collaboration with the State government’s prestigious programme “Nooru Dina Karma Paripadi.” The objectives behind this mission were creating awareness on weather forecasting and disaster management at the local level. Training was given to 40 resource persons at the Radar Research Centre of Cochin University for Science and Technology, and guided other teachers in the remaining schools. Students regularly observe and record the readings at fixed intervals and later analyze the data with the help of their geography teachers as part of this programme.

*Ee thanalil Ithiri Neram:* “Ee thanalil Ithiri Neram” programme in environment day under the dynamic leadership of students with disabilities witnessed an overwhelming response from Schools across the state as they embraced various programmes aimed at emphasizing the significance of environmental protection.

*Special Care Centre:* Special care centres are primarily concerned with giving special support to children with disabilities in public schools. Disabled children enrolled in public schools, who cannot access classroom learning, are also given academic support through the centres.

*Pradeshika Prathibha Kendram (Local Resource Centres):* Pradeshika Prathibha Kendra or Local Resource Centres are an innovative initiative for the educational and social upliftment of the marginalised and backward sections of people. These centres provided different activities which nurtured the creative talents of children who belong to such categories.

*Varnakoodaram:* The STARS project Varnakoodaram focused on revamping traditional teaching methods by incorporating innovative and interactive elements in selected preprimary sections of primary schools. Thirteen different areas were set in the classroom for the holistic development of the preprimary children.

### **State Council of Educational Research and Training (SCERT)**

The State Council of Educational Research and Training (SCERT), Kerala is an autonomous institution of the Department of General education, Government of Kerala entrusted with planning, implementation and evaluation of all academic programmes from pre-school to higher

secondary levels. The main activities are developing curriculum for school classes from pre-primary to higher secondary, developing text books, teacher texts, assessment strategies, organising in-service teacher empowerment programmes, documentation and dissemination of activities, conducting researches and publishing research reports, promoting non-formal education, special education, and population education, promoting art education, health education and vocational education.

School Curriculum revision is one of the main responsibilities of SCERT. The Government of Kerala has decided to revise the school curriculum in 2022. The school curriculum framework was last developed in 2007 after the National curriculum framework was developed in the year 2005. The SCERT has initiated the process of revision of school curriculum by forming the State curriculum Steering Committee, Curriculum revision core committee and 26 focus groups. Based on the position papers and the suggestions received from the stakeholders, Kerala Curriculum Framework (KCF -2023) on Pre-school Education, School Education, Teacher Education & Adult Education and Continuing Education was developed.

On the basis of Curriculum Framework the textbooks for 1, 3, 5, 7 and 9 were revised and introduced. Teacher texts and Parental texts were developed and the process of developing the digital texts has been initiated.

Some of the other major initiatives in 2023-24 are the following;

- The research on mobile and Internet of Things (IoT) Augmented Learning Environment Special Education was undertaken jointly with Kannur University. The objectives of the project were to develop a hardware and software enabled learning environment to address the needs of special education, particularly for children with Autism and to design and develop an augmented reality-based learning environment to improve collaborative learning experience.
- A research on the effectiveness of the mathematical package Manchadi developed by K-DISC was initiated.
- The process of developing a separate curriculum for sports schools has been started by SCERT Kerala.

### **Vidyakiranam Mission(Continuation of Public Education Rejuvenation Campaign) part of Navakeralam Karma Padhathi II**

Vidyakiranam Mission (Public Education Rejuvenation Campaign) is one among the mission programme envisaged as part of the Navakeralam Karma Padhathi II. Facilitating to achieve the basic objective of school education- ensuring equitable and quality education for all children, enabling them to actively and creatively engage in the national development process confidently by using their full potential by upholding the constitutional values by linking all possible agencies and resources within and out of education department is the overall objective of the programme.

#### **Major achievements of the 1st phase**

- Public Schools regained reputation from among the community especially that of the parental community.
- The social environment that emerged through Mission activities ultimately leads to reducing the dropout rate. Kerala is the State in the country where the dropout rate is the lowest in school education.
- The infrastructure facilities of govt. schools were improved in a large scale.
- All public schools that include the Government and Government aided schools within the State, were transformed technology friendly. All classrooms of 8th to 12th classes were converted into Technology friendly classrooms.
- Imparted digital education training to all teachers.
- Implemented a variety of academic activities for academic enhancement keeping in view of the state position 'Quality Education is Pupils Right'. Initiated and implemented programmes for students who are in need of education support in Languages, Science, Social Science and Mathematics.
- With these academic interventions, Kerala has been placed in top in the SEQI (School Education Quality Index) prepared by Niti Aayog.
- Evolved a new methodology for teacher training by introducing the project - teacher transformation programme for higher secondary teachers - in the place of the conventional teacher empowerment programme.

#### **Higher Secondary Education**

Higher secondary courses were introduced in the State in 1990-91 to reorganise the secondary level of education in accordance with the National

Education Policy 1986. There are 2,076 Higher Secondary Schools (HSS) in 2024 in the State. Out of these 819 (39.5 per cent) are Government schools, 845 (40.7 per cent) are aided schools and the remaining 412 (19.8 per cent) are unaided schools. Among the districts, Malappuram has the largest number of higher secondary schools (248) in the State followed by Ernakulam (209) and Thrissur (204).

There are 7,220 batches of higher secondary classes in 2024. The total intake in higher secondary schools was 3, 84,557 in 2023-2024. Malappuram had the largest number of batches (1,065) with highest enrolment of 62,546 students. District wise/management-wise number of HSS and number of batches are given in **Appendix 6.1.17** and District wise enrolment of students in HSS are given in **Appendix 6.1.18**.

The pass percentage of students in higher secondary courses in 2023-24 was 78.7 per cent. 2, 94,888 students were eligible for higher studies, out of which 1, 68,561 were girls and 1, 26,327 were boys in 2024. The details are given in **Appendix 6.1.19**. The pass percentage of SC students during the period was 56.9 per cent and that of ST students was 53.9 per cent. Details are given in **Appendices 6.1.20 and 6.1.21**.

#### **Vocational Higher Secondary Education**

Vocational higher secondary education was introduced in the State in 1983-84. Vocational higher secondary education in the State imparts education at plus two level with the objective of achieving self/wage/direct employment as well as vertical mobility. In 2024-25, there are 389 Vocational Higher Secondary Schools (VHSS) in the State with a total of 1,101 batches. Out of these 261 are in the government sector and 128 in the aided sector. Kollam (52) followed by Thiruvananthapuram (41) has the largest number of vocational higher secondary schools in the State. District wise details of VHSS and courses in 2024-25 are given in **Appendix 6.1.22**. 71.41 per cent of students were eligible for higher education in VHS examination in 2024 March. The number of students who appeared and those who passed vocational higher secondary examination from 2019 to 2024 and the results of school going students (2019-2024) are given in **Appendices 6.1.23 and 6.1.24**

## Higher Education

The government has given higher education the highest importance, as it plays a paramount role in developing a society. It enables personal growth and promotes economic, technological, and social change. It is not only a vehicle for enhancing and exchanging knowledge, research, and innovation, but it is also the most plausible means to achieve financial security and a stable future, especially for students from vulnerable backgrounds.

Higher education has changed drastically over the past decades due to increased enrolment, student mobility, diversity of provision, research output, instruction quality, and budget-of-the-art technology. Kerala's legacy of promoting higher education under the leadership of the public sector, with due participation from the private sector, has enabled people to acquire the skills that have rendered them employable in many sectors and countries worldwide. However, higher education always required constant support to sustain and further the accomplishments. Against this backdrop, the 14th Five-Year Plan envisages overall improvement of the education sector, emphasising general education and higher education to fulfil the state's resolve to evolve as a Knowledge Society. In this regard, the major strategies included increasing enrolment, improving quality, strengthening physical infrastructure, increasing flexibility and diversification, and providing equitable opportunities to students. It is to be noted that Kerala has consistently improved its achievements in higher education since the beginning of the current Five-Year Plan.

Despite the State's best efforts to create an inclusive and accessible higher education system, it has become increasingly clear that substantial interventions are still the need of the hour to enhance academic quality, inclusiveness, and equity. Additionally, the higher education system in the State needs to be modernised to align with global standards and changing trends. It is also important that higher education institutions be oriented adequately to enhance efficiency and responsiveness. Transformation of the State into a Knowledge Economy also calls for better contributions from our higher education institutions to the economic development of the State through result-oriented research and development, as well as the transfer of technology and training. An overview of the higher education sector of the State is given below:

## Universities and Collegiate Education

Kerala has 14 State universities, out of which four (Kerala, Mahatma Gandhi, Calicut, and Kannur universities) are general. The rest of the universities, viz. Sree Sankaracharya University of Sanskrit, Thunchath Ezhuthachan Malayalam University, Cochin University of Science and Technology, Kerala Agricultural University, Kerala Veterinary and Animal Science University, Kerala University of Health Sciences, Kerala University of Fisheries and Ocean Studies, Kerala Technological University offer specialised courses in specified subject areas. Sree Narayana Guru Open University, the only Open University in Kerala, was established in 2020 with headquarters at Kollam. It has the mandate of open education of all categories in various disciplines. The Digital University, established in 2020, is the first of its kind in the country, and it is meant to conduct academic programs and research on cutting-edge digital technologies and emerging knowledge domains. The National University of Advanced Legal Studies (NUALS), established in 2005, is the only university under state government for legal education. Besides these, a Central University in Kasaragod District also functions in the State. Premium national-level institutions like IIT Palakkad, IIM Kozhikode, and AIISER Trivandrum also function in the state.

## Arts and Science Colleges

In 2023-24, there are 230 arts and science colleges in Kerala, of which, 164 colleges are Government Aided and 66 are government colleges. Apart from these, various un-aided/self-financing arts and science colleges affiliated with universities also function in the State. Ernakulam and Thiruvananthapuram have the largest number of arts and science colleges (26) in the State, followed by Kottayam (24). Thiruvananthapuram and Kozhikode have the largest government colleges (10). District-wise details of arts and science colleges in the State in 2023-24 are given in **Appendix 6.1.25**. The details of self-financing and autonomous colleges in the State are in **Appendix 6.1.26**.

## Enrolment in arts and science colleges

A total of 3.7 lakh students had enrolled in various arts and science colleges (excluding unaided colleges) for various courses under the four general universities in Kerala in 2023-24. Of this, 2.3 lakh (65.3 per cent) are girls. (**Table 6.1.6**)

**Table 6.1.6** Enrolment of Students in Arts and Science Colleges in number and per cent

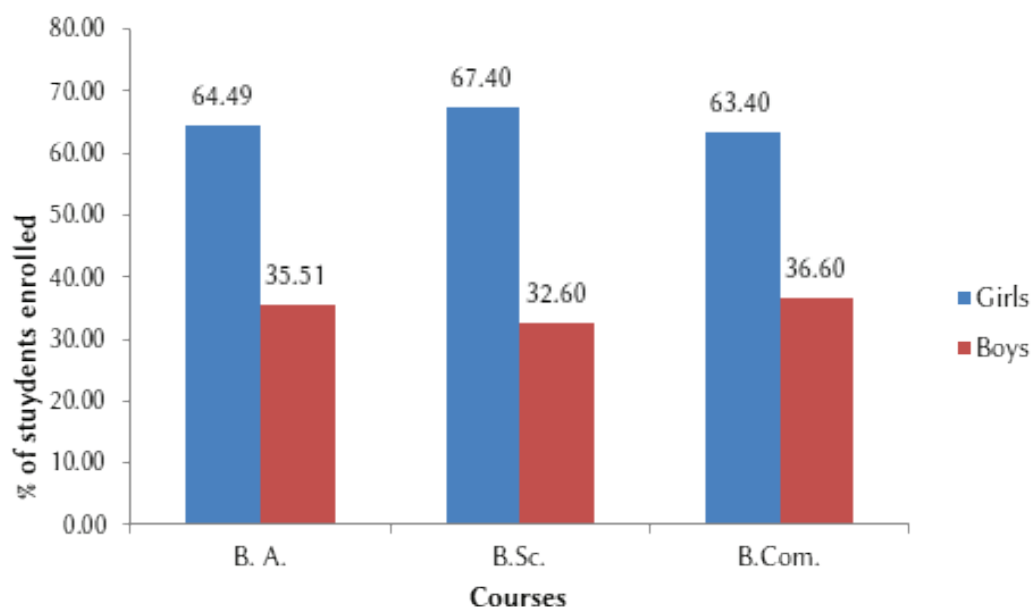
Course	Total	Girls	Boys	per cent of Girls
B. A.	148102	95509	52593	64.5
B.Sc.	114560	77214	37346	67.4
B.Com.	48131	30513	17618	63.4
Total	310793	203236	107557	65.3
M.A.	17522	11475	6047	65.5
M.Sc.	21519	13590	7929	63.2
M.Com.	7148	4980	2168	69.7
Total	46189	30045	16144	65.1
Grand Total	356982	233281	123701	65.3

Source: Directorate of Collegiate Education

Of the total students enrolled for degree courses, 47.7 per cent are enrolled for B. A degree courses, 36.8 per cent for B.Sc and 15.5 per cent for B.Com degree courses. Girls constitute 65.3 per cent of total enrolment for degree courses. Gender-wise distribution of enrolment reveals that the proportion of boys in B.Com courses is higher than that in B.Sc and B.A course (**Figure 6.1.3**).

Regarding the courses, 27 subjects are offered for BA degree programs. Among them, Economics has the largest enrolment of students, followed by

English. In B.Sc programs, 31 subjects are offered, and Physics has the largest student enrolment, followed by Mathematics. Details of enrolment of students in arts and science colleges for B.A, B.Sc, and B.Com are given in **Appendices 6.1.27, 6.1.28, and 6.1.29**. In postgraduate courses, 23,641 students were admitted in 2023-24. As much as 66.2 per cent of the students enrolled in PG courses are girls. Details of enrolment of students in arts and science colleges for M.A, M.Sc, and M.Com courses are given in **Appendices 6.1.30, 6.1.31, and 6.1.32**.

**Figure 6.1.3** Gender-wise proportion of students in undergraduate courses in 2023-24

Source: Directorate of Collegiate Education

**Table 6.1.7** Percentage of SC and ST students in higher education in Kerala in 2023-24

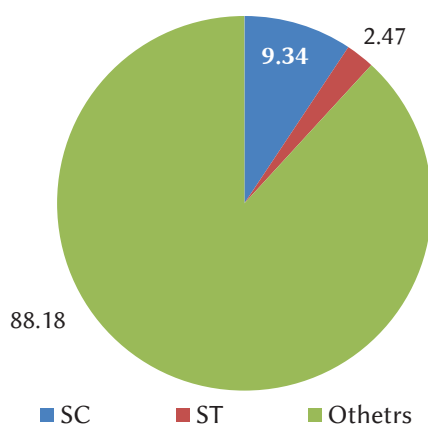
Course	Total	% of SC	% of ST	% of Others
B.A	100	7.71	2.47	89.82
B.Sc	100	11.55	1.23	87.22
B.Com	100	8.77	2.42	88.80
Total	100	9.29	2.01	88.70
M.A	100	9.51	6.49	84.00
M. Sc	100	8.96	4.10	86.93
M.Com	100	12.24	8.10	79.66
Total	100	9.68	5.63	84.69
Grand Total	100	9.34	2.47	88.18

Source: Directorate of Collegiate Education

### Scheduled Caste and Scheduled Tribe Students

It is reported that in 2023-24, a total of 33,345 Scheduled Caste (SC) students were enrolled in degree and postgraduate courses, which constitute 9.34 per cent of the total enrolment. When compared to the previous year, there is a slight increase in the enrolment of Scheduled Caste (SC) students, as in 2022-23, it was 9.32 per cent. The number of Scheduled Tribe students admitted to degree and postgraduate courses in the State in 2023-24 is 8,835, which forms 2.47 per cent of the total enrolment in the State. The enrolment of Scheduled Tribe students also shows a slight increase in 2023-24. During 2022-23, it was 2.4 per cent.

**Figure 6.1.4** Distribution of students in undergraduate and postgraduate courses in 2023-24



Source: Directorate of Collegiate Education

Details of the enrolment of SC and ST students in arts and science colleges in Kerala in 2023-24 are given in **Appendix 6.1.33**. Percentage-wise distribution of SC/ST students is shown in **Table 6.1.7**, and the distribution of SC and ST students enrolled in various undergraduate and postgraduate courses in the State is also shown in **Figure 6.1.4**.

### Scholarships

Students in Kerala availed of 16 types of Central and State sector scholarships in the year 2023-24. 32,427 students were selected for District Merit Scholarships, and 3,358 students availed of the Kerala State Suvarna Jubilee Scholarship. Central sector scholarships were provided to 9,821 students in 2023-24. The total number of students who availed of post-matric scholarships for minorities during 2023-24 was 73, 286 and the post-matric scholarship for students with disabilities was 1,418. The details of different types of scholarships offered from 2019-20 to 2023-24 are given in **Appendix 6.1.34**.

### Teachers

The number of teachers in arts and science colleges in the State in 2023-24 was 10,950, of whom 57.3 per cent were women. Details of the number of teachers in arts and science colleges across different universities in the state from 2019-20 to 2023-24 are given in **Appendix 6.1.35**. It is estimated that 4,514 (41.2 per cent) teachers in arts and science colleges in the State have Ph.Ds. Details are given in **Appendix 6.1.36**. A total of 4,005 guest lecturers were working in Government and Aided arts and science colleges of the State in 2023-2024. Details are given in the **Appendix 6.1.37**.

### Major achievements/ initiatives of Collegiate Education Directorate in 2023-24

**Hunger-free campus:** The project “*Hunger Free Campus*” is being implemented with the approval of the government from the financial year 2022-23 to mould a healthy young generation by providing quality, low-cost food to around 30,000 students studying in government colleges under the Department of College Education. Currently, the canteens in the colleges under the department are being run through Kudumbashree units. Colleges identify economically backward students who come from adverse living conditions and provide midday meals to those students at a rate of Rs.10/- through a special coupon/token. This amount is fully sanctioned to the canteens to cover the loss incurred by the canteens. In the financial year



### Box 6.1.2 Major Achievements in Higher Education in Kerala during 2023-24

Higher education in Kerala has been subject to significant policy shifts. The government of Kerala has special emphasis on improving the quality of higher education in the State as part of its policy to build and nurture a knowledge economy. Three Commissions have been constituted at the State level for exploring reform initiatives in the Higher Education System of the State with the objectives: i) to examine important aspects of the existing system of higher education in the State, particularly keeping in view the larger objectives of transforming the State into a knowledge society and developing a knowledge economy, ii) to review the present state of examination in the Universities and higher education institutions of Kerala and iii) to examine the laws, statutes, regulations and ordinances of universities, in the context of the regulations of U.G.C., A.I.C.T.E. and N.C.T.E., and to formulate proposals for revising them, keeping in view the larger objectives of transforming the State into a knowledge society. All three commissions have submitted their reports to revamp the sector with concrete recommendations. The commissions have thoroughly examined the existing national and international situation and extensively consulted experts and various stakeholders. The Government is in the process of examining the recommendations and implementing them on a priority basis.

The National Assessment and Accreditation Council is a government organisation in India that assesses and accredits Higher Education Institutions. It is an autonomous body funded by the University Grants Commission and headquartered in Bangalore.

Kerala has a Gross Enrolment Ratio (GER) of 41.3, the seventh highest in the country among the States and UTs. (AISHE-2021-2022)

In 2022, the University of Kerala secured the highest NAAC grading of A++ with a Cumulative Grade Point Average (CGPA) of 3.67, the highest grading and points obtained by any university in the State. The university had bagged the first chancellor's award for the best university in the State of Kerala in 2015. The university is ranked 38th overall in the country in 2024 in the National Institute Ranking Framework (NIRF) for the year 2024. The university is also ranked 21<sup>st</sup> among universities for the year 2024. The university also secured 339th rank in QS World Ranking Asia 2025, improving from its 451st rank in the previous year.

As far as colleges are concerned, as many as 16 colleges from Kerala figure in the top 100 colleges in the country, while 5 of them are ranked inside the top 50 colleges as per NIRF ranking 2024.

Mahatma Gandhi University has been reaccredited with an A++ grade by the National Assessment and Accreditation Council (NAAC) in the fourth cycle with a CGPA score of 3.63. MGU is the first University in Kerala to achieve A++ in the fourth reaccreditation cycle. In 2024, the university has secured 67th rank at the university level and 37th rank among higher education institutions (overall in India as per the National Institute ranking framework (NIRF). The university also received the chancellor's award for the best university of excellence in Kerala in 2015-16, 2017-18 and 2019-20. The university library bagged the Library Technology Conclave (LTC) 2019 Koha Library award for the best Koha implementation at the national level. The university also secured 15th rank among Indian universities in the World University ranking in 2022. Mahatma Gandhi University has been ranked among the top two per cent of Universities in Asia by the Study Abroad Aide rankings.

Calicut University is the largest University in Kerala, with more than 25 postgraduate studies and research departments. The University of Calicut has improved its grade to 'A+' with 3.45 points out of 4 in the recently held fourth assessment cycle by the National Assessment and Accreditation Council (NAAC). The university has also ranked 89th among universities (overall in India as per the National Institute Ranking Framework (NIRF) for 2024. Calicut University has also been ranked under the 401-450 band by the QS Asia University Ranking 2022 and 45th out of 100 universities in US India Universities.

The Kannur University is accredited with a B++ grade with 2.85 points in the second accreditation cycle by the NAAC in 2021. Sree Sankaracharya Sanskrit University is accredited with an A grade with a CGPA of 3.24 by the NAAC and CUSAT with an A+ grade of 3.39 points. CUSAT has also ranked 37 among universities (overall in India as per the National Institute Ranking Framework (NIRF) for the year 2023.

Source: Collegiate Education Directorate & Universities

2023-24, 7,859 children of government colleges under the department have become part of this scheme, and 1.35 crores have been utilised.

*CM's Prathibha Scholarship Award:* As a part of the Chief Minister's 100 days programme, the Pratibha Dhan Sahaya Scheme is an innovative scheme planned by the Department of Higher Education to award 1000 talented students who are economically backward and 1000 scholarships were awarded. 10 crore has been spent on the project in the financial year 2023-24.

*Jeevani - College Mental Awareness Programme:-* Through this programme, all the students of colleges will get psychological support, thereby promoting a positive environment in the institutions by making use of jeevani counsellors. All the colleges under the government and aided sector are beneficiaries of this program. With the help of 138 counsellors, 7,848 cases were solved during 2023-24.

*Earn While You Learn Programme:* Earn While You Learn is a project that has been started to inculcate saving habits in students and develop work skills. As part of the project, the department provides help to students in finding self-employment. A total of 756 students have benefited from the EWYL scheme. Rs 4,59,521/- were also paid to the students as wages.

*NAAC accreditation:* As part of improving the quality of the colleges, the colleges under the department have created the following levels of grades in NAAC accreditation. P.T.M Government College, Perinthalmanna - 3.11 Point, A Grade, Government College, Malappuram - 3.18 Point, A grade, KKTU Government college, Pullutt - 3.10 Points, A Grade, SARBTM Government college, Koyilandy - B Grade

### **Major achievements/programs/initiatives by the Universities in Kerala**

#### **Kerala University**

- Introduction of FYUGP at University of Kerala, first in Kerala: the University of Kerala made history by starting its first four-year UG programme - BA Political Science, Economics, History (Honours with research) at Kariavattom campus
- Researcher's Fest- Heights 2023: Organized the event in June 2023 at Kariavattom Campus to

showcase the University's research output and attract the Industrial, Academic, and Public Community to the Campus.

- The University of Kerala has been selected as the Best University for the NSS State Award 2021-22
- Kerala University bagged overall third in the 37th National Inter University Youth Festival held at Punjab Agricultural University Ludhiana
- Kerala State Biodiversity Conservation Award – 2022 received by the university.
- NIRF ranking 2024: University of Kerala was ranked 21st among universities in India in 2024. Also achieved 9th position in state public universities and 38th overall ranking.
- India Today-MDRA Ranking: The university attained 16th position in Overall Rank.

#### **MG University**

- Mahatma Gandhi University has been ranked among the top 2 per cent of universities in Asia by the Study Abroad Aid rankings. In its fourth cycle, Mahatma Gandhi University was reaccredited with an A++ grade by the National Assessment and Accreditation Council (NAAC), achieving a CGPA score of 3.61. In the NIRF ranking, the university achieved an overall rank of 67, 37th among universities, and 11th among state public universities.
- In 2023, for the third consecutive year, Mahatma Gandhi University secured a place in the World University Rankings published by The Times Higher Education. The university shared second place with Anna University, Tamil Nadu, and Jamia Millia Islamia University, New Delhi.
- The International Centre for Polar Studies (ICPS) at Mahatma Gandhi University was granted membership to the University of the Arctic (UARctic), an esteemed international cooperative network in the Circumpolar Arctic region.
- The university launched Degree Honours Programmes at affiliated colleges and 4+1 Programmes in its study departments
- Announced a strategic partnership with SIBUR, a leading petrochemical giant in Russia, marking a significant advancement in innovation within the rubber industry
- Thirty individuals completed the small-category drone programme approved by the Ministry of Civil Aviation at Mahatma Gandhi University in collaboration with Asia Soft Lab.
- Launched a globally accessible online MBA programme and programme approved by the UGC, providing an equivalent alternative to

traditional programs.

- Introduced two new certificate programs in drone technology under the School of Environmental Sciences
- Achieved notable success in national and southern regional sports including winning the overall title in athletics at the third Khelo India Inter University Games
- The women's team won the prestigious All India Inter-University Women's Volleyball Championship in Bhubaneswar, Odisha, and became champions in the All India Inter-University Men's Handball Championship held at Sacred Heart College, Thevara.
- A Memorandum of Understanding was signed for a Rs. 57 crore KIIFB-funded project, establishing an international-level indoor stadium and sports complex in collaboration with the Directorate of Sports and Youth Affairs, Government of Kerala.
- Granted accreditation to the Research Centre operated by the private bioscience company Agro Bio-Tech (ABTEC) in Kottayam, aligning with implementing the triple helix system.
- The university's technological advancements include the development of eco-friendly shields to facilitate smooth electromagnetic wave movement in sixth-generation wireless networks. MGU's Business Innovation and Incubation Centre completed 24 research projects in nine months, costing Rs. one crore, funded by Kerala's startup mission.
- The Mahatma Gandhi University Innovation Foundation (MGUIF) took a significant step towards promoting deep-tech industries by incubating Panlys Nanotech India Pvt Ltd, a startup specialising in advanced nanotechnology to prevent hospital infections.
- Demonstrating its commitment to social responsibility, MGU established a robust disaster relief initiative, 'MGU Team On Spot', comprising 4,800 individuals, including volunteers from the National Service Scheme (NSS) and NCC cadets from affiliated colleges, dedicated to disaster management.
- Launched the University of the Third Age Programme, empowering senior citizens through education and engagement.

### **Calicut University**

- Daycare centre has been constructed and installation of lifts in various buildings under the 'Campus Infrastructure Development Fund' has been initiated.
- Revamping of Secured Campus-WiFi (Phase II)

and Security Surveillance System implemented

- Construction of Golden Jubilee Block of Academic Evaluation (Phase I) has been completed.
- Centre for Innovation and Entrepreneurship (CIE) has been established.
- Established a barrier-free environment to cater to the needs of persons with disabilities through CDMRP (Community Disabled Management and Rehabilitation Program).

### **Kannur University**

- Kannur University bagged the E-Governance Award for Online Services in the Citizen Service Delivery Category in 2022-23.
- In a historic first, the university also achieved its first NIRF ranking in 2022 and was placed in rank band 151-200
- E-resource and remote access facilities has been made in the library.
- Hosted Research Conclave and conducted Public Lecture programmes
- Established Western Ghats Study Centre for Tropical Biodiversity and Integrated M Com programme
- Implemented an online Question Bank system and distribution of password-protected Question papers successfully in the University Departments.
- Established the Linguistic Diversity Study Centre, University Innovation & Incubation Foundation co-working space, and introduced three project mode courses.

### **CUSAT**

- Attained 10th rank in State Public University rankings –NIRF 2024, 34th rank among universities, 51 among Higher Educational Institutions.
- Secured A+ Grade- NAAC accreditation .
- Established School of Management among the top 100 B-Schools in India.
- Secured 921-940 rank in QS World University Rankings, 301-350 ranking in The Asia University ranking 2024
- 44 Patents have been granted/published during the period. 2022 – 2024.
- For 2024 CUSAT received a record-breaking 1410 international applications.

### **Kerala State Higher Education Council**

Recognizing the importance of State-level planning and coordination for the effective implementation of national-level policies in higher education, the National Policy on Education, 1986 suggested that

a State Council of Higher Education be set up in all states. Based on this, the Kerala State Higher Education Council was established on March 16, 2007. The Council is regarded as the principal higher education think tank of the State, and it provides evidence-based policy advocacy to bring about equity, access, and excellence in the higher education sector. The major responsibilities of the Council are:

- Act as an agency for formulating higher education policies of the State
- Render advice to the Government, universities, and other institutions of higher education in the State
- Co-ordinate the activities of various agencies of higher education in the State
- Initiate new concepts and programmes in higher education
- Provide common facilities in higher education without impinging upon the autonomy of other institutions of higher education

### **Major activities of the Higher Education Council during 2023-24**

*Cluster of Colleges:* Cluster of colleges is an arrangement for the mutual sharing of human and physical resources among neighbouring colleges to optimum utilisation of the available facilities for enhancing enrolment and quality of education. Three Clusters, viz, Thiruvananthapuram, Ernakulam, and Kozhikode, have been functioning from 2009 onwards, and they consist of five, four, and five-member colleges, respectively. New clusters, namely Thalassery, Kasaragod, and Palakkad regions, are also functioning during 2023-24.

*State Assessment and Accreditation Centre (SAAC):* The Council has formulated the concept of State Level Accreditation mechanism, namely SAAC, in line with the suggestions of the National Assessment and Accreditation Council and University Grants Commission intending to accomplish the task of assessing and grading the institute affiliated/educational institutions. During 2023-24, the assessment process of 3 colleges was completed.

*Higher Education Scholarship Scheme:* Under this scheme, 1000 fresh scholarships are given every academic year to meritorious students to pursue nonprofessional undergraduate courses. The scholarships of the awardees so selected would be renewed in the ensuing years till they complete their post-graduation. The number of beneficiaries

of higher education scholarships in the undergraduate and post-graduate sections during 2023-24 are 2,308 and 457 respectively.

*e-Journal Consortium:* It is the facility to provide the academic community with free access to e-journals across institutions in the country. This is done by Information and Library Network Centres through which expenditure can be reduced considerably. Almost all the journals and databases in relevant disciplines can be subscribed at a negotiated cost, fully funded by the Government/Universities. Kerala State Higher Education Council acts as a nodal agency in the State with the participation of all the Universities in the State.

*Kerala Academic Libraries Network (KALNET):* KALNET (Kerala Academic Library Network) is a platform for academic resources of libraries that has been developed to provide access to library collections across the university libraries in the State. It was launched in Feb 2021. The platform brings together 15 lakh titles across 147 libraries of 11 universities.

*Erudite Scheme:* Erudite is a flagship programme of the government that was introduced to improve the quality of education and research in the universities of the state. It enables the academic community to interact with outstanding scholars worldwide, including Nobel laureates. KSHEC is the coordinating agency for implementing the scheme through various universities and colleges in the State. Around 220 National and International Scholars, including Nobel laureates, have participated in various programmes organised by universities and colleges under the Erudite Scheme. In 2023-24 alone, 20 scholars have been invited under this scheme.

*Kairali Research Awards:* Government of Kerala, to encourage the most eminent research scholars and research pedagogues of the state, has instituted Kairali Research Awards from 2017-2018 and has authorised the State Higher Education Council (KSHEC) as the secretariat for the Kairali Research Awards. Since its inception in 2018, the Council has completed the selection process of awards three times and those awards have been distributed to the recipients.

Chief Minister's Nava Kerala Post-Doctoral Fellowship scheme: The Government of Kerala introduced the prestigious Chief Minister's Nava

**Table No. 6.1.8** Number of research awards distributed

No	Type of awards	No. of awards distributed
1	Gaveshaka Puraskaram	10
2	Gaveshana Puraskaram	8
3	Kairali Lifetime Achievement Award	7
4	Kairali Global Lifetime Achievement Prize for Researchers (abroad)	1
5	Kairali Global Lifetime Achievement Prize for Researchers (within India)	4

Source: Kerala State Higher Education Council

Kerala Post-Doctoral Fellowship scheme for meeting the innovation and development needs of the State through promoting quality research spanning the sectors like social, economic, agriculture, development and industry. During the first phase (2021-22), 77 CMNPF were awarded. The second phase (2022-23) of CMNPF was awarded to 64 candidates in August 2023 and approved the shortlist for the eligible candidates (31 nos.) for the award of Chief Minister's Nava Kerala Post-Doctoral Fellowships during the year 2023-24. Details of research awards distributed are shown in **Table 6.1.8**.

*Kerala – Enterprise Resource Planning Solution (K-REAP):* K-REAP is an initiative of the Kerala State Higher Education Council supported by the Department of Higher Education, Government of Kerala, to develop an ERP software system that centralizes diverse campus functions into a cohesive system. K-REAP platform empowers Universities and Higher Education Institutions (HEIs) with a digital framework for planning, management, delivery, and monitoring operations and services, thereby aligning with the transformative goals suggested by the Higher Education reforms commissions appointed by the Government of Kerala. The government has issued administrative sanctions to start this program.

#### **Kerala Council for Historical Research (KCHR)**

KCHR, established in 2001, is an autonomous academic institution committed to scientific research in archaeology, history, and social sciences. Research, including in-house and funded

projects, maintaining libraries and resource centres, documentation, publication, training, and running a wide variety of fellowship programmes are amongst the major areas of KCHR's activities. KCHR aspires to integrate advanced research and scholarship with historical social consciousness through its activities. The Kerala Council for Historical Research has two distinct campuses – one in Thiruvananthapuram and the other in Pattanam.

#### **Major activities of KCHR during 2023-24**

Various research projects undertaken by the council include the historical geography of Kerala-towards an understanding of the rise and decline of the midland zone in history, archaeological explorations, surveys and excavations, history of education Kerala, visuality, cityscapes, public history: ways of thinking contemporary Kerala, risk and vulnerability assessment of the rock arts of Wayanad, etc. KCHR started a School of Epigraphical Studies at the Pattanam campus on 12 February 2021 and the first batch completed their certificate course in February 2024. During 2023-24 KCHR published books, working papers, and occasional papers. The published books include Parukutty Amma- Jeevitha Kadha, Thekkethil Kudumba Charithram, Keralathile Pazhamchollukal, and Archaeology Matters - A Field-Based Narrative of Pattanam Excavations and Looking Ahead.

#### **Kerala State Skill Development Project and Additional Skill Acquisition Programme (ASAP)**

Additional Skill Acquisition Programme (ASAP) was initiated in 2014 as an ADB-funded project under the Higher Education Department to impart skill training to higher secondary and undergraduate students. It has trained more than 2 lakh students through its Skill Development Centres and Community Skill Parks in offline mode from 2014 to 2020. Now skill training is imparted through online means also. In January 2021, it was converted into a Section-8 company named ASAP Kerala by the Government.

#### **Major achievements/ performance of ASAP during 2023-24**

Special mention in India Skills Report: ASAP Kerala was recognized in the India Skills Report 2024 for its key role in developing industry-relevant skills for Kerala's youth, enhancing their employability.

NORKA ROOTS approval for ASAP courses: NORKA ROOTS has authorized the regional offices in Thiruvananthapuram, Kochi, and Kozhikode to authenticate educational certificates for eight ASAP Kerala courses, including marine structural fitting, childcare aid, business analytics, AI-machine learning, and more.

DGCA Approval for Drone Tech Course: ASAP Kerala's partner Remote Pilot Training Organisation received DGCA approval for a drone piloting course covering drone technology, mapping, UAV surveys, and aerial cinematography. This 96-hour programme allows participants to fly drones in India legally.

ASAP Kerala, in collaboration with the Local Self Government Department (LSGD), has successfully implemented skill development projects to empower marginalised communities. These courses had batch sizes of 26 and 16 participants, respectively.

Training programs for girls aged 15+ were conducted across five districts in Kerala, focusing on English proficiency and Tally software to enhance employability through the Beti Bachao Beti Padao Scheme.

ASAP Kerala, through the SHE SKILLS initiative, provided medical coding and billing training to women in Kochi and, through Samathwa, trained 50 SC/ST/Fishermen community members in logistics and full stack development.

ASAP Kerala launched a variety of talent-building initiatives such as College Student Induction Training, Summer Quest 2024, Placement Readiness Programme, Idea Fest 2024, Monthly Ideathon Series, Chess for All, National Space Day 2024 Event, Career Interest Test etc

ASAP Kerala established CoEs with industrial-grade labs to enhance skills and attract new industries. The Centre of Excellence for Electric Vehicles (EV) at Community Skill Park, Kunnathanam, inaugurated on April 25, 2023, focuses on EV technology and sustainability.

Community Skill Park Inaugurations were held at Cheriya Kalavoor, Alappuzha, Pampady, Kottayam Thavanur, Malappuram, and Vizhinjam, Thiruvananthapuram.

### **National Cadet Corps (NCC)**

NCC was established in 1948 as the largest uniformed youth organisation in India, and the motto for NCC is "Unity and Discipline". NCC aims to develop character, discipline, and leadership qualities among students and youth. There are five group headquarters, 42 battalions, and one directorate of NCC in the State. The total strength of cadets in the state during 2023-24 is 96,889 across 406 colleges and 699 schools.

Major achievements/ initiatives of the NCC directorate in 2023-24 are i) national-level training centres are being set up at Kallara and Kozhikkode to impart training to 600 selected cadets from the State ii) initiatives in the fields like anti-drug campaign, Malinya muktha campus and Malinya muktha Nava Keralam, Puneeth Sagar Abhiyan (sea shore and water body cleaning initiative), blood donation campaign, visit of old age home and helping them, support of we-care campaign, support of rescue operations at Chooralmala landslide etc.

### **Rashtriya Uchathaar Shiksha Abhiyan (RUSA)**

The key objectives of RUSA are to improve access, equity, and quality in higher education through planned development of higher education at the State level. It also intends to create new academic institutions, expand and upgrade the existing ones, develop institutions that are self-reliant in terms of quality education, professionally managed, and characterised by a greater inclination towards research, and provide students with an education that is relevant to the times and requirements of society.

RUSA Phase I was started in 2014, and Rs 199.57 crore was approved. Out of this, Rs 187.80 crore was released up to 2024. Out of the total, Rs 112.6 crore was released as central share. As part of the first phase of RUSA, grants for improving infrastructure were given to six universities and 28 colleges. The proposals for faculty improvement, upgrading existing colleges to model degree colleges, and equity initiatives for several other colleges were also approved. Out of the total release, Rs182.9 crores has been utilized (97.4 per cent)

RUSA Phase II was started in 2018, and Rs366 crore was approved. Out of which Rs243.75 crore has been released up to 2024. Of this, the central share is Rs146.25 crore, and the state

share is Rs97.5 crore. In this phase, proposals for establishing a RUSA new Model Degree College at Mananthawady, Wayanad, and five autonomous colleges (Rajagiri College of Social Sciences - Ernakulam, St. Joseph College, Devagiri College – Kozhikkode, Marian College, Kuttikkanam – Idukki, M.A College- Kothamangalam, Farooq College – Kozhikkode) for enhancing quality and excellence have been approved. Proposals for grants to 113 colleges for infrastructure development and two Universities for research, innovation, and quality improvement have also been approved. Out of the total release, Rs238.08 crores has been utilised (98 per cent).

### **Technical Education**

Technical education aims at human resource development by way of the application of technology for the benefit of society in terms of improving the quality of life, enhancing industrial productivity, and improvising technologies for overall community development. Quality improvement in technical education is universally regarded as a prerequisite for economic growth. Considering the huge efforts by the government to enhance economic development through the infusion of new technologies, emphasis was given to promoting innovative thinking and entrepreneurship development among students.

The Directorate of Technical Education is the state's nodal department for technical education. The details of technical institutions under the administrative and financial control of the Directorate of Technical Education are given in **Appendix 6.1.38**.

### **Engineering Colleges**

It is reported that 167 engineering colleges have functioned in the state in 2023-24, with a sanctioned intake of 50,490. Out of these engineering colleges, 155 (92.8 per cent) are self-financing colleges (unaided), 9 (5.4 per cent) are Government colleges, and 3 (1.8 per cent) are government-aided colleges. The highest number of unaided engineering colleges are functioning in Ernakulam (28), followed by Thiruvananthapuram (26). No government engineering colleges exist in Kollam, Pathanamthitta, Alappuzha, Ernakulam, Malappuram and Kasargod Districts. District-wise and management-wise details of engineering colleges and sanctioned intake are given in **Appendix 6.1.39**. The sanctioned intake of government colleges in 2023-24 was 3,690 (7.3

per cent), aided colleges 2,120 (4.2 per cent), and unaided colleges 44,680 (88.5 per cent).

The highest number of seats in 2024-25 was found to be in Computer Science and Engineering (12,264), followed by Electronics and Communication Engineering (6,606), Civil Engineering (6,414) and Mechanical Engineering (6,405). In 2023-24 also, the highest number of seats was in the Computer Science and Engineering branch (10,164). The branch-wise distribution of seats in engineering colleges in 2024-25 is given in **Appendix 6.1.40**.

Gender facts: At the graduate level, the proportion of girls' intake was 46 per cent in 2023-24 in government and aided colleges. In postgraduate courses, 1,378 students were admitted to government and aided engineering colleges. Girl students constituted 63.5 per cent of the total postgraduate students in Government and aided engineering colleges. Details are given in **Appendices 6.1.41 and 6.1.42**.

### **Academic Excellence in Engineering Colleges**

As evident from the results of the B Tech course, academic excellence in Government engineering colleges has remained high, primarily due to the high pass percentage and increasing placement of students in reputed firms.

In terms of the results of examinations, it could also be inferred that government-aided colleges performed better than government, government self-financing, private autonomous colleges. While government-aided colleges registered 79 passes per cent, government engineering colleges had 75.8 per cent, Government self-financing colleges had 64.6 per cent, and private autonomous colleges had 48.7 per cent pass. It is also to be noted that the passing percentage of government self-financing colleges (64.6 per cent) is much above that of private autonomous engineering colleges, which secured 48.7 per cent. Compared to boys, girls performed better with a pass percentage of 72.6, though the number of boys registered was more than girls (**Table 6.1.9**). It is disturbing that only 31.8 per cent of SC students and 27.9 per cent of ST students passed the examinations, which is far below the State averages (**Table 6.1.10**).

The placement record of the students in various government institutions is also relatively high. Many students also qualify for higher studies

**Table 6.1.9** Details of B.Tech Result, 2024

Management	Boys			Girls			Total		
	Registered Students	Passed Students	Pass Percentage	Registered Students	Passed Students	Pass Percentage	Registered Students	Passed Students	Pass Percentage
Government	2,381	1,713	71.94	1,625	1,325	81.54	4,006	3,038	75.84
Govt. Aided	1,315	969	73.69	771	679	88.07	2,086	1,648	79
Govt. Self-Financing	2,706	1,464	54.10	2,047	1,606	78.46	4,753	2,070	64.59
Private Autonomous	10,342	4,040	39.06	5,781	3,819	66.06	16,123	7,859	48.74
Total	16,744	8,186	48.89	10,224	7,429	72.64	26,968	15,615	57.90

Source: Kerala Technological University, 2024

through competitive examinations like GATE and CAT. Most of the students get placement in multinational firms such as WIPRO, Mahindra, TCS, BOSCH, etc.

The number of visiting faculty programmes in various government engineering colleges during 2023-24 was 135. Details of visiting faculty programmes and placement details of students of various government engineering colleges in 2023-24 are given in **Appendices 6.1.43 and 6.1.44**.

### Polytechnics and Technical High Schools

There were 46 government polytechnics and six government-aided polytechnics in Kerala in 2023-24. Out of this, seven are women's polytechnic colleges. The annual intakes of students in government polytechnics and government-aided polytechnics in 2023-24 were 11,015 and 1,446, respectively. The total number of students in government polytechnics in 2023-24 was 31,241, and that in government-aided polytechnics was 4,408. Details of annual intake and student

strength in polytechnics from 2019-20 to 2023-24 are given in **Appendices 6.1.45 and 6.1.46**.

Distribution of the annual intake of students in polytechnics in 2023-24 across different trades is given in **Appendix 6.1.47**. Student intake is highest in Computer Engineering (2,030) followed by Electronics Engineering (2,020), Mechanical Engineering (1,740), and Civil Engineering (1,510).

Girls constituted only 22.9 per cent of the total strength in polytechnics while their proportions in government and aided polytechnics were 24.2 per cent and 14.2 per cent respectively in 2023-24. A total of 1,242 teachers worked in polytechnics in 2023-24. The proportion of female teachers was 44.9 per cent. In government-aided polytechnics, female teachers constituted 33 per cent while the respective proportion in the government sector was 47.3 which is comparatively high. Details of number of students and teachers in polytechnics are given in **Appendix 6.1.48**.

Number of SC/ST students and SC/ST teachers

**Table 6.1.10** Pass percentage of SC and ST B.Tech students, 2024

Category	SC			ST		
	Registered Students	Students passed	Pass Percentage	Registered Students	Students passed	Pass Percentage
Government	271	108	39.85	29	8	27.59
Govt. Aided	127	52	40.94	20	8	40
Govt-Self Financing	188	43	22.87	9	3	33.33
Private Autonomous	228	56	24.56	10	0	0
Total	814	259	31.82	68	19	27.94

Source: Kerala Technological University, 2023



**Table 6.1.11** Percentage of SC and ST students in Polytechnics

Type of Institution	2021-22				2022-23				2023-24			
	SC	ST	Oth-ers	Total	SC	ST	Oth-ers	Total	SC	ST	Oth-ers	Total
Government	7.61	0.88	91.51	100	8.24	1.02	90.74	100	10.54	1.49	87.97	100
Govt. Aided	4.36	0.44	95.2	100	6.58	0.50	92.92	100	6.15	0.39	93.46	100
<b>Total</b>	<b>7.20</b>	<b>0.83</b>	<b>91.97</b>	<b>100</b>	<b>8.02</b>	<b>0.95</b>	<b>91.03</b>	<b>100</b>	<b>10</b>	<b>1.35</b>	<b>88.65</b>	<b>100</b>

Source: Directorate of Technical Education

in polytechnics from 2021-22 to 2023-24 (Table 6.1.11) are given in Appendix 6.1.49.

Thirty-nine Government technical high schools are functioning in the State. In 2024-25, there are 7,832 students and 526 teachers respectively. Women teachers constituted 36.1 per cent of teachers in technical high schools. The number of students and teachers in technical high schools from 2019-20 to 2024-25 are given in Appendix 6.1.50. In 2024-25 the percentages of SC and ST students in technical high schools are 10.6 per cent and 0.6 per cent respectively. Details are given in Appendices 6.1.51 and 6.1.52.

### APJ Abdul Kalam Kerala Technological University

The Government of Kerala established Kerala Technological University in July 2014 intending to give leadership to the technology-related policy formulation and Engineering Planning for the State. It also emphasises improving the academic standards of the Graduate, Post Graduate, and Research Programmes in Engineering Science, Technology, and Management and regulating the academic standards of all colleges affiliated with the University. The main thrust areas of the University are Research, Development, and Innovation.

### Major achievements of APJ Abdul Kalam Kerala Technological University in 2024

Translational Research Centre for APJKTU: APJ Abdul Kalam Technological University was designated as a Special Purpose Vehicle for the smooth implementation of the Translation Research Centre project in a time-bound manner. The University selected M/s. WAPCOS Limited, Pettah, Thiruvananthapuram, as Project Management Consultant for implementing the Translational Research Centre Project of the University at Vilappilsala.

### Centres of Excellence of the university:

Establishing Centres of Excellence for multidisciplinary applied research is a scheme initiated by the University to ensure global connectivity to institutions in undertaking high-quality research in emerging areas of technology. The domains of three Centres of Excellence under APJ Abdul Kalam Technological University are 1) Sustainability Engineering and Carbon Neutrality at Government Engineering College Kannur, 2) Emerging Materials and Infrastructure at Rajiv Gandhi Institute of Technology, Kottayam, and 3) Artificial Intelligence, Machine Learning, Robotics, and Automation at Model Engineering College, Ernakulam.

### Research support facilities under the University:

APJ Abdul Kalam Technological University has 44 research centres spread across the affiliated colleges under the University, accommodating 920 research scholars. To provide better facilities to support their research and academic activities, facilities and tools such as Elsevier Journal Database, Nimbus library, Turnitin Plagiarism checking tool, etc were provided during 2023-24.

**Research Scholarships:** The number of fellowships to Ph.D. Research Scholars was increased to 100 numbers in the year 2023-24. The total number of research scholars who joined in the year 2023-24, including full-time and part-time, is 143, and the amount utilised for 2023-24 is Rs 50.00 lakhs.

**Student Support Scheme: Suraksha:** To ensure the well-being of the student's physical, social, and emotional state, the scheme "Suraksha" was initiated by the University during the year 2021-22, and the entire procedure, including the schemes of rules and its operations, were implemented by the university.

**On-Screen Marking (OSM) system:** The On-

Screen Marking (OSM) system is proposed to revolutionise the university's exam evaluation process by leveraging digital technology. This system aims to enhance accuracy by reducing human errors, improving efficiency through faster processing and result dissemination, increasing transparency with clear audit trails and reduced biases, and ensuring the security of exam scripts by protecting them from loss, damage, and unauthorised access.

### **LBS Institute of Technology**

The LBS Centre for Science and Technology, Thiruvananthapuram, is the premier institute of computer training and consultancy, registered under the Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act XII of 1955, established by the Government of Kerala in 1976. The Government of Kerala started the centre as an autonomous body with the primary objective that the centre would act as a link between the industries and technical institutions to benefit society through mutual interactions. The LBS Centre for Science and Technology is a Kerala University research study centre. LBS Centre for Science and Technology started an engineering college at Kasargod during 1992-93. Another engineering college for women was started at Poojappura, Thiruvananthapuram during the period 2001-02.

### **Major achievements of LBS in 2024**

National Conference on Soils and Foundations SAF 2024 was organised from 15.02.2024 to 17.02.2024 at LBS Institute of Technology for Women, Poojappura, Thiruvananthapuram with the technical support of Indian Geotechnical Society – Thiruvananthapuram Chapter, Deep Foundations Institute (DFI) and the Technical Committee TC 212 of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). The conference aims to provide a platform for Academicians, Research scholars, Practicing Engineers, and Students working in Geotechnical Engineering and Deep Foundations to interact and share their experience and knowledge.

The WESAT satellite, developed entirely by women, was launched from Sriharikkota in partnership with ISRO. This project involved a team of women, including students and staff from the LBS Institute of Technology for Women.

As a part of \*'Digi Femmina\* - Helping others achieve digital freedom', WiE AG IEEE SB LBSCollege of Engineering Kasargod, in collaboration with IEEE WiE Malabar Hub, introduced \*'Connected 2.0\*' at Sauhruda Arts & Sports Club, Barotty, Kasargod.

The Carbon Zero Challenge 4.0 Hackathon, held from February 12th to 14th, 2024, witnessed the participation of 22 innovative teams dedicated to addressing carbon emissions and fostering sustainable solutions. The event featured dynamic activities, including team formation, ideation sessions, hacking periods, mentorship sessions, and final presentations.

Young Innovators Programme (YIP) 4.0, held at LBS College on June 24, 2023, served as a platform for participants to showcase their projects and receive valuable feedback from the panel, contributing significantly to the overall success and advancement of the Young Innovators Programme. The session of Young Innovators Programme (YIP) 6.0 held on February 8, 2024, was meticulously crafted to ignite innovation and foster care. EEE Department of LBS College of Engineering, Kasargod, developed an Electric laterite cutter that can be effectively and economically used in laterite quarries.

### **Trivandrum Engineering Science and Technology (TrEST) Research Park**

TrEST (Trivandrum Engineering Science and Technology) Research Park is the state's first science and technology research park, and it has set a model for industry-academia linkage. The institution promotes collaborative research in microprocessor design, electric vehicle research, and other emerging technologies. TrEST Park facilitates joint research by faculty, members, students, and industry.

### **Significant Achievements of TrEST Park in 2024**

An MoU was signed between K-DISC, TTPL, VSSC, C-DAC, and TrEST Research Park to realise the EV -Consortium. The K-DISC EV Consortium among K-DISC, TTPL, VSSC, C-DAC, and TrEST Park focuses on promoting R&D in Electric Vehicle Power System components.

Setting up of TrEST satellite centres in academic institutions: This aims to bring in opportunities to incubate startups in and around the area near

the campus of academic institutions. This will eventually pave the way for more internship and employment opportunities, student skill development, etc.

An EV Industrial and Research Park is planned to be established in the State, which includes the setup of common facilities for the EV Companies and Startups, where they can plan to use the facilities on a payment basis. An approximate area of 23 acres is earmarked for setting up the EV Industrial and Research Park, Incubation Units, and Innovation Space (Innovation Hub).

TrEST park had set up two Centres of Excellence (a) Electric Vehicles and (b) Microprocessor chip development.

### **Kerala State Science and Technology Museum (KSSTM)**

KSSTM is an autonomous organisation under the Government of Kerala, established in 1984 and designed to serve as a dynamic medium of science communication for the public and promote science and scientific temper for a better tomorrow. The internationally renowned Priyadarsini Planetarium at Thiruvananthapuram is the prime attraction of the museum. The museum has galleries on Astronomy, Space Research, Electrical engineering, Electronics, popular science, mathematics, automobile, computers, and robotics, in addition to a science play park with educational playing devices, 3D theatre, Science on sphere show, energy ball, VR studio and Laserium and musical fountain. Other facilities include a science park for children, a dinosaur enclave, and an innovation hub. A well-equipped library is also functioning at the museum. The main campus is functioning at Thiruvananthapuram. Electronic gallery, the first phase of a computer gallery, an automobile gallery with a life-size model of the first automobile, website modification with an online ticket booking facility, a 5m diameter motorised revolving globe, conduction of a creative summer science workshop for students, various outreach programs, etc. are the major works completed at Thiruvananthapuram campus during 2023-24.

To achieve excellence in higher education and to expedite the journey towards a knowledge economy, Kerala must strengthen its efforts to develop science, technology, and innovation. Higher education in Kerala has reached a critical juncture where strategic interventions

and reform measures are imperative to enhance global competitiveness. The government has established institutional networks and missions for interdisciplinary and transdisciplinary research in social sciences, humanities, languages, and arts. Emerging technologies such as augmented reality (AR) and virtual reality (VR) promise to enhance learning experiences by fronting new educational opportunities.

Enhancing higher education in the State has been a major priority of the government, reflected in the constitution of three high-level commissions focussed on revamping the sector. The Shyam Menon Commission for comprehensive revamp of the State's higher education sector has recommended establishing Centres of Excellence to enhance the quality of higher education and promote cutting-edge research. Another ambitious programme, the "Study in Kerala" programme, aims at making the State a significant hub of higher education, mainly for students from abroad.

## 6.2 MEDICAL AND PUBLIC HEALTH

The Government of Kerala has made significant strides in ensuring that healthcare is not only accessible but is also of high quality for all its residents. By focusing on marginalised and vulnerable populations, the State aims to address disparities in health outcomes and provide support where it is needed most. The comprehensive healthcare network in Kerala, which includes primary, secondary, and tertiary care facilities, ensures that citizens have access to a range of services.

Kerala's impressive health indicators, such as high life expectancy, low infant and maternal mortality rates, and a favourable gender ratio, highlight the effectiveness of its health policies. These metrics position the State as a leader in health outcomes compared to other regions in India. Kerala is the top-ranking State in terms of overall health performance among larger states in India in various Niti Aayog Health index reports.

In addition to maintaining these positive indicators, the State is proactively addressing emerging health challenges. There is a growing focus on Non-Communicable Diseases (NCD), mental health issues, substance abuse, and the health risks associated with road traffic accidents. By recognizing these contemporary health concerns, Kerala is adapting its healthcare strategies to meet the evolving needs of its population. Moreover, the state's commitment to the health of specific groups, including Scheduled Caste and Scheduled Tribe populations, fish workers, plantation workers, and migrant workers demonstrates its inclusive approach to healthcare.

By tailoring interventions to the unique challenges faced by these communities, the Government is working towards reducing health inequities and ensuring that all citizens can lead healthier lives.

Kerala's health landscape is indeed marked by a complex interplay of challenges, ranging from the incidence of infectious diseases to the rising prevalence of NCDs. The State's history of effective public health measures has been tested by the emergence of diseases like chikungunya, dengue, leptospirosis, and COVID-19, which have highlighted the need for robust surveillance and response systems.

The rise in adolescent health concerns also calls for targeted programmes that address the unique needs of younger populations. Kerala has undergone a significant demographic transformation, characterised by a decline in fertility and mortality rates, leading to an ageing population. To effectively tackle these multifaceted health challenges, the Government of Kerala recognises the necessity of coordinated efforts across various sectors. This intersectoral collaboration is vital for creating comprehensive strategies that encompass prevention, treatment, and rehabilitation. During the 14th Five-Year plan period, the State aims to enhance its health care delivery system by focusing on accessibility and quality of services. By prioritizing preventive, promotive, curative, rehabilitative and palliative care, the Government seeks to establish a healthcare framework that is not only efficient but also responsive to the needs of the community. This people-friendly approach is essential for fostering trust and engagement among

the population, ultimately leading to improved health outcomes. The health challenges faced by Kerala require a concerted effort that integrates various sectors, promotes community involvement, and emphasizes a comprehensive healthcare strategy. By doing so, the State can work towards a healthier future for all its residents.

### Health Indicators of Kerala

**Life Expectancy-** Life expectancy is an important yardstick to judge the quality of life and well-being of people. Life expectancy (at birth and ages 5-10 years) in Kerala has been the highest among the States, which is 75 years as against the national average of 70 years. Kerala retains its top rank in life expectancy for males (71.9) and females (78.0), whereas at the national level, it is 68.6 and 71.4 respectively (Table 6.2.1). In Kerala, the life

expectancy for females (78) is higher than that for males (71.9).

**Maternal Healthcare-** The primary indicator of maternal health is the Maternal Mortality Ratio (MMR). Kerala has the lowest MMR (19) among the States whereas the MMR at the national level is 97 (Table 6.2.1).

The percentage of deaths due to not receiving medical attention from qualified professionals is less than one-fourth of the national average. The percentage of deaths where the deceased have received medical attention before death, either at a Government hospital or at a Private Hospital in Kerala is 80.7 which is 48.7 per cent in India. However, still birth rate in Kerala is still slightly higher than that of all India levels. This may be

**Table 6.2.1** Demographic, socio-economic and health profile of Kerala as compared to India

Sl. No.	Indicators	Kerala	India
1	Total population (in crore) (Census 2011)	3.34	121.06
2	Decadal Growth (per cent) (Census 2011)	4.90	17.7
3	Sex Ratio (Census 2011)	1084	943
4	Child Sex Ratio (Census 2011)	964	919
5	Birth Rate #	13.2	19.5
6	Death Rate*		
	(a) Children (0-4)	1.8	8
	(b) Children (5-14)	0.5	0.4
	(c) Persons (15-59)	2.7	2.9
	(d) persons (60 and above)	39.1	42.3
7	Natural Growth Rate #	6.2	13.5
8	Per cent of deaths receiving medical attention*		
	Government	43.3	29.9
	Private	37.4	18.9
	Qualified professional	16.0	33.2
	Untrained/others	3.4	18.0
9	Still Birth Rate*	4	3
10	Crude Birth Rate*	13.2	19.5
11	Maternal Mortality Ratio**	19	97
12	Expectancy of Life at Birth***	75	70
	Expectancy of Life at Birth*** - Male	71.9	68.6
	Expectancy of Life at Birth*** - Female	78	71.4

Source: # SRS 2022 May/ \* SRS Statistical Report 2020

\*\*Special Bulletin on MMR 2018-20 / \*\*\*SRS Life Table 2016-20

attributed to more institutional deliveries than in other parts of India. Fertility rates are also lower than that of national figures. The percentage of live births without medical attention of qualified professionals received by mothers in Kerala is only 0.1 against 7.8 at the national level.

### Child Mortality at different levels

Infant Mortality Rate IMR- Kerala is the only bigger State in India with a single-digit Infant Mortality Rate (IMR) of 6, whereas it is 28 at the Indian level.

The neo-Natal Mortality Rate (NNMR) in the State is 4 which is one-fifth of the national average (20). Under-five mortality (under 5 MR) rate is 8, which again is one-fourth compared to all India figure (32). Perinatal Mortality Rate (PNMR), Early Neo-natal Mortality Rate (ENMR), Late Neo-natal Mortality Rate (LNNMR) and Post Neo-natal Mortality Rate (PNNMR) are far below the India figure. Child Mortality Rates at different levels are better than the national average. One of the main reasons for these achievements is that 99.9 per cent of mothers in Kerala get medical attention from qualified professionals at delivery either at Government hospitals or at Private

hospitals, which is 82.6 per cent in India. Details of child mortality rate at different levels and the percentage of live births getting medical attention from qualified professionals received by mothers in Kerala are given in **Table 6.2.2**.

### Fertility

As per the National Family Health Survey 2019-20 (NFHS - 5), the median age at first marriage in Kerala is 21.5 years among women aged 25-49 years. Six per cent of women aged 20-24 years got married before attaining the legal minimum age of 18 years. Only 10.2 per cent of women aged 20-49 years have never married compared with 35.9 per cent of men aged 20-49. The total fertility rate (TFR) expressed per woman is 1.5 in Kerala, whereas it is 2 at all India levels. Comparative figures of major fertility indicators at the State and National levels are given in **Table 6.2.3**.

### Aardram Mission

The Aardram Mission I was started during the 13th Five-Year Plan period to make Government hospitals people-friendly by improving their basic infrastructure and capacity to provide services. The mission aims to improve the efficiency of services and facilities in Government healthcare

**Table 6.2.2** Details of child mortality rate at different levels and percentage of live births getting medical attention of qualified professionals received by mothers in Kerala

Sl. No.	Indicators	Kerala	India
1	Infant Mortality Rate #	6	28
	Infant Mortality Rate # -Male	10	28
	Infant Mortality Rate # - Female	3	28
2	Neo-Natal Mortality Rate*	4	20
3	Perinatal Mortality Rate*	8	18
4	Child Mortality Rate*	2	8
5	Under 5 mortality Rate*	8	32
6	Early Neo-natal Mortality Rate*	4	15
7	Late Neo-natal Mortality Rate*	0	5
8	Post Neo-natal Mortality Rate*	2	8
9	Crude Death Rate*	7	6
10	Percentage of live births by type of medical attention received by mothers*		
	Government	44.7	54.6
	Private	55.2	28
	Qualified professional	0.1	9.7
	Untrained/others	0.1	7.8

Source: # SRS 2022 May/ \* SRS Statistical Report 2020

**Table 6.2.3** Major fertility indicators of Kerala as compared to India

Sl. No.	Indicators	Kerala	India
1	Total Fertility Rate*	1.5	2
2	General Fertility Rate*	45.3	67
3	Total Marital Fertility Rate*	4.6	5.2
4	General Marital Fertility Rate*	65.7	108.3
5	Gross Reproduction Rate*	0.8	0.9
6	Female mean age at effective marriage*		
	(a) Below 18	17	16.5
	(b) 18-20	19.2	19.3
	(c) Above 21	25	24.2
	(d) All age	23.4	22.7

Source: \* SRS Statistical Report 2020

institutions to extend treatment at a reasonable cost, time and satisfaction. The major objectives of the mission are: (i) Patient-friendly transformation of the outpatient (OP) wings of medical college hospitals and other Government hospitals, (ii) Standardisation of the District and Taluk level hospitals, (iii) Developing the PHCs into FHCs in a phased manner and (iv) Ensuring protocol-based treatment guidelines in the management of patients in hospitals. Aardram Mission is implemented at three stages in Government Medical College hospitals, General hospitals, District hospitals, Taluk hospitals and Primary Health Centres (PHCs). The conversion of PHCs into family health Centres (FHCs), FHCs as Block Family Health Centres with an adequate supply of drugs and assured treatment protocols would ensure better health of the public and enhance their trust in the public health system. As part of Nava Kerala Karma Padhathi II, Aardram Mission 2 will be launched in 2022.

### Family Health Centres

In the first phase in 2017-18, the Government identified 170 PHCs covering all 14 districts for developing into Family Health Centres. Out of this, 166 FHCs are already made functional, and the rest are progressing. In the second phase in 2018-19, 504 PHCs were selected for development into FHCs of which 439 have been completed and works are progressing in other PHCs at

different stages. The transformation of the PHCs into FHCs has evoked encouraging community response. In the third phase, 212 PHCs were selected for development into FHCs using funds under the National Health Mission in which 89 are completed. In addition to this, 76 Community Health Centres (CHCs) were selected as the first phase to convert into Block Family Health Centres during 2019-20 of which 56 have been completed and another 76 Community Health Centres (CHCs) were selected as second phase to be converted into Block Family Health Centres during 2021-22 in which 19 have been completed. A total of 3725 posts have been created under DHS since 2016.

### Patient-friendly transformation of the outpatient wings of Government hospitals

Because Medical College hospitals and District level hospitals are larger institutions providing outpatient care for a large number of patients every day, a patient-friendly transformation of the outpatient wings of these hospitals was taken as a priority item under the Aardram Mission. Outpatient transformation with adequate OP registration counter, patient waiting area, adequate seating facilities, token system and other amenities such as drinking water, toilet facilities, public address system, information education & communication arrangements and signage systems are being incorporated. Support of patient care coordinators for larger institutions temporarily would also be provided. To ensure quality medical care, OP computerisation, providing adequate facilities in the consultation rooms and guideline-based case management are planned. These are being implemented in Government medical college hospitals and district-level hospitals.

### People-friendly OP transformation of General/District/Taluk Hospitals

There are a total of 18 General hospitals and 18 District hospitals in the States. Out of this 17 institutions have been selected for OP transformation. The construction works of 14 hospitals have been completed. The work in other hospitals is progressing well. Out of the total 86 Taluk hospitals, 43 institutions are selected for standardisation in a phased manner in which 15 institutions are completed. 891 posts were created in District/General/Taluk hospitals. As part of Aardram Mission which consists of 14 Super Specialists, 252 Specialists and Casualty Medical

Officers, 197 Staff Nurses, 84 Lab Technicians and 344 Paramedical Staff.

### New Initiatives Taken in Medical Colleges

Aardram Mission aims to provide patient-friendly and quality care services to the outpatient wing of Medical Colleges. As a first step, Medical Colleges at Thiruvananthapuram, Paripally, Alappuzha, Kottayam, Ernakulam, Thrissur, Malappuram and Kozhikode were selected for the implementation of OP Transformation. Presently the works in these 8 Medical Colleges have been completed. The main components of the projects are: making an online registration facility available to reduce the waiting time of patients at hospitals, constructing new OP waiting areas, providing drinking water facilities, renovating/reconstructing toilet blocks, and OP rooms for all departments, and proper signage to different services, TV and display board, airport chairs, public address system, providing air conditioners in OP rooms, and providing ramp. The status of infrastructural development in hospitals under the Aardram Mission is given in **Table 6.2.4**.

### Nava Kerala Karma Padhathi II - Aardram Mission

In the second phase, Aardram Mission aims to emphasize operational excellence and quality improvement and social activities to achieve healthy living with increased public participation. Following are the main objectives of the Mission: ensuring comprehensive primary health care, creation of people-friendly health institutions, standardization of health care facilities, reducing

out-of-pocket expenses and achieving the Sustainable Development Goals. As part of the Aardram Mission, steps are taken to upgrade all Government healthcare institutions including family health centres, taluk hospitals, district hospitals, general hospitals and medical colleges to people-friendly standards. Entire urban health centres will be converted into family health centres. Phase to phase standardisation of existing sub-centres will be done and sub-centres with sufficient health workers for provision of different public health services in each division of urban areas will be established. Basic health information of the citizens of each region is collected and based on that lifestyle diseases are detected and prevented at an early stage.

The objectives of Aardram mission are set to be attained mainly through activities under ten thematic areas viz. Transformation of healthcare facilities, Annual Health Screening, Cancer Care Programme, Nirnaya lab network, Elderly – Palliative Care, One Health Initiative, Disease Elimination, Infectious Disease Infrastructure, Healthy Life Campaign, and Integrative Medicine & Research.

Government hospitals in Kerala have treatment facilities for cancer patients. Mechanisms to detect cancer at an early stage are being developed. A cancer grid system is implemented by engaging three cancer centres of the State and cancer treatment units of medical colleges by linking district cancer care units of the health department

**Table 6.2.4** Status of Infrastructural Development in Hospitals under Aardram Mission

Type of Hospitals	Phases	Total Institutions	Work Completed	Work Progressing	Works to be started
PHCs into FHCs	1st Phase	170	166	3	1
	2nd Phase	504	439	18	47
	3rd Phase	212	89	41	82
	Total	886	694	62	130
CHC to Block FHCs	1st Phase	76	56	8	12
	2nd Phase	76	19	26	31
OPs of District / General Hospitals	1st Phase	17	14	0	3
OPs of Taluk Hospitals	1st, 2nd and 3rd Phases	43	15	17	11
Medical Colleges	1st Phase	8	8	0	0

Source: Directorate of Health Services



and strengthening palliative care networks. The same has already been implemented in some districts. Infectious disease control and its eradication activities are strengthened and eradication of malaria, kala-azar, filariasis and tuberculosis are accelerated. Adequate health care is ensured with emphasis on palliative and physiotherapy services considering the special health needs of the elderly.

Timely achievement of the Sustainable Development Goals in the health sector prepared by the State under the Sustainable Development Goals prescribed by the United Nations is progressing. Special attention is given to the health needs of groups such as tribal groups, coastal people, LGBTIQ+, women and persons with disabilities. 'One Health' activities are strengthened to detect new diseases, including new animal-borne diseases by screening and intervention.

Isolation wards are being set up in all assembly constituencies to deal with the third phase of COVID-19 and further problems and treatment of new cases. Collaborative research to detect and control the outbreak of new diseases is strengthened through the collaboration of the State Institute of Virology, other research institutes under various departments of the State, central research institutes etc. An Ethics Committee is formed at the State level under the leadership of the State Health Systems Resource Centre (SHSRC) to create conditions for promoting research in the field of health at all levels.

Samples are taken and sent to top-level labs of the health department in the hub and spoke model for testing and coordination of treatment standards including referral plan. Interventions are made in the areas of mental health, falls, dementia etc. For the health of the elderly activities are implemented in collaboration with AYUSH. Panchayats are being made elderly-friendly. Lifestyle diseases, mental health and geriatric campaigns are conducted with an emphasis on health and wellness, disease control and disease prevention.

### **Janakeeya Arogya Kendrangal**

The policy approach put forward by Aardram Mission is to reduce the incidence of diseases by carrying out health activities in the health sub-centres with the active participation of the people. Steps are taken to make health sub-centres a focal point of interventions in the areas

of health promotion services, disease prevention, disease surveillance, disease control, maternal and child health etc. and to empower them over time to enable them to undertake public health activities. Society must collectively take responsibility to ensure that every individual lives a healthy life. Disease incidence can be reduced only by moulding a society that follows healthy habits such as healthy eating habits, exercise etc. People's participation is necessary for the successful completion of such activities. It is in this context that all sub-centres in the State have been elevated as Janakeeya Arogya Kendram to carry out activities in the field of public health. The objective of the Janakeeya Arogya Kendram is to bring comprehensive primary health care to the grassroots level. For this purpose, through Aardram Mission, all sub-centres in the State are upgraded and modernized into Janakeeya Arogya Kendram (Health and Wellness Centres), with improved physical conditions and converted into people-friendly institutions. As of 15 November 2024, there are 6825 Janakeeya Arogya Kendrams in the State including those under Ayush. 4765 midlevel service providers (MLSP) are posted in Janakeeya Arogya Kendrams under NHM. They are qualified nurses who work in community health nursing.

### **One Health**

Specific guidelines for One Health activities have been prepared and One Health operations are started in all districts. Assistance from the Rebuild Kerala Initiative (RKI) and World Bank is available for One Health activities in Pathanamthitta, Alappuzha, Kottayam and Idukki districts. Nodal Officers have been appointed in all these four districts. Work is underway to establish a Centre for One Health at the State level and a District Programme Management & Support Unit (DPSU) at the district level. The Government has issued orders to establish the following systems viz. 1. State Level One Health Committee, 2. District Level One Health Committee 3. Local Government Level One Health Committee and 4. Line Department level One Health Committee and Nodal Officers.

### **National Quality Assurance Standards (NQAS)**

Even though NQAS was started in 2013, Kerala was not able to accredit many institutions due to certain checkpoints in the NQAS checklists which were not relevant to Kerala. Accordingly, in 2017, the NQAS checklist was customized in line with Kerala standards with the help of the National

Health Systems Resource Centre. This was done by removing some items irrelevant to Kerala's conditions and by adding palliative care to the checklist. After customisation, Kerala has made tremendous progress in NQAS accreditation. Up to October 2024, 197 out of 1284 institutions [Districts Hospitals (5), Taluk Hospitals (4), Community Health Centre (11), Family Health Centre (133), Janakeeya Arogya Kendram (3) and Urban PHC (41)] of DHS from the State have completed national level certification. The number of LaQshya-certified institutions is 12. LaQshya was launched to reduce maternal and newborn mortality & morbidity due to the occurrence of complications during and immediately after delivery, improving the Quality of Care during the delivery and immediate post-partum care and enabling an effective two-way follow-up system to enhance the satisfaction of beneficiaries visiting the health facilities. The number of KASH (Kerala Accreditation Standards for Hospitals) accredited institutions in Kerala is 208.

### e-Health Project

The e-Health project targets to link health institutions all over Kerala. The project aims to build a database of individual medical records easily accessible to medical practitioners. It includes unique patient identification in different settings and the exchange of data between different healthcare delivery units at primary, secondary and tertiary levels across the State. This would avoid repeated medical tests and would thereby reduce out-of-pocket expenses arising out of the rush to clinics and labs. The scheme is being implemented in all fourteen districts of Kerala with Thiruvananthapuram as the pilot District.

e-health is completed in 654 hospitals of which 200 are working as paperless hospitals. NITI Aayog has appreciated the e-health project of the State. Kerala is the only State in the country where the database of 2,59,55,998 people has been collected and stored as electronic records. This includes 68,35,747 houses, 1,26,83,801 male, 1,32,71,381 female and 816 transgender registrations. The details are given in **Table 6.2.5**.

### Health Sector Financing during Plan Periods

Health has been a major area of allocation in the State Budget over the years. Government healthcare expenditure has been showing a steady increase for the last several years. Kerala invests 6.76 per cent (2052.23 crores during 2024-25) of its total State Plan outlay (30370 crores during 2024-25) on health care excluding the contribution of LSGs and other line departments. As per the recommendations of the Sixth State Finance Commission, 27.5 per cent (8352 crore) of the total State plan outlay is earmarked to the Local Self Government Institutions (LSGIs). LSGIs expend a considerable share of this outlay for health care. In addition to this, the Government is investing large amounts in this sector through KIIFB and NABARD assistance for the construction of buildings and the purchase of high-end equipment. The outlay earmarked for the implementation of schemes during the 12th Five-Year Plan was Rs 3,31,888 lakh (BE). The total expenditure reported during the Plan period was Rs 3,00,600.50 lakh (90.57 per cent). During the 13th Five-Year Plan, an amount of Rs. 719929 lakhs was allocated to the health sector and the expenditure reported was Rs. 910077 lakhs (126.4 per cent). Department-wise plan outlay and

**Table 6.2.5** District-wise demographic data surveyed under the e-health programme

Sl. No.	District	Demographic Data Surveyed	Sl. No.	District	Demographic Data Surveyed
1	Thiruvananthapuram	24,06,760	8	Thrissur	23,01,629
2	Kollam	21,68,789	9	Palakkad	23,44,974
3	Pathanamthitta	10,26,328	10	Malappuram	38,44,650
4	Alappuzha	15,21,575	11	Kozhikode	25,00,494
5	Kottayam	15,22,289	12	Wayanad	6,23,272
6	Idukki	8,67,546	13	Kannur	19,41,501
7	Ernakulam	18,70,452	14	Kasaragod	10,15,739
	Total	2,59,55,998			

Source: e-health Kerala, DHS as of November 08, 2024

expenditure during the last two annual plan periods of the 13th Plan and the first three years of the 14th Plan up to October 2024 (2024-25) are given in **Table 6.2.6**

Both plan as well as non-plan expenditure on health have increased over these five years. Plan and non-plan investment in health and family welfare from 2018-19 to 2023-24 both in revenue and capital expenditure, percentage of health expenditure to total Government expenditure and percentage of health expenditure to GSDP are given in Table 6.2.7

Plan expenditure by other Departments included various departments viz. Excise, Industries, Science and Technology, Fisheries, Cultural Affairs, Sports and Youth Affairs, Social Justice, Women and Child Development, Scheduled Castes Development, Scheduled Tribes Development, Labor Department and LSGD.

### Major Health Problems in Kerala

#### Non-Communicable Diseases (NCD)

Common non-communicable diseases causing great threats to a healthy life are diabetes, hypertension, cardiovascular diseases, cancer and lung diseases. Unless interventions are made to

prevent and control non-communicable diseases, their burden is likely to increase substantially in future because of an ageing population and lifestyle changes. Considering the high cost of medicines and longer duration of treatment, this constitutes a greater financial burden to low-income groups. Drastic lifestyle changes, heavy dependency on alcohol and tobacco, an affinity for white-collar jobs, unhealthy eating patterns, low priority for physical exercise, and high levels of stress in all strata of the population are some of the reasons contributing to the prevalence of non-communicable diseases in the State.

Incidents of obesity, hyperlipidemia, heart attack and stroke are also high. Cancer mortality is extremely high among males in Kerala compared to the national average. The survey conducted by Achutha Menon Centre for Health Science Studies, Thiruvananthapuram in 2016-17 reveals one out of three has hypertension and one out of five has diabetes. The study also revealed that the level of normalcy attained for blood sugar and blood pressure even after early detection and management is significantly low compared to the standards.

Even though the State has witnessed a steep decrease in the use of tobacco in the Global Adult Tobacco Survey 2016 report with the prevalence dipping to 12 per cent from 21 per cent, the

**Table 6.2.6** Department-wise outlay and expenditure of the last two years of the 13th Plan 2017-22 and total outlay and expenditure of the first three years of the 14th plan up to October 2024, in Rs crores and expenditure as the percentage share

Department	Annual Plan 2020-21		Annual Plan 2021-22		Annual Plan 2022-23		Annual Plan 2023-24		Annual Plan 2024-25 (Exp. upto October 31)	
	Outlay	% Exp.	Outlay	% Exp.	Outlay	% Exp.	Outlay	% Exp.	Outlay	% Exp.
Health Services	991.40	135	991.40	206	1297.76	159.30	1416.46	119.98	1463.52	61.34
Medical Education	420.60	77	420.60	111	463.75	75.26	463.75	88.43	462.34	19.15
Indian Systems of Medicine	41.95	120	41.95	91	44.05	84.86	49.05	79.50	50.93	27.51
Ayurveda Medical Education	43.20	39	43.20	62	47.52	31.63	47.52	41.39	43.72	11.29
Homeopathy	23.75	85	23.75	104	25.15	73.57	25.15	84.09	23.54	36.11
Homeo Medical Education	8.65	170	8.65	129	8.90	81.27	8.90	78.00	8.18	25.73
<b>Total</b>	<b>1529.55</b>	<b>115</b>	<b>1529.55</b>	<b>170</b>	<b>1887.13</b>	<b>132.18</b>	<b>2010.83</b>	<b>109.23</b>	<b>2052.23</b>	<b>49.50</b>

Source: Plan Space

**Table 6.2.7** Investment in Health and Family Welfare (Rs in crore)

Year	Total Government Health Expenditure				Total health exp	Total Government Expenditure	Percentage of Health Expenditure to Total Government Expenditure	GSDP in crores at Constant Prices	Percentage of Health Expenditure to GSDP
	Plan exp by health depts	Plan exp by other depts	Total Plan exp for health including exp by other depts	Non-Plan					
2018-19 (ACC)	1862.76	760.50	2623.26	5235.8	7859.06	120069.82	6.55	554228.31	1.42
2019-20 (ACC)	2246.61	664.99	2911.60	5292.21	8203.81	114384.94	7.17	559194.18	1.47
2020-21 (ACC)	3144.73	1142.61	4287.34	5657.63	9944.97	138884.49	7.16	512076.08	1.94
2021-22 (ACC)	4104.83	1258.87	5363.70	7835.24	13198.94	163225.53	8.09	573591.46	2.30
2022-23 (ACC)	3519.56	*	3519.56	6690.52	10210.08	158738.43	6.43	616188	1.66
2023-24 (RE)	2448.61	*	2448.61	6810.64	9259.25	168407.11	5.50	*	*

Source: *Budget in Brief, DES*

Note: ACC is Accounts, RE is Revised Estimate \* Not estimated

increasing affinity to alcohol is affecting the health sector with a prevalence rate as high as 44 per cent and age of initiation coming down every year. The unhealthy dietary practices and lack of physical exercise in all sections of the population irrespective of age and economic status have contributed to the rise in lifestyle diseases pointing that 52 per cent of the total deaths in the productive age group between 30 and 70 being due to one or other cause of NCD. (Source: DHS)

NCD control programme covers the entire State spreading across all districts and the services rendered through all district/general hospitals, sub-district level hospitals, Community Health Centres, Primary Health Centres and even the Sub centres which cater to a population of five thousand. Kerala is the only State where the entire health system is equipped with an NCD screening programme.

#### **Amrutham Arogyam**

Amrutham Arogyam is a State run Non Communicable Diseases Control programme. The objectives of the programme are: 1. Reduction of risk factors in the population 2. Health education for the population on a healthy diet, exercise and ill effects of addiction 3. Screening for the population

above 30 years of age for Non-Communicable Diseases irrespective of their disease conditions and free supply of medicines for all detected with NCDs and 4. Early management and treatment of complications. Amrutham Arogyam programme covers the entire State spreading across all districts and the services rendered through all district/general hospitals, sub-district level hospitals, Community Health Centre, Primary Health Centre and even the 5400 Sub centre which cater to a population of five thousand. Kerala is the only State where the entire health system is equipped with an NCD screening programme. The population above 30 years was subjected to screening at the Amrutham Arogyam clinics for NCDs.

#### **Kerala COPD Prevention and Control Programme –SWAAS**

Chronic Obstructive Pulmonary Disease (COPD) is one of the leading causes of mortality and morbidity worldwide. As per the 'Global Burden of Diseases' (Institute for Health Metrics and Evaluation (IHME) at the University of Washington) estimates for India, COPD is the second leading cause of mortality in India. Recently the NCD programme has included COPD and Chronic Kidney Disease among the priority

**Table 6.2.8** Details of SWAAS clinics, screening and diagnosis of COPD and asthma

Year / Activity	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25 Upto August 31	Total
Symptomatic Screening	47601	63206	45444	3750	35244	26076	141340	362661
Swaas clinic-FHC	89	90	91	108	96	117	105	696
Swaas clinic- DH/GH/ THQH	14	25	10	0	0	0	0	49
Spirometry Screening	9147	18428	1952	299	7017	3978	24715	65536
COPD Diagnosed	4677	11557	3709	737	4764	1605	12220	39269
Asthma Diagnosed	4145	7081	4371	359	3036	1836	11145	31973

Source: Directorate of Health Services

NCDs in India. SWAAS is a specific public health programme for COPD in Kerala which is implemented from the Family Health Centres (FHC) level as part of the Aardram Mission. SWAAS clinics were started in 591 Family Health Centres and 49 Sub Districts/District Hospitals. Details of SWAS clinics, screening and diagnosis of COPD and asthma are given in **Table 6.2.8**.

### India Hypertension Management Initiative (IHMI)

The India Hypertension Management Initiative (IHMI) is a collaborative project of the Indian Council of Medical Research (ICMR), Ministry of Health and Family Welfare (MoHFW), Government of Kerala, World Health Organization (WHO) and Resolve to Save Lives initiative of Vital Strategies. Kerala State also fused diabetes control and monitoring along with IHMI. The initiative is implemented in all districts. The IHMI is focused on five essential components of scalable treatment of hypertension, based on the WHO HEARTS Package. Details of the India Hypertensive Control Initiative are given in **Table 6.2.9**.

### Nayanamritham- Diabetic Retinopathy Screening

Diabetic Retinopathy is a common complication of longstanding Diabetes Mellitus which can end up in total loss of vision. Complete effective treatment of diabetic retinopathy is available if the condition is detected in the early stages. With the technical support provided by E-health, the Health Services Department has implemented a care pathway in the public health system involving the

primary centres, secondary centres and tertiary care centres. This programme is being implemented in all districts covering 172 FHCs of Kerala. ASHA workers and other field workers play an active role in identifying diabetic patients in the community and encouraging them to take part in the screening programme. Details of Nayanamritham- Diabetic Retinopathy Screening during 2024-25 (up to November 30) are given in **Table 6.2.10**.

### Population-Based Screening

In Kerala even though there is clinic-based data on the prevalence of Non-Communicable Diseases, there is no population-based registry of these diseases. The State has initiated population-based screening of non-communicable diseases in four districts with the support of ASHA volunteers who would visit the houses in their jurisdiction and collect information on the status of non-communicable diseases and their risk factors. Based on this data camp based and home-based screening will be conducted for those who are unaware of their NCD status and the total data will be consolidated at the Health Centre level, District level and State level. An android application was developed by E-health for data collection which is used by ASHA workers.

Apart from the diseases surveyed in the Shaili 1 survey, mental health, blindness, deafness and leprosy are also covered in the Shaili 2 survey. The details of screening done as part of population-based screening during Shaili 1 (up to 15th February 2024) and Shaili 2 (after 15th February 2024) are given in **Table 6.2.11**.

**Table 6.2.9** Details of India Hypertensive Control Initiative

District	Total Registrations	The proportion of estimated hypertensives registered	Lost to Follow-up (%)	2024 annual treatment outcomes (patients under care)		
				BP control (%)	BP uncontrolled (%)	Missed visits (%)
Phase I districts						
Trivandrum	2,08,334	36.9	25.3	38.1	35	26.9
Thrissur	1,75,837	37	32	50.5	22.8	26.7
Kannur	1,30,342	42.5	28.8	54.4	26.9	18.7
Wayanad	54,393	41.3	32.3	52.8	29.9	17.2
Phase II districts						
Kollam	64,856	20.5	11.6	46.4	26.2	27.4
Alappuzha	1,07,427	35.6	12.8	50.4	32.8	16.8
Ernakulam	85,002	13.8	18.4	39.7	37.5	22.7
Kozhikode	49,920	12.8	6.7	48.8	34.5	16.6
Kasargod	39,403	11.1	9.4	50.3	35.1	14.6
Pathanamthitta	12,544	4.3		28.9	32.1	39
Phase III districts(started in 2024-25)						
Palakkad	17,535	3.2				
Malappuram	6,078	1.1				
Kottayam	35,322	8.2				
Idukki	847	0.4				

Source: Directorate of Health Services

**Table 6.2.10** Details of Nayanamritham- Diabetic Retinopathy Screening during 2024-25 (upto November 30)

Total OPD Patients	5885
Total patients on whom AMD Artificial Intelligence was used	76
Total diabetic retinopathy (DR) / Age-related macular degeneration (AMD) patient referred to higher facilities	65
Total Glaucoma patients referred to higher facilities	8
Total number of patients who underwent treatment	21
Total DR/AMD patients who received treatment	13
Total Glaucoma patients who received treatment	5

Source: Directorate of Health Services

### BOX-6.2.1 Shaili App

The Government of Kerala has launched an Android App ‘Shaili’, aimed at diagnosing and controlling lifestyle diseases among the people in the State of Kerala. The app has been set up as part of the population-based screening project launched by the Health Department under the Nava Kerala Action Plan. The Accredited Social Health Activist (ASHA) workers have been tasked with collecting information from persons over the age of 30 in their respective areas about any lifestyle diseases or risk factors they may have. The app was set up under the E-Health initiative. The app would primarily collect information about diseases like diabetes, high blood pressure, heart disease, and lung diseases as well as other lifestyle-related ailments and cancers. The health status of the individuals would be scored and those with a score of above four would be asked to visit the nearest health centre for a check-up for lifestyle diseases.

### Haemodialysis

Haemodialysis centres are mushrooming in the State of Kerala due to the increase in patients with renal complications, which have affected the quality of life adversely along with the economic burden it has inflicted. Details of dialysis units, patients registered, and number of dialysis done are given in **Table 6.2.12**

### CAPD Clinics (Continuous Ambulatory Peritoneal Dialysis)

The State Health Department has initiated a programme to promote CAPD which is cost-effective and convenient to the people as they can continue dialysis without affecting their daily life chores. CAPD centres were set up in all 14

districts. The number of CAPD patients during 2023-24 (up to November 30) is given in **Table 6.2.13**.

### Stroke Management (SIRAS- Stroke Identification Rehabilitation Awareness and Stabilisation Programme)

Stroke is a complication of Hypertension, which occurs due to an occlusion of blood vessels due to a clot or haemorrhage of cerebral vessels. Stroke Management is time-bound and the recovery depends on the time frame within which the patient reaches the treatment centres which is usually 4 hours. Stroke Management is complicated as the management requires specialised skills,

**Table 6.2.11** The details of screening done on population-based screening

Sl. No.	Component	Shaili 1 (up to 15th February 2024) in Number (completed)	Shaili 2 (after 15th February 2024) in Number (continuing)
1	Population above 30 Years	17730149	17730149
2	NCD population-based survey done	15378166	5040867
3	CBAC Score > 4	2783391	2353810
4	Referred to Cancer screening	910964	112315
5	Referred for Oral Cancer Screening	41546	23668
6	Referred for Breast Cancer Screening	790858	67514
7	Referred for Cervical Cancer Screening	96959	25748
8	Referred for TB Screening	112817	147573
9	Referred for Respiratory Evaluation	437397	213535
10	Patients already diagnosed with Hypertension alone	1649597	663831
11	Patients already diagnosed with Diabetes alone	1332775	438165
12	Patients already diagnosed with Hypertension and Diabetes	623864	276002
13	Bedridden Patients	109031	55485
14	Homebound Patients	190428	86621
15	Above 60 population surveyed	4750594	1656640
16	Referred for Leprosy Screening	0	147440
17	Referred for Vision Screening	0	1616893
18	Referred for Hearing Screening	0	232946
19	Persons with Elderly Health Issues	0	125721
20	Referred for Mental Health Evaluation	0	72755

Source: [shaili.ehealth.kerala.gov.in](http://shaili.ehealth.kerala.gov.in) as on 12.11.2024

**Table 6.2.12** Details of dialysis units, patients registered and number of dialysis done

S.No.	Name of Districts	Total No. of functional Dialysis centres	Total No. of functional Dialysis Machines	Cumulative No. of Patients registered	Cumulative No. of Dialysis sessions held
1	Trivandrum	10	99	17609	162120
2	Kollam	8	111	30695	309718
3	Pathanamthitta	5	45	11543	126381
4	Alappuzha	6	74	19201	161457
5	Kottayam	5	42	4508	44344
6	Idukki	3	39	3486	37326
7	Ernakulam	9	146	26885	270532
8	Thrissur	11	107	10923	131150
9	Palakkad	8	77	15912	191385
10	Malappuram	10	132	22742	285994
11	Kozhikode	8	125	16243	220714
12	Wayanad	5	45	10835	108090
13	Kannur	11	126	33612	357031
14	Kasaragode	7	65	8872	98474
Total No.	14	106	1233	233066	2504716

Source: Directorate of Health Services

**Table 6.2.13** Details of the number of CAPD patients

District	Total number of CAPD Patients
Trivandrum	50
Kollam	45
Pathanamthitta	15
Alappuzha	47
Kottayam	26
Idukki	13
Ernakulam	98
Thrissur	40
Palakkad	65
Malappuram	52
Kozhikode	61
Wayanad	39
Kannur	20
Kasaragod	6
Total	577

Source: Directorate of Health Services

infrastructure and expensive medicines for stroke thrombolysis. The health department started the stroke management programme SIRAS by training the Physicians in stroke management at SCTIMST and setting up stroke ICUs in the district hospitals which have CT scans and Tele Radiology services. Twelve District Hospitals have started functioning stroke clinics and the rest of the districts are completing stroke ICUs. Stroke units in various districts and the number of thrombosis cases during 2024-25 are given in **Table 6.2.14**.

#### Diabetic Foot Clinics (Padasparsham)

Diabetic foot is a major complication of long-standing diabetes and may result in loss of limbs if not detected at an early stage. Medical Officers were given training on diabetic foot management by the Indian Institute of Diabetes. There are 84 Diabetic foot clinics functional in the State up to Taluk Hospitals.

#### 360 degree Metabolic Centre of Excellence

As a part of the mission to control lifestyle diseases an exemplary centre named 360 Degree Metabolic Centre of Excellence started functioning at



**Table 6.2.14** Stroke units in various districts and number of thrombosis cases during 2024-25

Sl No	Institution	Stroke treatment with thrombolysis
1	GH Trivandrum	28
2	DH Kollam	29
3	GH Pathanamthitta	142
4	GH Kottayam	36
5	DH Thodupuzha	16
6	GH Ernakulam	52
7	GH Thrissur	8
8	DH Palakkad	24
9.	GH Kozhikode	12
10	DH Kannur	5
11	GH Kanjangedam	2
12	GH Alappuzha	0
Total		354

Source: Directorate of Health Services

Ernakulam General Hospital, by the Government of Kerala with external support. The patient gets a unique ID once they register at the centre. They can then move towards the Pre-Clinical area where Basic information such as Patient's height, weight, Blood Pressure, etc. are monitored and recorded. With the help of advanced point of care (POC) devices, a patient gets the test results within a short duration from the lab. After analysing the lab reports, if required, the doctor guides the patient for further tests and steps such as nutritional counselling, Physiotherapy, Pulmonary function test, Retinal Scanning, Diabetic foot assessment, etc. which are available under one roof. Treatment Summary including test results, diagnosis etc. are collected using database management systems, and the data is saved for future reference. A patient gets the complete treatment summary when they leave the centre. Using a tele-calling facility patient gets a reminder call before few days before the scheduled follow-up date.

### Indian Institute of Diabetes

The Indian Institute of Diabetes (IID) at Thiruvananthapuram is an autonomous institution under the Government of Kerala. It is the only institution under the Government offering services exclusively for Diabetes Mellitus and its complications. IID, made operational

in the year 2001, functions with the main centre at Pulayanarkotta near Akkulam in Thiruvananthapuram city. The major activities of this institute are to investigate the genetic basis of diabetes, provide adequate training for physicians and paramedical staff, provide research support to develop novel methods of treatment, endow academic chairs in diabetes and organise State-of-the-art conferences on various aspects of the disease. The total bed strength of the IID is 40. The average number of new cases detected every year is nearly 6000. Patients treated in 2023-24 were 70782, IP were 521 and new cases were 9688. In 2024-25 (up to August 31) IP, OP and new cases were 270 numbers, 61421 numbers and 8433 numbers respectively. Number of community medical camps conducted during 2023-24 was 16.

### Cancer

Cancer is a major non-communicable disease in Kerala. Apart from Medical Colleges, the Regional Cancer Centre, Malabar Cancer Centre and Cochin Cancer Research Centre are the major hospitals in the Government sector which offer treatment for cancer patients. Apart from these institutions, all the major Government hospitals provide cancer treatment. Delays in early detection, huge treatment costs, minimal treatment centres and lack of awareness contribute to high mortality of the disease.

The State Health Department has launched a decentralized cancer treatment plan to conduct cancer screening and treatment. The district hospitals and selected taluk hospitals are equipped to diagnose cancer and provide treatment decisions including chemotherapy. This service has been made available in 25 hospitals in the State and steps are being taken to expand it to more hospitals. Apart from this, screening programmes for the detection of cancers like breast cancer, lung cancer and uterine cancer have also been started in all primary health centres and family health centres. A massive survey was conducted by the health department through Asha workers to find out the cancer patients present in society. There are 25 units of daycare chemotherapy for giving follow-up chemotherapy treatment to patients diagnosed in major centres. District Cancer Control Programme report 2023-24 (up to November 30) is given in **Table 6.2.15**

Malabar Cancer Centre, Kannur, an autonomous centre under the GoK, was established to provide

**Table 6.2.15** District Cancer Care Unit Report 2023-24 (up to November 30)

No. of Chemotherapy units	25
No. of Persons seen in OP	135196
No. of New Cases Detected	6219
No. of Chemotherapy	71143

Source: Malabar Cancer Centre

oncology care to the people of north Kerala. The Centre has a bed strength of 204 and has many latest facilities for the treatment of cancer patients. In 2023-24, a total of 5865 patients and 102576 outpatients were treated in the Malabar Cancer Centre in new cases were 7748. During 2024-25 (up to 31.08.2024), the number of IP and OP are 2622 and 45749 respectively and new cases are 3294. The average number of new cases detected every year in the centre is 7445 (based on the last five years data). Total surgery done during 2023-24 was 2986 and during 2024-25 (up to August 2024) was 1358 and total CT injections done for the period were 22954 and 10614 respectively.

#### Unique Achievements of MCC

1. The first institution in Kerala to acquire and use a Robotic biopsy and intervention radiology assistance system.
2. F-18 PSMA scan performed first time in Kerala.
3. The first under the Government Sector to launch the Bone Marrow Donor Registry in India.
4. First Total Body Irradiation for Bone marrow transplantation in the public sector in the State
5. Plaque brachytherapy started for the first time in Kerala for eye cancers.

#### Cochin Cancer Research Centre (CCRC)

Growing concerns over the alarming increase in rates of cancer incidence together with the need for a dedicated tertiary cancer care and research centre in the Government sector in central Kerala necessitated the birth of the Cochin Cancer Research Centre. CCRC is a society registered under the Societies Act. The Centre has a bed strength of 20 and an additional 100-bed facility will be ready during the financial year 2024-25. The average number of new cases detected every year is 1,200. Number of outpatients treated in 2023 was 11355, IP were 191 and new cases were 1443. In 2024 (up to August 31), the number of OP and new cases were 6726 and 753 respectively. The number of IPs during 2024 (up to August 31)

was 58. The total number of surgeries conducted for the period was 191 and 58 respectively.

#### Regional Cancer Centre (RCC)

RCC, Thiruvananthapuram is the premier comprehensive dedicated centre for diagnosis, treatment and control of cancer in Kerala. RCC is rated amongst the top 28 RCCs in the country and maintains a working relationship with international bodies. Daily average patient visits in RCC in 2022-23 are 847. Over the past thirty-nine years, RCC has been able to contribute significantly to the increasing needs of cancer care to the people of Kerala and adjoining areas of Tamil Nadu and Karnataka at the lowest possible cost. In 2023-24, 15131 new cases, 263638 review cases and 12828 in-patient admissions were done in RCC. Daily average patient visits are 862. Further details on RCC are covered in section 5.2 of this review.

#### Mental Health

As per the Census of India 2011, 0.20 per cent of the population of Kerala suffers from mental illness and 0.20 per cent suffers from intellectual disability compared to a national average of 0.06 per cent and 0.12 per cent respectively. Since Kerala reports higher levels of mental illness more attention has not been given to the field of mental health in Kerala. A mental health policy was approved by the State Government in May 2013. The policy suggests that the treatment for mental illness should be started from the PHCs making the mental hospitals and the Department of psychiatric medicines as referral centres by upgrading them. As part of the Aardram Mission, 'Aswasam' depression management in primary care was started in 471 Family Health Centres across the State. Details of the Aswasam Programme from April 2017 to 15th November 2024 are given in **Table 6.2.16**.

#### Sampoorna Manasikarogyam

Sampoorna Manasikarogyam is a comprehensive model of sensitization, mental health training, case detection campaigns and camps, enabling the detection of the unidentified case burden in the community. Their integration into primary care clinics enables follow-ups, overcomes treatment gaps and improves access to mental health care. Up to 31st August 2024, it was implemented in 642 Grama Panchayats, 18,397 ASHAs were trained as part of the programme, and 33,528 new cases were detected. A total of 50,928 cases were given treatment as part of the programme and integrated into Comprehensive Primary Care by which they

**Table 6.2.16** Details of the Aswasam Programme from April 2017 to 15th November 2024

Component	progress
No screened cases	180086
No screened positives	25017
Pharmacotherapy given	13813
Psycho-Social Intervention done	34995
Referred to District Mental Health Programme (DMHP)	5592

Source: Directorate of Health Services

will continue to get treatment & psychotropic medicines from their nearest Family Health Centre. Sampoorana Manasikarogyam implemented at the Grama Panchayat level helps in;

1. Finding the undetected case burden in the community through interventions & camps.
2. Integration of newly detected cases into the Family health care system.
3. Ensuring regular follow-ups and thus reducing Treatment Drop Outs
4. Substance abuse prevention and management
5. Addressing Adolescent Mental Health Issues
6. Increasing Awareness of Suicide Prevention
7. Dementia Case detection and management
8. Increasing the awareness of mental health issues and treatment, in the community.
9. Rehabilitation of the mentally ill in remission within the community

In Kerala, three mental health centres are functioning with a bed strength of 1,366. District mental health programmes are functioning in all the districts with a total of around 10,000 outpatients per month. Rehabilitation facilities are offered through these Centres. Lack of awareness, attitude of the general public, neglect of family members and lack of proper follow-up are the major problems noticed in this regard. The State Government has started 31 daycare homes through which 502 cured mentally ill patients are being given daycare.

#### **District Mental Health Programme (DMHP)**

DMHP is functioning in all the 14 Districts of the State. Mental health clinics are being conducted in all PHCs and CHCs in the District by trained doctors of the institutions and medicines are made available to patients from their nearest

PHCs. More than 50,000 patients are receiving treatment every month from DMHPs in the State. Other activities include information, education and communication (IEC) for the public to create awareness and reduce stigma, training for doctors, nurses, pharmacists and health workers for integration of mental health into primary care and targeted interventions such as substance abuse prevention, suicide prevention, geriatric mental health and stress management. Daycare centres were started for the mentally ill in remission under the Comprehensive Mental Health Scheme. Now 31 day care centres are functioning in the State under the scheme. School mental health programme is implemented in the State in association with the National Health Mission (NHM).

#### **Institute of Mental Health and Neurosciences (IMHANS)**

The Institute of Mental Health and Neurosciences (IMHANS), Kozhikode is an autonomous institution established by the Government of Kerala in 1982. The institute is functioning in the Government Medical College campus, Kozhikode. The institute now runs M.Phil courses in psychiatric social work (8 seats), clinical psychology (8 seats), post-basic diploma in psychiatric nursing (10 seats) and has also 3 seats for PhD. In clinical services, the institute currently focuses on community psychiatry, child psychiatry and rehabilitation services. IMHANS has no inpatient facility at present. During 2023-24 number of OP cases was 24617 with which new OP cases were 8937 and it was 10029 cases and 3821 cases respectively during 2024-25 (up to August 31).

#### **Institute for Communicative and Cognitive Neurosciences (ICCONS)**

The Society for Rehabilitation of Cognitive and Communicative Disorders (SRCCD) is a Charitable society registered under the Travancore Cochin Literary, Scientific and Charitable Societies Act 1955. SRCCD has established the ICCONS at Thiruvananthapuram and Shoranur to promote scientific research, clinical services and advanced education and training in the field of communicative and cognitive neuroscience and disabilities. Institute for Communicative and Cognitive Neurosciences (ICCONS) is a pioneer institution under Govt. of Kerala for the comprehensive management, rehabilitation, education, research and development in the field of developmental and acquired disabilities

from infancy to elderly such as Autism, Learning Disability, Mental retardation, Cerebral palsy, single and multiple congenital abnormalities, epilepsy, post-stroke and post-traumatic syndrome and various degenerative disorders affecting the nervous system. The centre gives specific emphasis to conditions that interfere with cognitive, language and motor functions. A multidisciplinary team consisting of Neurologists, Pediatricians, ENT specialists, Audiologists, Speech Language Pathologists, Clinical Psychologists, Physiotherapists and Special Educators are involved in the rehabilitative services provided by the institution. The institute provides inpatient and outpatient services, and rehabilitation programmes such as speech therapy, behavioural training, physiotherapy and linguistics training to the above-mentioned group of patients regularly. The ICCONS Shoranur has a 60-bed inpatient ward with Neuro-ICU for emergency services and an advanced fully automated Neuro-endocrine and metabolic lab & electro-physiology lab ready for patient service. The centre is giving treatment to children, adults and the elderly with various acquired and developmental disabilities such as autism, mental retardation, cerebral palsy, single and multiple congenital anomalies post-stroke and post-mental traumatic syndrome, adult aphasia, dementia etc. ICCONS is conducting a four-year course in graduate Audiology and Speech-Language Pathology (BASLP) at ICCONS Shoranur. It is affiliated with KUHS and has the recognition of the Rehabilitation Council of India. The annual intake of students is 20. Number of patients treated during 2023-24 in Thiruvananthapuram centre was 18631 and in Shoranur centre was 30028. New registration during 2023-24 is 1541 and

during 2024-25, it is 887 (up to August 31).

### Prevalence of Anaemia

The findings of the NFHS-5 (2019 - 2021) reveal that there has been an increase in the prevalence of anaemia among women and children compared to NFHS-4, 2015-16. Kerala is the only State to have recorded a prevalence of less than 40 per cent in all targeted age groups. The Anaemia Mukth Bharat (AMB) strategy was launched in 2018 to reduce Anaemia prevalence among children, adolescents and women in the reproductive age group. Anaemia Free Kerala aims to strengthen the existing mechanisms imparted as part of Anemia Mukth Bharth and foster state-specific newer strategies for tackling anaemia. Details of Anaemia prevalence in Kerala as per NFHS 5 compared to NFHS 4 are given in **Table 6.2.17**.

Even though various State as well as GoI schemes are being undertaken to mitigate Anaemia, it still exists. Hence GoK decided to conduct a statewide campaign and it is progressing.

### VIVA Project

VIVA (The abbreviation of Vilarchayil Ninnun Valarchayilekku in Malayalam) is an anaemia prevention project which is launched on 18-02-2023. This project is jointly organized by the departments of Health and Family Welfare, LSGD and Women & Child Development of the Government of Kerala. The campaign aims at anaemia screening, treatment and awareness among girls and women aged 15 to 59 years. According to the World Health Organization, 42 per cent of children under the age of five and 40 per cent

**Table 6.2.17** Anaemia prevalence in Kerala as per NFHS 5 compared to NFHS 4

Indicator	NFHS 4	NFHS 5
Children aged 6-59 months who are Anaemic (<11.0 g/dl) 22 (%) per cent of children in the said age group with a Haemoglobin concentration less than 11 g/dL	35.7	39.4
Non-pregnant women aged 15-49 years who are Anaemic (<12.0 g/dl) 22 (%)	34.7	36.5
Pregnant women aged 15-49 years who are Anaemic (<11.0 g/dl) (%) percentage of women with a Haemoglobin concentration less than 11 g/dL	22.6	31.4
All women aged 15-49 years who are Anaemic (%) percentage of women with a Haemoglobin concentration less than 12 grams per decilitre (g/dL)	34.3	36.3
All women aged 15-19 years who are Anaemic 22 (%)	37.8	32.5
Men aged 15-49 years who are Anaemic (<13.0 g/dl) 22 (%)	11.8	17.8
Men aged 15-19 years who are Anaemic (<13.0 g/dl) 22 (%)	14.3	27.4

Source: NFHS 5, NFHS 4

of pregnant women in the world are anaemic. According to the National Family Health Survey-5 in India 2022, the prevalence of anaemia among children under 5 years of age, pregnant women and lactating mothers in India is 40 per cent, 32 per cent and 40 per cent respectively. According to the National Family Health Survey, Kerala has the lowest rate of anaemia in India. However, the aim is to make Kerala anaemia-free among women through effective interventions. The status of the Viva project as of 30th, September 2024 is given in **Table 6.2.18**

### Communicable Diseases

Kerala is witnessing an increasing burden of communicable and non-communicable diseases. Although the State has been successful in controlling several communicable diseases earlier, the prevalence of dengue, leptospirosis, malaria, hepatitis, H1N1, scrub typhus, and COVID-19 in recent years has led to considerable morbidity and mortality. Instances of vector-borne diseases such as dengue, malaria and scrub typhus incidents have been seen in many Districts. Waterborne infections such as different kinds of diarrhoeal diseases, typhoid and hepatitis are also reported in many districts.

### Prevalence of Major Communicable Diseases

**Table 6.2.18** Status of Viva project as of September 30

Dis- trict	Target	Tested	% test- ed	Tested Anae- mic	% Anae- mic	Mild (11- 11.9)	Moder- ate (8.0- 10.9)	Se- vere (<8)	% Mild	% Mod- erate	% se- vere
TVM	1057463	376125	36	162944	43	84729	73376	4839	23	20	1
KLM	884696	566727	64	324063	57	174722	143788	5553	31	25	1
PTA	326148	244034	75	100261	41	58487	39641	2133	24	16	1
ALP	661767	377896	57	194122	51	109644	80891	3587	29	21	1
KTM	527730	341448	65	142367	42	75072	65116	2179	22	19	1
IDK	328911	240949	73	89912	37	49303	38595	2014	20	16	1
EKM	951776	480923	51	214956	45	129980	80801	4175	27	17	1
TSR	973594	590508	61	302706	51	162909	132837	6960	28	22	1
PKD	914166	263195	29	140639	53	54116	76380	10143	21	29	4
MLP	1503144	872368	58	525079	60	265496	247505	12078	30	28	1
KKD	942746	421447	45	235440	56	134930	95689	4821	32	23	1
WYD	252305	124519	49	69817	56	30990	35261	3566	25	28	3
KNR	787991	324529	41	170123	52	87953	77613	4557	27	24	1
KGD	442332	255221	58	138907	54	64055	70281	4571	25	28	2
State	10554769	5479889	52	2811336	51	1482386	1257774	71176	27	23	1

Source: Directorate of Health Services

A comparative analysis of the prevalence of major communicable diseases over the last five years is given in **Table 6.2.19**.

### Dengue

Dengue fever, which surfaced in Kerala as early as 1998, has now become the single largest vector-borne disease in the State. Till 2015, this disease was more prevalent in districts such as Thiruvananthapuram, Kollam, Kottayam, Pathanamthitta, Kozhikode and Malappuram. But in 2017, all the districts reported dengue and that too in large numbers. Districts located at higher altitudes had low prevalence, but all others showed a high incidence of the disease. These mosquitoes, which in the earlier days were seen more in rural settings, now spread to urban areas also.

### Leptospirosis

Leptospirosis is another public health challenge faced by the State. It was considered a rare disease in early 1980, but later it spread to all districts. The disease was seen initially as a rodent-borne infection, spread through the urine of the infected rodents and the consequent contamination of the environment. Over the years, the disease has been reported in many domestic animals such as cows, dogs and pigs and thus has become an occupational risk for those engaged in agriculture works. People,

**Table 6.2.19** Prevalence of communicable diseases in Kerala

Sl. No.	Year	2019		2020		2021		2022		2023		2024 (Up to August 31)	
		Name of Disease	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases
1	Dengue Fever	4651	14	2722	22	3251	27	4468	58	16767	153	15016	59
2	Malaria	656	1	267	1	309	1	438	0	563	7	597	5
3	Confirmed Chikungunya	109	0	558	0	334	0	66	0	31	0	15	0
4	Japanese Encephalitis (JE)	11	2	0	0	0	0	2	0	7	2	6	3
5	Leptospirosis	1211	57	1039	48	1745	97	2482	121	2407	124	2061	126
6	Scrub Typhus	579	14	423	8	438	6	727	24	613	16	498	7
7	Kala Azar	4	0	1	0	1	1	13	0	14	1	0	0
8	Kysanur Forest Disease	8	2	29	3	4	0	1	0	0	0	0	0
9	H1N1	853	45	58	2	1	0	94	11	1030	62	2929	52
10	Fever	OP	2862375	51	1265782	0	1463517	0	3285392	6	2978930	8	1847835
		IP	60080		18879		12458		25257		49095		28749
11	Measles	199	1	76	1	3	0	183	0	1593	4	109	0
12	Chickenpox	29583	20	14959	3	3457	2	9927	14	26388	4	18682	15

Source: Directorate of Health Services

who have been involved in cleaning stagnant canals and drains, were reported to have contracted the disease. More recently the mortality due to leptospirosis is also on the rise and joint efforts of veterinary and animal husbandry departments are essential for effective control of this disease. District-wise number of patients treated, and deaths reported affecting Leptospirosis in 2023 and 2024 (up to August 31, 2024) are given in **Appendix 6.2.1** and the number of cases and deaths reported from 2019 to 2024 (up to August 31, 2024) are given in **Table 6.2.19**.

### Chikungunya

This disease is believed to have originated in the remote islands in the Arabian Sea in 2005-06 and spread rapidly over the whole of Kerala within the next two years, affecting more than 80 per cent of our population. This has resulted in lifelong immunity for the affected population. In 2022, 66 cases were reported in Kerala. Here again, the vector responsible for disease transmission is the Aedes mosquitoes. Since both dengue and chikungunya are transmitted by the same mosquito and as the same mosquitoes are responsible for the transmission of the potential threat of Zika

virus disease and Yellow fever, the health system is vigilant. In 2023, 31 cases were reported of which 24 cases were from Thiruvananthapuram District. In 2024 (up to August 31), 15 cases were reported, of which 11 were from Thiruvananthapuram only. The details of district-wise patients treated for chikungunya and deaths reported in 2023 and 2024 (up to August 31) are given in Appendix 6.2.2 and the number of cases and deaths reported from 2019 to 2024 (up to August 31) is given in **Table 6.2.19**.

A total of 29,78,930 viral fever cases were reported in Kerala in 2023. In 2024 (up to August 31), the number of reported cases was 18,47,835. The details of district-wise patients treated for viral fever and death reported in 2023 and 2024 (up to August 31) are given in Appendix 6.2.2 and the number of cases and deaths reported from 2019 to 2024 (up to August 31) is given in **Table 6.2.19**.

### Malaria

Malaria, a vector-borne disease transmitted by Anopheles mosquitoes, has been a major public health challenge for our country for the past many decades. Various national programmes targeting

its elimination have met with limited success. Though Kerala had controlled the disease in the early 1970s, Malaria incidents still exist as a public health challenge. The problem has recently aggravated because of the presence of large-scale population movement from malaria endemic States. The proportion of falciparum malaria, the more severe form of the disease also exists in Kerala. Though the elimination of the Indigenous form of Malaria has been included in the SDG targets by the State, the issues in its fulfilment are many. Rapid urbanisation, extensive infrastructure development in many districts, uncontrolled construction works in urban areas and climate-related changes in the life cycle of mosquitoes are big hurdles in the attainment of the SDG goals. Annual cases of malaria in Kerala are less than 500 and the number of deaths reported is also very low. Kasaragod District has persistently had a high number of malaria cases, over many years, because of its proximity to the highly endemic districts of Karnataka. The movement of fishermen along the western coast of our State is a potential threat to the spread of malaria along the coastal districts. In 2023 number of cases reported was 563 and death reported was 7. In 2024, up to August, 597 cases and 5 deaths were reported. The number of malaria cases and deaths has been increasing over the years in Kerala. Number of cases and death from 2019 to 2024 (August 31) is given in **Table 6.2.19**.

### Japanese Encephalitis (JE)

This is a form of encephalitis, an inflammatory disease of the brain and its coverings, and is also a mosquito-borne infection. Kerala is more prone to this disease because of the presence of large paddy fields as the virus responsible for the disease is spread by Culex mosquitos, which breeds abundantly in water-logged areas of paddy fields. The peculiar nature of the Culex mosquito to breed in contaminated water increases the potential threat in other areas as well. The role

of migratory birds in the transmission of JE is an extra risk for Kerala because our State has many sanctuaries for migratory birds. But since there is an effective vaccine against JE, we can be optimistic in its control programme, by strengthening the JE vaccination. In 2023, seven cases and two deaths were reported. Six cases and three deaths have been reported in 2024 (up to August 31). The number of JE cases and deaths is showing an increasing trend in Kerala. Details of cases and deaths from 2019 to August 31, 2024, are given in **Table 6.2.19**.

### Waterborne diseases

The waterborne disease is mainly attributed to the unavailability of safe drinking water in many parts of the State especially in tribal and coastal areas. Unhygienic drinking water sources such as wells, pump houses, water supplied through tanker lorry, leaks in public water supply pipes and the consequent mixing of foul water with drinking water, dumping of wastes including sewage in water sources, use of commercial ice in preparation of cool drinks and using unsafe water in preparation of welcome drinks are some reasons for the spread of water-borne diseases. The Health Department has implemented a programme called “Jagratha” since November 2017 for the prevention and control of communicable diseases. There has been a considerable increase in incidents of typhoid, Hepatitis –A, Cholera and ADD (diarrhoea) in Kerala since 2020. Details of cases and deaths due to waterborne diseases of Acute Diarrhoeal Diseases (ADD), typhoid and Hepatitis from 2019 to 2024 August 31 are given in **Table 6.2.20**.

### HIV/AIDS

Kerala State Aids Control Society is the pioneer organisation in the State working to control the spread of HIV as well as strengthen the State’s capacity to respond to HIV/AIDS. The society was

**Table 6.2.20** Prevalence of waterborne diseases in Kerala

Sl. No.	Name of Diseases	2019		2020		2021		2022		2023		2024 (Aug 31)	
		Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death
1	Hepatitis - A	1620	7	464	2	114	0	231	2	1073	11	4610	53
2	Cholera	9	0	2	0	1	0	0	0	26	0	35	1
3	Typhoid	27	0	16	0	30	0	55	0	102	0	109	0
4	ADD (Diarrhoea)	544027	6	250788	1	238227	3	466211	2	485929	2	392486	12

Source: Directorate of Health Services

formed to implement the National Aids Control Programme in the State. The current phase of the AIDS Control Programme (NACP-V) is from 2021 to 2026. The critical targets for achieving the 2030 SDG goals are for 95 per cent of people living with HIV to know their HIV status, 95 per cent of people who know their HIV status to receive treatment and to reduce HIV transmission by 95 per cent of people on treatment by 2025. The prevalence rate in the State has declined from 0.21 per cent in 2008-09 to 0.13 in 2010-11 and 0.06 per cent in 2021. The prevalence rate in India in 2021 is 0.21 per cent. In Kerala, the prevalence of HIV/AIDS is 0.41 per cent (4.95 per cent in 2011) among injecting drug users (IDU) which is 6.26 per cent at the national level. It is 0.23 per cent (0.36 per cent in 2011) among men having sex with men (MSM) which is 2.69 per cent at the national level and 0.10 per cent (0.73 per cent in 2011) among Female Sex Workers (FSW) which is 1.56 per cent in India in 2017. Among transgender, the HIV prevalence rate in Kerala is 0.16 per cent which is 3.14 per cent at the national level. HIV prevalence among migrants in India is 0.51 per cent (Source: Kerala State Aids Control Society). HIV estimates in India and Kerala based on India HIV Estimates 2023 are given in **Appendix 6.2.3.**

### **Coronavirus Disease (COVID-19)**

The first case of Covid-19 in India was reported in Kerala on January 30, 2020. Kerala adopted a multi-pronged strategy in dealing with the pandemic even before the first Covid-19 confirmed case was reported. Kerala's response to COVID-19 started much earlier than March 11, 2020, when the Director General of the World Health Organisation (WHO) characterised COVID-19 as a pandemic. The containment strategies were well in place when the first case was reported. From the beginning of COVID-19 control activities, the private hospital engagement team was working in close liaison with the district private hospital engagement nodal officers, private hospital managements and the Indian Medical Association. Kerala Medical Services Corporation Limited has played the most critical role in the ambulance services by managing the Kaniv-108 ambulances to mobilise the COVID-19 suspects/patients from their houses/exit points to the isolation facilities. During the coronavirus outbreak in Kerala, it was decided to provide psychosocial support 'Ottakkalla Oppamundu' to the persons in quarantine/isolation and their family members.

State-level trainings were conducted exhaustively and elaborately covering all staff working in the health sector. Ward-level teams were active in all Panchayats and were ensuring daily calls and visits to the homes of the elderly. A series of mass media campaigns were being conducted for COVID-19 awareness from the beginning of 2020. Health Department launched e-Sanjeevani telemedicine services in Kerala on June 10, 2020. They were providing services in a centralised manner and DISHA is the State's hub managing the telemedicine activities for the State.

### **Public Health Laboratories**

At present, there are 9 Public Health (PH) Labs in the State. There is State Public Health Lab at Thiruvananthapuram, Regional Public Health Labs at Ernakulam, Kozhikode, Pathanamthitta, Kannur, and Public Health Labs at Alappuzha, Malappuram, Wayanad and Kollam. Technical Guidance and material supply to all the PH labs are provided by the Director, of the State Public Health and Clinical Lab. An average of 200 patients attend the laboratories every day for various lab investigations. An average of 1300 lab tests are performed every day. State PH lab is the WHO referral laboratory for Vaccine Preventable Diseases (VPD). Two-year Diploma MLT course is conducted regularly for 15 students/ batch.

### **Newborn Screening (NBS) Programme (2013-23)**

The Newborn Screening (NBS) Programme started in March 2013 and was extended to all the Government hospitals in September 2017. The blood samples of newborns are tested through the State Public Health and Clinical Laboratory, Thiruvananthapuram and three Regional Laboratories at Ernakulam, Kozhikode and Kannur. The screening test is done for four selected disorders namely Congenital Hypothyroidism, Congenital Adrenal Hyperplasia, Phenyl Ketonuria and G6PD deficiency. The director of the State PH Lab is the State Nodal officer for the newborn screening programme of Kerala. The cumulative total number of samples received for NBS in four PH Labs from April 2013 to September 2024 comes to a total of 1199006 of which positive Congenital Hypothyroidism (650 cases), Congenital Adrenal Hyperplasia (179 cases), G6PD deficiency (428 cases) and Galactosemia (26 cases) were detected.

### **Family Welfare Programmes**



Family Welfare Programme was a 100 per cent CSS during several plan periods and the funding pattern and the financing components of CSS have been changed w.e.f 2016-17 financial year. Central assistance has been limited to the salary of the regular staff engaged in the implementation of the Family Welfare Programme in the State. Now the programme is being implemented as a part of the National Health Mission (NHM) and DHS.

### Delivery and Maternal Mortality Ratio

Based on the last 10 years data DHS, the deliveries in Government hospitals were seen at around 30 per cent. Maternal Mortality Ratio in Kerala is 19, it is 97 in India (Source: Special Bulletin on MMR 2018-20). The details of deliveries in public and private hospitals since 2012-13 are given in **Table 6.2.21**.

### Immunisation Coverage

Immunisation is one of the most successful and cost-effective health interventions and prevents debilitating illness, disability and death from vaccine-preventable diseases such as diphtheria, hepatitis A and B, measles, mumps, pneumococcal disease, polio, rotavirus diarrhoea, tetanus etc. The coverage of immunisation programmes in Kerala for five years from 2018-19 is given in **Appendix 6.2.4**.

### Health Care Institutions

In Kerala modern medical services are offered by the Directorate of Health Services (DHS) and the education sector concerned is dealt with by the Directorate of Medical Education (DME).

### Health Care Institutions under DHS

At present there are 1,288 health institutions with 38525 beds, 6545 doctors, 14378 nursing staff and 7312 paramedical staff under Health Services Department consisting of 849 PHC/FHCs, 226 CHCs/Block FHCs, 88 taluk headquarters hospitals, 18 District hospitals, 18 general hospitals, 3 mental health hospitals, 10 women and children hospitals, 3 leprosy hospitals, 14 TB hospitals, 2 other speciality hospitals and 57 other hospitals. PHCs/ FHCs are institutions providing comprehensive primary care services including preventive care and curative care. CHCs/ Block FHCs and taluk level institutions form the basic secondary care institutions. District hospitals, general hospitals and maternity hospitals provide speciality services and some super speciality services. Category-wise major medical institutions and beds in Kerala, details of IP and OP cases, major and minor surgeries conducted DHS during 2023-24 and 2024-25 and medical and paramedical personnel under DHS are given in **Appendix 6.2.5, 6.2.6 and 6.2.7**.

**Table 6.2.21** The details of deliveries in public and private hospitals since 2012-13 in Kerala

Period	Public	Private	Total	Public %	Private %
2012-13	135941	358563	494504	27	73
2013-14	151277	344980	496257	30	70
2014-15	151524	342112	493636	31	69
2015-16	139808	340841	480649	29	71
2016-17	124115	332293	456408	27	73
2017-18	138510	313617	452127	31	69
2018-19	143847	339989	483836	30	70
2019-20	146174	314209	460383	32	68
2020-21	131599	288187	419786	31	69
2021-22	134284	291737	426021	32	68
2022 - 23	128150	286430	414580	31	69
2023-24	109542	259873	369415	30	70
2024-25 up to August 31	40891	100449	141340	29	71

Source: DHS

## District-wise distribution of hospital beds in Kerala

District-wise distribution of hospital beds in Kerala is given in Figure 6.2.1 Thiruvananthapuram and Ernakulam districts have a higher number of beds as compared to other districts while Kasaragod, Idukki and Wayanad districts have a lesser number of beds. The bed population ratio in Kerala is 1:602 and it is 1:666 for modern medicine alone. The average doctor bed ratio in Kerala is 1:4 and it is 1:5 for modern medicine alone. The doctor-population ratio in Kerala is 1:2592. The population here is estimated for the year 2021. These figures reflect the status of the Government sector only and the figures will be much better if the private sector is also considered.

## State Health Agency (SHA)

The State Health Agency is the nodal agency for implementing the health insurance scheme in the state.

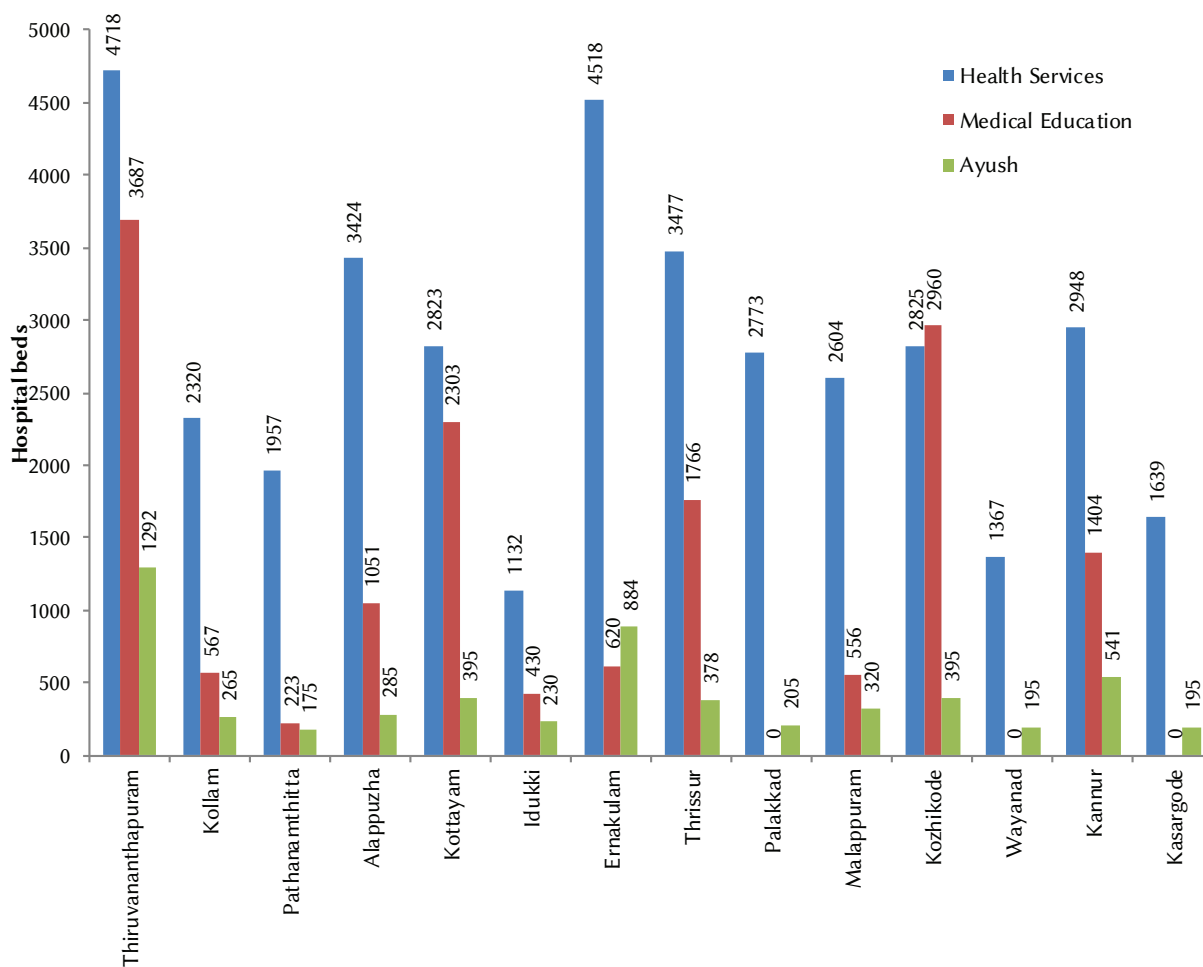
## Karunya Arogya Suraksha Padhathi (KASP)

*Karunya Arogya Suraksha Padhathi* (KASP) is the comprehensive health insurance programme of the Government of Kerala implemented through the State Health agency which includes Pradhan Mantri Jan Arogya Yojana (PM-JAY). GoK implemented PM-JAY as KASP. KASP converge all the Government-sponsored health insurance schemes namely, *Rashtriya Swasthya Bima Yojana (RSBY)*, Comprehensive Health Insurance Scheme (CHIS) and Senior Citizen Health Insurance Scheme (SCHIS).

## Health Assurance

Initially, the scheme was implemented in the

**Figure 6.2.1** District-wise distribution of hospital beds in Kerala



Source: Various Health Departments / Institutions

State from April 1, 2019, to June 2020 under insurance mode for the entire Rs. 5 lakh coverage per family. From July 1, 2020 onwards, the same scheme is being implemented under assurance mode with the same Rs 5 lakh coverage per family. A total of 41.99 lakh families are covered under the KASP scheme out of which 23.98 lakh families are covered under PMJAY and SECC categories. Central assistance is limited to the families covered under PMJAY and SECC. The Central Government has a fixed premium ceiling of Rs 900 for each family and 60 per cent of that will be given to the State as a Central share. The Central Government, therefore, provides Rs. 631.2 for each enrolled AB-PMJAY (RSBY) family and hence the expected Central assistance will be Rs.151 Crore (23,97,610 families \* 631.2). The total claim amount paid by SHA during 2022-23 was 1364.19 crore. About 614 hospitals have so far been empanelled, which include 412 private hospitals and 202 Public hospitals including 5 GoI hospitals. *Karunya* Benevolent Fund (KBF) scheme is also included as a separate component under the same Mission.

The details of the progress of AB PM-JAY/KASP are given in Table 6.2.22 and utilisation of AB PM-JAY/KASP by sector is given in **Appendix 6.2.8**.

#### **Karunya Benevolent Fund (KBF)**

The Karunya Benevolent Fund (KBF) scheme was started in February 2012 by the Government of Kerala to give financial assistance to members of families from financially backward sections for the treatment of certain chronic diseases. Every family whose annual income is below Rs 3 lakhs as per the Ration Card irrespective of their APL Status can avail of financial assistance under this scheme. However, this income limit is not imposed on the treatment of haemophilia. Every family can

avail financial assistance of up to Rs 3 lakhs for the treatment of kidney diseases and up to Rs 2 lakhs for other prescribed diseases. One or more people can benefit from the same ration card subject to the limit prescribed above. The scheme was implemented through the Department of State Lotteries. From September 1, 2020, onwards, it is being implemented by the State Health Agency. In 2023-24, the State Health Agency expended an amount of Rs. 70 crore and in 2024-25 it is Rs. 50 crore.

#### **Arogyakiranam**

Arogyakiranam is one of the flagship health programmes of the GoK. The programme provides free treatment and related medical services to all patients from birth to 18 years, as an entitlement. Expenses covered by this entitlement include costs incurred for OP registration, investigations, drugs/implants/materials used in treatment and procedures. The fund for coverage of treatment expenditure was allotted to districts, to be maintained as a corpus fund, from which all expenses were debited. The scheme is being implemented by the State Health Agency from the financial year 2022-23 onwards.

#### **Sruthitharangam**

Sruthitharangam is for cochlear implantation surgery among children and its follow-up. Children between 0-5 years of age are eligible for this scheme. However, children above the age group of 5 years will also be considered in cases where profound hearing loss occurred because of post-meningitis injury since it improves the quality of life of children above 5 years. The cost of the procedure is Rs.5.2 Lakh and an average of 200 applications are settled every year and 200 gradations are also settled.

**Table 6.2.22** Progress of AB PM-JAY / KASP during 2021-22 to 2024-25 (up to August 31, 2024)

Year	Number of Families Enrolled	Number of Claims	Amount of claims (Rs. in crore)	Claims Paid (Rs. in crore)
2021-22	4162250	1524710	1469.90	1321.58
2022-23	4186517	1121236	1547.92	1364.19
2023-24	4199233	986355	1573.31	490.36
2024-25 (up to August 31, 2024)	4199233	365292	579.17	3.61

Source: State Health Agency Kerala

### Thalolam

The Thalolam scheme aims to provide free treatment to the children below age of 18, who are suffering from Kidney diseases, Cardiovascular diseases, Cerebral Palsy, Brittle Bone Disease, Hemophilia, Thalassemia, Sickle Cell Anemia, Orthopedic deformities and other Neuro-Developmental Disabilities, Congenital anomalies (Endosulfan victims) and accident cases which need surgery.

### Cancer Suraksha for Children

Recognising the urgent need to extend financial support to cancer victim children, who are too poor to afford treatment, the State launched the Cancer Suraksha Scheme on 1st November 2008 for children below the age of 18 who suffer from cancer.

### National Health Mission (NHM)

National Health Mission is a Centrally Sponsored Scheme which includes two submissions NUHM and NRHM. NHM has five financing components to the States, viz. (i) NRHM/RCH Flexi-pool, (ii) NUHM Flexi-pool (iii) Flexible pool for communicable diseases, (iv) Flexible pool for non-communicable diseases including injury and trauma and (v) Infrastructure Maintenance. Under the infrastructure maintenance component, support has been given over several Plan periods, to States to meet salary requirements of schemes namely, Direction and Administration (Family Welfare Bureaus at State and District level), Sub Centres, Urban Family Welfare Centres, Urban Revamping Scheme (Health Posts), ANM/LHV

Training Schools, Health and Family Welfare Training Centres and Training of Multi-Purpose Workers (Male).

NHM is implemented in the State for the development of health care delivery with Central Government funding. Forty per cent of the total fund is given to the NHM by the State Government as a State share. NHM supports the Health Services Department, Directorate of Medical Education and AYUSH Departments. National Rural Health Mission aims to provide accessible, affordable and accountable quality health services to the poorest households in the remote rural regions. Under NRHM, the focus is on a functional health system at all levels, from the Village to the District. There are 102 Urban PHCs under NHM. The total GoI release to the State from 2018-19 to 2024-25 (up to October 31) is given in **Table 6.2.23**. The total staff strength of NHM is 17221 (up to August 2024) under medical, paramedical and other categories.

### State Institute of Medical Education and Technology (SI-MET)

SI-MET was established in the State in 2008 to promote medical education and research. Four nursing colleges are functioning under SI-MET with an annual intake of 280 students. A total of 1058 students are studying in the Nursing Colleges of SI-MET as of October 2024. Also, the Government has accorded administrative sanction and NOC for the starting of 7 new Nursing Colleges with an intake of 60 B.Sc. Nursing students each.

**Table 6.2.23** Release of central assistance for NHM from 2018-19 to 2024-25 (up to October 31) Rs. in crores

Year	Central Share for NHM activities	Central Release for COVID Activities	Central Release for Infrastructure Maintenance	Total Central release	State Share re-leased
2018-19	271.06	0	553.77	824.83	212.71
2019-20	299.11	74.21	430.26	803.58	430.29
2020-21	341.95	583.04	404.69	1329.68	908.04
2021-22	327.25	222.71	381.42	931.38	489.32
2022-23	603.64	0	381.42	985.06	684.65
2023-24	0	0	103.15	103.15	440.20
2024-25	240.92	0	431.42	672.34	254
Total	2083.93	879.96	2686.13	5650.02	3419.21

Source: NHM Kerala

### Child Development Centre (CDC)

Child Development Centre (CDC) established by the GoK is an autonomous Centre of excellence in early childcare and education, adolescent care and education, pre-marital counselling, women's welfare and other related fields to reduce childhood disability through novel scientific initiatives. The number of patients treated in 2023-24 was 25339. Only out-patient services are available and there is no facility for admitting patients. The number of student intakes is two (PG).

### Insurance Medical Services Department

Employees State Insurance Scheme of India is the country's first integrated multi-dimensional social security scheme for workers in the organized sector. Medical care under this scheme is implemented in the State of Kerala through the Insurance Medical Services Department. This Department is under the administrative control of the Labour Department, before which the scheme was implemented through the State Health Services Department. ESI Scheme is assigned with the significant and socially useful task of providing comprehensive medical care services to the worker population and their dependents and protecting against certain eventualities that result in loss of wages or earning capacity. The scheme also

takes care of physically disabled workers and their dependents with monetary support, where death or disablement has occurred due to employment injury or occupational disease. Administration of medical care is the statutory responsibility of the State Government, and it is implemented through the Insurance Medical Services Department. Medical facilities are provided through 9 Hospitals and 145 Dispensaries. Total number of doctors in the Department is 501. Treatment under Allopathic, Ayurvedic and Homoeopathic systems is provided to ESI beneficiaries. The ESIC is the collector and custodian of funds and reimburses the expenditure to the Government of Kerala in the agreed ratio of 7:1 based on audit certification from the Accountant General on the final account payment system. District-wise number of ESI dispensaries, hospitals and bed strength is given in **Table 6.2.24**.

### Drugs Control Department

The responsibility of the Drugs Control Department is to ensure the availability of quality drugs to the public and see that the market is free from counterfeit, spurious and substandard drugs and no drugs are sold at a price higher than the retail price marked on the container. The department has 6 Regional Offices, 11 District

**Table 6.2.24.** District-wise number of ESI dispensaries, hospitals and bed strength during 2023-2024

Sl No	District	No ESI Dispensaries	No ESI Hospitals	Bed Strength
1	Thiruvananthapuram	12	1	128
2	Kollam	30	-	
3	Pathanamthitta	4	-	
4	Alappuzha	14	1	55
5	Kottayam	9	1	65
6	Eranakulam	20	1	65
7	Idukki	2	-	
8	Thrissur	15	2	212
9	Palakkad	7	1	50
10	Malappuram	7	-	
11	Kozhikkode	12	1	100
12	Wayanad	1	-	
13	Kannur	11	1	50
14	Kasaragod	1	-	
	Total	145	9	725

Source: Insurance Medical Services Department

**Table 6.2.25** Major achievements of the Drugs Control Department in 2023-24

Number of inspections conducted	15716
Number of prosecutions initiated	108
Number of sale licences suspended as a deterrent measure	357
Number of samples tested	12143
Number of new manufacturing licenses issued (Modern medicine and Cosmetics)	29
Number of price violations detected and reported to the National Pharmaceutical Pricing Authority	32
Number of New Blood Bank Licenses Issued	5
Number of new blood storage centres	7
Number of Recognized Medical Institutions	115
Suspensions due to unaccounted sale of antibiotics during inspections/raids	342

Source: Drugs Control Department

Offices, 4 Ayurveda wing offices and 4 drug testing laboratories (Thiruvananthapuram, Ernakulam, Pathanamthitta and Thrissur). NABL-accredited drug testing laboratories are functioning at Thiruvananthapuram and Ernakulam with an analytical capacity of 11,500 samples per annum. The establishment of one more laboratory at Kannur is in progress. There are around 23,000 licensed medical shops/dealers and pharmacies, in the State. Rule 51 of the Drugs & Cosmetics Rules, 1945, stipulates that the Drugs Inspector shall inspect not less than once a year, all establishments licensed for the sale of drugs within the area assigned to them. At present, there are 47 posts of drug inspectors in the State. Major achievements of the Department in 2023-24 are given in **Table 6.2.25**.

### Commissionerate of Food Safety Kerala

Food Safety and Standards Authority of India was established under the provisions of the Food Safety and Standards Act, 2006 as a statutory body for laying down scientific-based standards for articles of food and to regulate the manufacture, storage, distribution, sale and import of food to ensure availability of safe and wholesome food for human consumption. The department aims to ensure safe and healthy food and water for the citizens of Kerala and to develop healthy food habits. The Government Analyst's Laboratory at Thiruvananthapuram, two Regional Analytical laboratories at Ernakulam and Kozhikode and the State Food Testing Laboratory at Pathanamthitta are under the Commissionerate of Food Safety. Testing of water, milk, common adulterants like colour, artificial sweeteners, extraneous matter, and

fungal growth are carried out in these laboratories. Three analytical laboratories viz., Government Analysts' Laboratory, Thiruvananthapuram, Regional Analytical Laboratories at Ernakulam and Kozhikode have got NABL accreditation. Major achievements of the Department in 2023-24 and 2024-25 are given in **Table 6.2.26**.

In a remarkable achievement, Kerala has once again secured the first rank in the State Food Safety Index (SFSI) 2024, continuing its leadership in food safety standards for the second consecutive year. The State of Kerala has been awarded Ist Rank with 73.75 points (in the category of larger States) in the State Food Safety Index 2023-24 released by FSSAI on September 2024 based on overall performance on various parameters viz. human resources and institutional data, food safety compliance, food testing infrastructure and surveillance, training and capacity building and consumer empowerment. Tamilnadu is ranked second in the category of larger States with 67 points and Jammu and Kashmir is ranked in the third position in the category of larger States. Every Year, FSSAI releases the State Food Safety Index based on the overall performance of the States/ UTs in the previous financial year to create a positive competitive environment across the States/ UTs to meet the objectives of the Food Safety and Standards Act to provide safe food to the public at large. This achievement also reflects the commitment of the State Government toward ensuring the health and well-being of its citizens through safe and nutritious food. By maintaining this momentum, Kerala is well-positioned to continue leading the way in food safety for years to come.

**Table 6.2.26** Major achievements of the Commissionerate of Food Safety in 2023-24 and 2024-25

Programmes	2023-24	2024-25 (up to August 31)
No. of Inspections carried out by Quick Response Team (QRT)	65432	26226
No. of Food Poison Cases attended by the QRT	69	42
No. of License Issued	License-22525 Registration-206684	License-8243 Registration-75912
No. of awareness activities conducted by using the Mobile Food Testing Lab	2312	772
No. of food handlers trained under the FoSTaC training initiative	21758	9668
Hygiene Rating Audits conducted	14234	215
No. of Schools in which Safe and Nutritious Food @School (SNF@ School) has been implemented	85	-
No. of Panchayats in which Sampoorana Bhakshya Suraksha Grama Panchayath programme has been implemented	26	-

Source: Commissionerate of Food and Safety

### Chemical Examiner's Laboratory Department

The chemical examiner's laboratory is functioning under the administrative control of the Home Department. It caters to the needs of Judiciary, Excise, Police and medico-legal experts directly and indirectly and thus assists in the prosecution of criminal cases. It renders independent scientific

service to the criminal justice administrative system. The Chemical Examiner's Laboratory Department consists of a Central Laboratory in Thiruvananthapuram and Regional Laboratories in Ernakulam and Kozhikode. The Chemical Examiner's Laboratory Department analyzes

### BOX-6.2.2 Eat Right Kerala Mobile Application

The Food Safety Department of Kerala launched the Eat Right Kerala App, marking a significant milestone in promoting food safety and healthy eating habits among the citizens. This innovative app has been designed to bridge the gap between food safety authorities and consumers, empowering users to make informed decisions about their food choices. The Eat Right Kerala App provides an array of services and features. One of the standout features of the Eat Right Kerala App is its list of hygiene-rated eateries across Kerala. This feature empowers the public to make informed dining choices by selecting eateries that meet high standards of cleanliness and hygiene, as assessed by the Food Safety Department. Consumers can easily browse through the ratings and choose eateries that best meet their preferences for safety and quality. The app is also linked with the Food Safety Grievance Portal, providing users with a seamless platform to report food safety violations or concerns. Through this portal, complainants can register complaints, track the status of their grievances, and receive updates on actions taken by the authorities. This integration ensures prompt redressal of complaints, fostering greater accountability and responsiveness from food establishments. The Eat Right Kerala App is a progressive step towards ensuring transparency, accountability, and active participation of the public in maintaining food safety standards. This initiative not only strengthens the enforcement of food safety laws but also fosters a collaborative effort between the Government and citizens to safeguard public health. By offering this digital solution, the Food Safety Department of Kerala has showcased its commitment to leveraging technology for public welfare, making the Eat Right Kerala App one of its most innovative and impactful achievements.

the material objects related to cases of murder, sexual offenses, human poisoning, liquor samples under the Abkari Act, and narcotic and psychotropic substances under the NDPS Act. Detailed chemical analysis reports are provided to the relevant authorities and law enforcement agencies. The department focuses on enhancing laboratory facilities, improving analytical methods, and ensuring the highest standards of accuracy and precision in chemical analysis certification. All three laboratories are accredited by NABL. In 2023-24, 38,172 cases were referred by various agencies, and 26,583 cases were analyzed and reported, which includes both referred and pending cases.

### **Medical Education**

In Kerala, medical education is imparted through 12 medical colleges at Thiruvananthapuram, Alappuzha, Kozhikode, Kottayam, Manjeri, Ernakulam, Kollam, Thrissur, Kannur, Konni, Palakkad and Idukki districts. Nursing education is imparted through 14 Nursing Colleges in 14 districts. Six Dental Colleges are functioning in Thiruvananthapuram, Kozhikode, Alappuzha, Thrissur, Kannur and Kottayam districts. Besides, four colleges of Pharmacy and one Paramedical Institute are also functioning under the Department. Works for establishing new medical colleges are progressing in Wayanad and Kasaragod.

Government Medical College, Thiruvananthapuram, has placed 42nd among the top 50 medical education institutions ranked by the National Institutional Ranking Framework (NIRF) under the Ministry of Education. In the dental college category, Government Dental College Thiruvananthapuram has taken the 21st position in the NIRF ranking. Among Government medical colleges in the country, the Thiruvananthapuram GMC is ranked sixth and Government Dental College, Thiruvananthapuram, figures in fifth place among Government dental colleges in the country.

Total number of faculties under DME as of August 31, 2024, is 3626. Medical and Paramedical courses conducted in Government medical colleges with an annual intake of students, and details of clinical and non-clinical personnel in Medical Colleges under DME, in 2024-25 are given in Appendix 6.2.9 and 6.2.10. A comparative analysis of the status of medical college hospitals and attached institutions in 2023-24 and 2024-25 is

given in Appendix 6.2.11. The bed strength has increased by 134 in 2024-25 in Medical College institutions as compared to the previous year's figure of 15103.

### **Kerala University of Health and Allied Sciences (KUHS)**

Kerala University of Health Sciences was established as per the Kerala University of Health Science Act, 2010 to ensure proper and systematic instructions, teaching, training and research in modern medicine, homoeopathy and the Indian system of medicine and allied health sciences in Kerala. Academic activities of the University commenced in the academic year 2010-11. The number of institutions affiliated to the University (up to October 2024) is 371 with 53 Government colleges, 5 Government-aided colleges 33 self-financing co-operative colleges and 280 self-financing colleges. The colleges fall under all systems of medicine such as Modern medicine, Ayurveda, Homeopathy, Sidha, Unani, Yoga, Naturopathy, Nursing, Pharmaceutical science and Paramedical courses. Details of the government-aided and unaided colleges affiliated under various streams are given in **Table 6.2.27**.

A graphical representation of the Government and unaided colleges affiliated with the Kerala University of Health and Allied Sciences (KUHS) as of October 2024 is given in Figure 6.2.2. Government and Government colleges constitute only 14 per cent of the total number of colleges affiliated with KUHS. (**Figure 6.2.2**)

The total intake of students during 2024-25 is 27188 (5356 males and 21832 females) under various health sciences streams. Details of the annual intake of students in each discipline and the male/female count of students in each discipline are given in **Table 6.2.28**.

### **AYUSH (Ayurveda, Yoga and Naturopathy, Siddha, Unani and Homoeopathy)**

#### **Indian System of Medicine (ISM)**

The department of the Indian System of Medicine renders medical aid to the people through the network of Ayurveda, Sidha, Unani, Visha, Netra and Naturopathy institutions. Speciality hospitals such as Mental Hospital (1), Panchakarma (1), Nature Cure (1), Siddha (1), Visha (3), Sports Ayurveda (1) and Marma (1) are also functioning under this Department. At present, there are



**Table 6.2.27** Details of the Government aided, and unaided colleges affiliated under various streams, number as of August 2024

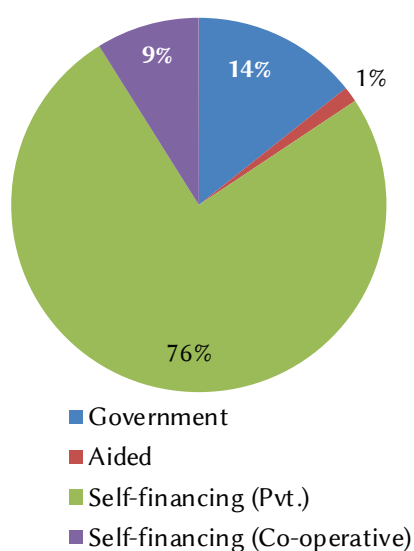
Stream	Government	Aided	Self-financing (Co-operative)	Self-financing (Pvt.)	Total
Medicine	14			22	36
Dental	6			20	26
Ayurveda Medicine	3	2		12	17
Homeo Medicine	3	3		0	6
Sidha Medicine				1	1
Nursing	15		24	117	156
Pharmacy	5		2	53	60
Paramedical	7		7	54	68
Unani Medicine				1	1
Total	53	5	33	280	371

Source: Kerala University of Health and Allied Sciences

130 hospitals and 818 dispensaries under the Department which include Ayurveda (806), Visha (4), Siddha (6), Nature Cure (1) and Unani (1). The total bed strength of these hospitals is 3,154. The State Medicinal Plants Board coordinates matters relating to the cultivation, conservation, research development and promotion of medicinal plants in the State. District-wise distribution of institutions, beds, IP, OP and doctors under the ISM department in 2022-23 and 2023-24 are given in **Appendix 6.2.12**.

Special projects were implemented by the ISM department in 2023-24 and 2024-25 in addition to the normal medical treatment. They are *Drishti, Jeevani, Punarnava, Snehadhara*, Geriatric Care, Yoga, Sports Medicine, *Panchakarma, Ksharasutra, Manasikam, Koumarabhrithyam, Prosoothihantra*, Sickle cell, *Nirvisha*, siddha and Child and adolescent care. Details of special projects, districts implemented, and number of beneficiaries are given in **Appendix 6.2.13**.

**Figure 6.2.2** Government aided, and self-financing colleges affiliated under KUHS, in per cent



Source: Kerala University of Health and Allied Sciences

**Table 6.2.28** Details of the Annual intake of students as of October 2024

Stream	Male	Female	Total
Medicine	2048	3908	5956
Dental	347	1810	2157
Ayurveda Medicine	148	915	1063
Ayurveda Nursing	1	19	20
Ayurveda Pharmacy	2	13	15
Homeo Medicine	44	346	390
Sidha Medicine	4	19	23
Nursing	1523	8407	9930
Pharmacy	802	3646	4448
Paramedical	421	2710	3131
Unani Medicine	16	39	55
Total	5356	21832	27188

Source: Kerala University of Health and Allied Sciences

### **AYUSH (Ayurveda, Yoga and Naturopathy, Siddha, Unani and Homoeopathy)**

GoI has set up two regulatory bodies to set standards for medical education. The Central Council of Indian Medicine (CCIM) under the Indian Medicine Central Council (IMCC) Act, 1970 regulates educational institutions and practitioners in respect of Ayurveda, Unani and Sidha systems of medicine. The Central Council of Homeopathy (CCH) under the Homeopathy Central Council Act, 1973 regulates educational institutions and practitioners concerning the Homeopathy system of medicines. At present Yoga and Naturopathy, being drugless systems, are not regulated.

#### **National AYUSH Mission**

Department of AYUSH, Ministry of Health and Family Welfare, GoI has launched the National AYUSH Mission (NAM). The basic objective of NAM is to promote AYUSH medical systems through cost-effective AYUSH services, strengthening of educational systems, and facilitating the enforcement of quality control of Ayurveda, Sidha, Unani and homoeopathy drugs and medicinal plants. The funding pattern is 60:40 by Centre and State. GoK started the Ayush Department in the State on August 8, 2015. GoI fund release for the last five years is given in **Table 6.2.29**.

#### **Ayurveda Medicine Manufacturing – OUSHADHI**

OUSHADHI is the largest manufacturer of Ayurvedic medicines functioning in India in the public sector. It is one of the few profit-making public sector undertakings. Oushadhi is the exclusive supplier of Ayurvedic medicines

to Government Hospitals and dispensaries of the Ayurveda Department. In Kerala, Oushadhi supplies medicines to the State ISM department at 30 per cent less than the market price and the ISM Department supplies this medicine to the poor patients in the State free of cost. The company also caters to the demands of the public through a network of 849 exclusive agencies spread in and outside the State. The profit of the firm before tax in 2023-24 was Rs 63.37 crores which is an increase from Rs 57.94 crores in 2022-23.

#### **Ayurveda Medical Education – Ayurveda Colleges**

There are 3 Government Ayurveda colleges situated at Thiruvananthapuram, Thrippunithura and Kannur having bed strength of 1,385. The total number of inpatients treated in 2023-24 was 8361 and outpatients treated were 416817. It is 3979 and 159820 respectively in 2024-25 (up to August 31). Panchakarma Hospital and Women and Children Hospital are also functioning under the Government Ayurveda College Thiruvananthapuram. There are two aided Ayurveda colleges, 12 self-financing Ayurveda colleges, one self-financing Siddha college, one self-financing Unani College and 6 paramedical self-financing colleges for imparting medical education in the State. The annual intake of students for UG Degree in Government is 226, PG Degree 162 and PG Diploma 30. College-wise distribution of beds and patients treated under Ayurveda Medical Education in Kerala during 2023-24 and 2024-25 (up to August 31) is given in **Appendix 6.2.14**

#### **HOMOEOPATHY**

There are 709 homoeopathic dispensaries, 14 District hospitals, 17 taluk hospitals, 2 ten-bedded

**Table 6.2.29** Year-wise Resource Allocations of National AYUSH Mission Kerala (Rs. in lakhs)

year	Gol Resource Envelope	Proposal submitted	Approval approved by Gol	Central share released	State share released
2018-19	2700.30	5819.47	4329.73	2597.84	1731.89
2019-20	2072.8	3500.26	2567.56	1540.53	1027.02
2020-21	3544.3	4461.68	3562.65	2337.58	1558.39
2021-22	2444.05	3499.48	3462.13	1153.38	768.92
2022-23	4229.7	10072.72	9777.40	4399.27	2933.15
2023-24	9869.9	17894.83	17754.33	7989.4	5326.34

Source: *National Ayush Mission Kerala*

Central release for the National Ayush Mission to Kerala has seen an increase over different financial years.

hospitals and one hospital with a total bed strength of 1000 under the Homeopathy Department in the State. In addition, Kerala State Homoeopathic Co-operative Pharmacy (HOMCO) Alappuzha, a medicine manufacturing unit is also functioning under the Homeopathy Department. HOMCO has been running in profit for the last 30 years. In 2023-24, net profit of Homoeo amounts to Rs 13.78 crore. District-wise distribution of institutions, beds and patients treated under the homoeopathic department in 2023 and 2024 are given in **Appendix 6.2.15**.

### Homoeo Medical Education

Homoeo medical education is imparted through two Government homoeopathic medical colleges at Thiruvananthapuram and Kozhikode. In addition to this 3 aided colleges and one unaided paramedical institute are functioning under this Department. The total bed strength of the Government homoeopathic medical college at Thiruvananthapuram is 116 and Kozhikode 100.

Patients treated in these two Medical Colleges in 2023-24 in IP and OP were 27925 and 154976 respectively. In 2024-25 the respective figures were 10750 and 110692 (up to August 31). The annual intake of students and courses in the six Homoeo Medical Colleges and one paramedical institute / college-wise distribution of beds and patients treated are given in **Appendix 6.2.16**.

### The Way Ahead

Improvement in health status is indeed a critical indicator of human development, and Kerala's strong public health care system serves as a foundation for both social and economic progress. A healthy population is more productive and can contribute significantly to economic growth, making investments in health care essential for overall development. As Kerala is moving through the 14th Five-Year Plan period, it is vital to address several key areas to enhance health outcomes and ensure the sustainability of its healthcare system:

### BOX-6.2.3 Major achievements of the health sector

Total number of doctors in Govt. hospitals	13900
Total number of doctors in Modern Medicine	10868
Total number of doctors in Ayush	3032
Total number of beds in Govt. hospitals	59847
Total number of beds in Ayush Govt.	5755
Total number of beds in Modern Medicine in Govt.	54092
Number of Govt. medical institutions with bed	1471
Number of medical and paramedical personnel under DHS	28235
Number of UG seats in Govt. Medical colleges (Modern medicine)	3799
Number of PG/Speciality seats in Govt. Medical colleges (Modern medicine)	1313
Number of Paramedical Diploma seats in Govt. Medical colleges (Modern medicine)	1073
Number of persons from electronic health records collated (e-health)	2,59,55,998
Percentage of Health Expenditure to Total Government Expenditure (2022-23 ACC)	6.43
Percentage of Government Health Expenditure on Health to GSDP (2022-23 ACC)	1.66
Number of families enrolled in KASP	41.99 lakh
Total number of colleges affiliated with KUHS	371
Total number of students affiliated with KUHS in a year	27188
Number of NQAS-accredited Govt. institutions in the State	187
Number of KASH accredited Govt. institutions in the State	208
Number of LaQshya-certified institutions	12

Source: Various Health Departments / Institutions

**General Health:** There is a need for ongoing assessment and improvement of general health services to address both communicable and non-communicable diseases. This includes preventive measures, health education, and community outreach programmes to promote healthier lifestyles.

**Rural Health:** Rural areas often face unique challenges in accessing health care services. Strengthening rural health infrastructure, increasing the availability of healthcare professionals, and enhancing transportation and communication facilities can help bridge the gap in healthcare access.

**Tribal Health:** The health needs of tribal populations require special attention. Culturally sensitive health programmes that respect traditional practices while promoting modern health interventions can improve health outcomes in these communities.

**Urban health:** Addressing urban health challenges requires a multifaceted approach that considers the unique needs of slum residents viz. inadequate access to healthcare, poor sanitation, malnutrition, and high rates of infectious diseases. Residents face significant health risks due to overcrowding, environmental hazards, and limited resources, which exacerbate existing health disparities. Addressing these challenges requires a comprehensive approach that includes improving infrastructure, enhancing healthcare access, and fostering community engagement.

**Guest Labourers:** Guest workers face a range of health problems due to various factors, including their working conditions and lifestyle viz. physical risks, exposure to hazardous substances, infectious diseases, barriers to healthcare access, etc

**Women's Health:** Addressing women's health issues, including reproductive health, maternal health, and access to health services, is crucial. Initiatives that empower women and provide comprehensive health education can lead to better health outcomes for women and their families.

**Mother-Child Health Care:** Continued focus on maternal and child health is essential. Programmes that promote antenatal and postnatal care, immunization, and nutrition can significantly reduce infant and maternal mortality rates.

**Health Insurance:** Expanding health insurance coverage can help reduce out-of-pocket expenses for families, making healthcare more accessible and affordable. Innovative insurance models that cater to low-income populations can enhance financial protection against health-related expenditures.

**Medical Tourism:** Leveraging Kerala's strengths in healthcare services can boost medical tourism. Investments in specialized health facilities, promoting wellness tourism and ensuring high standards of care can attract both domestic and international patients.

To effectively address these challenges, the public health care system in Kerala must be continuously strengthened. This can include upgrading facilities, investing in technology, training healthcare professionals, and fostering collaboration between various stakeholders, including government agencies, non-governmental organizations, and the private sector. By focusing on these areas during the 14th Five-Year Plan period, Kerala can further enhance its health outcomes, ensuring that all citizens have access to quality healthcare services and contributing to the overall human development of the community.



## 6.3 IMPACT OF THE CHANGING DEMOGRAPHIC PROFILE

Kerala, renowned for its high literacy rate and social development, is experiencing a significant demographic transition. This shift, characterised by declining fertility rates, increasing life expectancy, and a growing elderly population, has profound implications for Kerala's socio-economic landscape. The declining birth rates and rising life expectancy has resulted in Kerala becoming an ageing society. This means that a larger proportion of the population is over the age of 60. Hence, Kerala has to address economic, social and healthcare implications of the demographic change. The declining birth rate can lead to a shortage of young workers, potentially affecting economic growth and productivity. A growing elderly population can increase the dependency ratio, placing a strain on social security systems and healthcare facilities. The State will need to adapt its economic structure to accommodate the needs of an ageing population.

The United Nations has declared 2021-2030 as the Decade of Healthy Ageing, facilitating a global collaboration that brings together Governments, civil society, international agencies, professionals, media, and the private sector to improve the lives of older people, their families, and the communities in which they live. They stand for healthy ageing, which is more than merely the absence of diseases, and acknowledge that the living arrangements of older people are important determinants of their well-being. An ageing population will require greater investment in healthcare infrastructure and services, particularly those related to chronic diseases and elder care. The rising cost of healthcare for an ageing population

can pose a significant financial burden on individuals and the Government.

Healthy ageing is defined as developing and maintaining the functional capacity that enables well-being at old age. Chronological age alone is an unreliable indicator of functional capacity, which includes critical aspects such as meeting basic needs, learning, growing, making decisions, maintaining mobility, building and sustaining relationships, and contributing to society. These capabilities result from a combination of an individual's intrinsic capacities, environment, and interactions within that environment.

### **Demographic Transition – India and Kerala**

According to Census 2011, there are nearly 104 million elderly persons (aged 60 years or above) in India, of which 52.8 million are women and 51.1 million are men. The percentage of the population in the age group 60 years and above to the total population was 8.6 in India, and 12.6 in Kerala. Amongst South Asian countries, the pace of ageing in India is moderate, with the proportion of the aged projected to increase to 10.1 percent in 2021, 13.1 per cent in 2031, and 15 percent in 2036. The corresponding figures for Kerala are 16.5 percent, 20.9 per cent, and 22.8 percent, respectively. The total population of elderly aged 60 and above in Kerala is projected to be 8.4 million in 2036 (India Ageing Report 2023; Elderly in India Report 2021; Population projection for the period, 2011-36, Office of the Registrar General of India (RGI)).

The Elderly in India Report 2021 highlights that the rate of growth of the general population was 12.4 per cent during 2011-2021, whereas the growth rate of the elderly population was 36 per cent, in the same period. The annual growth rate of the elderly population is projected to be 3.3 per cent at the national-level and 4.0 per cent for Kerala.

The number of elderly women in India is projected to exceed men in 2031. Out of the projected total population of 194 million in 2031, 101 million will be female and 93 million will be male. As per the projected population for 2031, the sex ratio will be 955 and 1,085 for the general population and the elderly, respectively.

### **Economic Status of Elderly Population**

An increasing trend is observed in the old-age dependency ratio (OADR). This is defined as the number of persons aged 65 years and over, per 100 persons of working age (20 to 64 years), and is the most commonly used indicator for monitoring changes in the age structure of the population. The ratio has increased from 14.2 percent in 2011 to 15.7 percent in 2021, and is projected to be 20.1 percent in 2031 at the all-India level. OADR of Kerala was 19.6 per cent as per the 2011 Census, and is projected to be 26.1 percent in 2021, and 34.3 per cent in 2031.

The OADR projections for India in 2031 are 21.5 per cent and 18.8 per cent for females and males, respectively. The OADR by sex and residence is significantly higher for females than for males in Kerala, with 24.3 per cent for males and 27.8 per cent for females, in 2021. This is projected to increase to 30.1 percent for males and 38.4 percent for females by 2031.

As per the NSS 75th Round, Social Consumption on Health in India conducted in 2017-18, there is a wide variation in the economic status of elderly females as compared to that of elderly males. Among elderly females, only 10 per cent in rural and 11 per cent in urban areas were economically independent. The corresponding percentages were 48 and 57 for elderly males.

### **Health and Social Status**

Old age is characterised by a broad spectrum of health conditions. It includes chronic diseases, mental and physical health issues arising from senility, physical disabilities, and other

comorbidities. The Elderly in India Report 2021 highlights the health status of the elderly population based on the findings of NSS 75th Round (July 2017 to June 2018) Social Consumption on Health in India. The proportion of physically mobile elderly persons in the age group of 60-64 years is almost the same in rural and urban areas in 2004 and 2017-18. In 2004, it was 94.7 per cent (rural and urban), and 96.4 per cent in 2017-18. In Kerala, the percentage distribution of aged persons by the state of physical mobility is 92 for males and 87 for females. Based on the rural-urban classification, the distribution is 88 per cent for rural and 91 per cent for urban.

At the national-level, the most prevalent disability among is the elderly is locomotor disability (5.5 per cent), followed by hearing disability (1.6 per cent) and visual disability (1.4 per cent). (NSS 76th Round, July to December 2018 – Persons with Disabilities in India).

### **Interventions of the Government of Kerala**

The Government of Kerala has embraced many initiatives to address healthy ageing and the well-being of the elderly. These have garnered international recognition for Kerala. A comprehensive approach has been adopted by implementing a range of schemes in critical areas such as health, nutrition, education, and employment. Initiatives including old age pensions, day care centres, and mobile Medicare units have been introduced. Additionally, palliative care services have been integrated into primary health services, enhancing support for senior citizens.

### ***Vayojana Nayam 2013***

The Old Age Policy of the Government of Kerala acts as a guideline to prepare an Action Plan to frame schemes and projects for the welfare of all citizens above the age of 60, especially elderly women. The policy aims to improve social, economic, and health conditions of the senior citizens of the State. The Government has now initiated a revision of the policy to address various current issues and needs.

### **Old Age Pension Scheme**

This is a non-contributory pension scheme for low-income citizens aged 60 years and above. Beneficiaries receive a monthly pension of Rs 1,600. As of October 2024, there are 28.8 lakh beneficiaries under old age pensions scheme. The Central contribution (through the Indira Gandhi

National Old Age Pension Scheme) is only Rs 200 per month for persons aged 60-79 years and Rs 500 per month for 80 years and above. The State meets the remaining requirement for these individuals, as well as the full pension amount for those not eligible for IGNOAPS benefits.

The beneficiaries of old age pension, LSG-wise, as on October 2024, are given in **Table 6.3.1**.

**Table 6.3.1** Old age Pension beneficiaries (LSGI-wise)

Old age Pension (LSG-wise)	No. of Beneficiaries as on 05.10.2024 (in lakh)
Grama Panchayat	23.1
Municipality	3.6
Corporation	2.1
<b>Total</b>	<b>28.8</b>

Source: *Sevana* Pension, IKM

The Government of Kerala has developed an online system called *Sevana* Pension through the Information Kerala Mission, for the distribution of social security pensions to beneficiaries. The eligible beneficiaries are identified and pensions are distributed through Local Self-Governments (LSG). The State has successfully introduced the system of Direct Benefit Transfer.

### Institutions for Elder Care

The Department of Social Justice runs old age homes, regulates the operations of such institutions outside Government, and implements schemes for the elderly. Sixteen government old age homes/dementia care centres, and old age homes for persons with disabilities are functioning under the control of the Social Justice Department.

Apart from the old age homes run by the Department, there are nearly 680 old age homes registered under the Orphanage Control Board. The number of persons in old age homes in 2023-24 has increased compared to previous years, as seen in **Table 6.3.2**.

In addition to this, the department runs *Sayamprabha* Homes to provide daycare facilities for the elderly, in cooperation with Local Governments. LSGs have been running *Pakal Veedu* (Day Homes) for the daytime care of the elderly and later on. These are now upgraded to

**Table 6.3.2** Number of persons in old age homes in Kerala, 2016-17 to 2023-24

Year	No. of inmates
2016-17	19,149
2017-18	27,272
2018-19	28,029
2019-20	28,021
2020-21	28,788
2021-22	30,105
2022-23	25,945
2023-24	32,032

Source: Social Justice Directorate, GoK

*Sayamprabha* Homes, incorporating recreation, health care, and nutritional supply for the elderly. The Department also piloted “Model *Sayamprabha* Homes” in Thiruvananthapuram and Kozhikode districts, which function as Multi-Service Day Care Centres for the various needs of the elderly.

The Second Innings Project aims to improve the quality of life of senior citizens living in Government old age homes. Basic amenities such as shelter, food, medical care, and entertainment are provided to the beneficiaries. In 2023-24, Rs 79.5 lakh was expended for this scheme.

**Dementia Care Programme:** The Kerala State Initiative on Dementia has initiated a programme called *Smruthipadham*. The Social Justice Department and the Alzheimers and Related Disorders Society of India undertake this initiative. As part of this project, a day care facility at Kunnankulam, and a full-time day care centre at Edavanakkad, Ernakulam, are available. In 2023-24 an amount of Rs 8.2 lakh has been expended for this scheme.

### Schemes for the Elderly implemented by the Government of Kerala

One of the major challenges faced by the elderly population is the lack of social support as age advances. As the elderly population is not a homogeneous group, it is crucial to understand the demographic ageing in Kerala, and the factors influencing their health, disability, living arrangements, and economic independence, to form a strategy to address the problems they face. There are many intersections to be considered such as specific needs and challenges faced by



those above 80 years of age, widows, unmarried or childless women, persons with disability, those with no living immediate relatives, those living alone, destitute individuals, and those who suffer from serious or terminal illnesses.

Social security and social protection schemes for the elderly population are also the responsibility of the State Government. The Social Justice Department is the nodal department for the implementation of schemes for the elderly. The Kerala Social Security Mission also implements schemes for the elderly. Additionally, LSGs and elderly self-help groups have a major role to play in elderly care. Additionally, several NGOs and charitable organisations serve the elderly. The overall expenditure on schemes for the elderly has increased significantly from 2019 to 2024, reflecting a growing recognition of the needs of the ageing population. A significant increase in expenditure is evident, particularly in the areas of health and old-age pensions. **Table 6.3.3** outlines the expenditure on various schemes for the elderly in Kerala, from 2019 to 2024.

Some of the programmes formulated by the State Government for the welfare of the elderly persons are:

**Programmes under *Sayamprabha* scheme:**

This is a comprehensive package, implemented by the Social Justice Department, for the creation of an elderly-friendly environment, facilitating aged people to withstand challenges and achieve good physical as well as mental health in the most meaningful and sustainable manner. The following

programmes are implemented under *Sayamprabha* scheme:

- Model *Sayamprabha* Homes are functioning as multi-service day care centres for the elderly. In 2023-24, an amount of Rs 48 lakh has been expended for 71 day care centres.
- *Vayoreksha* scheme provides emergency first aid, emergency assistance for treatment, surgery, ambulance service, rehabilitation etc., to indigent and abandoned elderly. In 2023-24, Rs 6.7 lakh has been expended for 124 beneficiaries.
- *Vayoamrutham* project is implemented with the support of the Indian System of Medicine for Ayurveda treatment for persons in Government old age homes. Every year, residents of the 16 Government old age homes receive benefits of the scheme. An amount of 46.1 lakh has been expended, and benefitted 768 in the year 2023-24.
- *Vayosevana* Award is awarded to Government/ Non-Government Organisations working in the field of elder care, and also to veterans who have made significant contributions in the fields of arts, sports, and life time achievers. In 2023-24, Rs. 20.7 lakh has been expended for the implementation of *Vayosevana* award and old age day celebrations.

*Vayomithram*: This social safety net programme implemented by the Kerala Social Security Mission, provides health care and support to the elderly above the age of 65, residing in urban areas of the State. Currently, 95 *Vayomithram* units function in Kerala across 6 Municipal

**Table 6.3.3** Expenditure on schemes for the elderly, 2019-2024

Sl. No	Implementing Agency/Scheme	2023-24 Expenditure (Rs. Cr.)	2019-2024 Expenditure (Rs. Cr.)
1	Principal Director, LSGD	0.0	157.7
2	National Employment Service of Kerala	0.4	1.3
3	*Health (KASP & KBF and NHM)	751.6	2726.2
4	LSGD	104.	625.8
5	Old age pension	3731.4	19669.9
6	Orphanage Control Board	1.2	41.3
7	Social Justice Department	11.3	52
8	Kerala Social Security Mission	19.9	160.5
	<b>Total</b>	<b>4619.8</b>	<b>23,434.7</b>

\* Note: Expenditure does not cover non-scheme health expenses for the elderly  
Source: Departments concerned.

**Table 6.3.4** Beneficiaries of Vayomithram during 2017-18 to 2022-23

Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
No. of old age beneficiaries	2,53,503	2,62,845	2,79,635	2,80,165	2,78,623	2,89,030	2,90,030

Source: Kerala Social Security Mission

Corporations, 85 Municipalities, and 4 Block Panchayats. The project provides health care and support by conducting free medical check-ups and treatment through mobile clinics. The details of the beneficiaries of the Vayomithram scheme during 2017-18 to 2023-24 are given in **Table 6.3.4**.

*Navajeevan*: This scheme is being implemented by the Department of Employment to assist senior citizens in the age group of 50-65 years in starting self-employment units, thereby enabling their upliftment from social and economic backwardness. Twenty five per cent of the total loan amount is earmarked for women. The scheme facilitates bank loans up to Rs 50,000 for starting self-employment ventures, of which 25 per cent would be reimbursed as a Government subsidy, to a maximum of Rs 12,500. In 2023-24 an amount of Rs 33.9 lakh has been expended for this scheme, for 320 persons.

### Role of Local Governments

Local Governments earmark 5 per cent of their total Development Fund exclusively for the welfare and palliative care of the elderly. LGs also implement projects for making all institutions elder-friendly, with measures such as separate queues in hospitals, seating, ramps in offices, elder-friendly toilets and bathrooms, elder-friendly tourist destinations, etc. *Vayo club*, old age homes, *Pakal Veedu* are some of the major projects for the elderly, implemented by LGs. The elderly are also provided with palliative care, treatment, medicines, and nutritious food.

### Kudumbashree and elderly initiatives

Kudumbashree has introduced various initiatives to support the elderly. The *Asraya* programme provides essential healthcare, food, and shelter to marginalised elderly individuals, addressing their basic needs. Through the *Snehitha Calling Bell* initiative, volunteers check on elderly individuals living alone, ensuring their safety and offering companionship. Elderly Neighborhood Groups (NHGs) foster social interaction and mutual support among senior citizens, promoting community engagement. The *Vayomaithri* programme aims to make Kudumbashree

more geriatric-friendly, focusing on care and attention for Kerala's growing elderly population. Additionally, Kudumbashree offers skill development and micro-enterprise opportunities, enabling older adults to remain active and financially independent. These programmes collectively enhance the quality of life for the elderly, ensuring dignity and well-being.

### Way Forward

With elders expected to exceed 8.4 million by 2036, the State must implement policies that promote economic inclusion, social support, and sustainable healthcare to harness this opportunity. By fostering innovations that ensure access to basic amenities, healthcare, and social security, Kerala can create an elderly-friendly society in which seniors lead active and fulfilling lives.



CHAPTER

07

LABOUR AND EMPLOYMENT



# LABOUR AND EMPLOYMENT

## 7.1 LABOUR AND LABOUR WELFARE

### Labour Force

Labour force, or in other words, the ‘economically active’ population includes both ‘employed’ and ‘unemployed’ persons. The Periodic Labour Force Survey (PLFS) carried out by the National Sample Survey Organisation of the Ministry of Statistics and Programme Implementation uses two methods to estimate the labour force: Usual Status (ps+ss), i.e. by considering usual principal and subsidiary activity together and Current Weekly Status. The workforce in the usual status (ps+ss) includes (a) persons who have worked for a relatively long period of the 365 days preceding the date of survey and (b) persons from among the remaining population who have worked for at least 30 days of the reference period of 365 days preceding the date of survey. The workforce measured in Current Weekly Status (CWS) gives the average picture of the workforce in a short period of one week during the survey period, derived by considering those who worked for at least 1 hour on any day during the 7 days preceding the date of survey.

### Labour Force Participation Rates (LFPR)

PLFS data from 2017-18 to 2023-24 shows that LFPR (persons, all ages, rural+urban) in India

has increased over the years, both in usual status (save for a slight dip in 2021-22), and in CWS. (**Appendix 7.1.1**)

**Table 7.1.1** shows the LFPR according to Usual Status (ps+ss), in 2022-23 and 2023-24 at the all-India and Kerala levels for different age groups.

In the ‘all ages’ category, in 2023-24, Kerala’s LFPR is higher than that of India in all segments except urban male. Between 2022-23 and 2023-24, the State’s LFPR in “all ages” has increased across all segments, except for a slight decline in rural male LFPR. Kerala’s female LFPR (rural +urban) has consistently been higher than India’s across every age category, in both years.

### Worker Population Ratio (WPR)

WPR is an indicator used to analyse the employment situation and track the proportion of the population actively contributing to the production of goods and services in the economy. It is the percentage of persons employed in the population. Both India and Kerala have made progress on the WPR (across all age categories) between 2017-18 and 2023-24. (**Table 7.1.2**)

**Table 7.1.1.** LFPR at all India level and Kerala in 2021-22 and 2022-23 (Usual Status –PS+SS)

Age Group	Rural			Urban			Rural + Urban			Rural			Urban			Rural + Urban		
	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female	Person
	All India 2022-23									Kerala 2022-23								
15-29 years	65.5	25.8	45.9	58.4	20.8	40.7	63.5	24.5	44.5	57.7	26.8	41.6	50.5	28.4	39.4	54.2	27.5	40.6
15-59 years	84.2	44.3	64.2	80.8	28.3	55.1	83.2	39.8	61.6	82.5	45.8	62.8	78.2	39.3	57.4	80.5	42.8	60.3
15 years and above	80.2	41.5	60.8	74.5	25.4	50.4	78.5	37	57.9	76.2	40.8	57.1	70.8	33.6	51.1	73.7	37.5	54.3
All ages (0+)	55.5	30.5	43.4	58.3	20.2	39.8	56.2	27.8	42.4	60.7	34.1	46.6	56.2	28	41.6	58.6	31.3	44.3
	All India 2023-24									Kerala 2023-24								
15-29 years	65.1	30.8	48.1	59.9	23.8	42.6	63.5	28.8	46.5	51.5	30.5	40.9	51.0	30.2	40.3	51.2	30.3	40.6
15-59 years	84.3	51.2	67.6	81.9	31.2	57	83.5	45.2	64.3	80.5	48.4	63.3	80.3	43.4	60.4	80.4	46.0	61.9
15 years and above	80.2	47.6	63.7	75.6	28.0	52.0	78.8	41.7	60.1	75.3	44.2	58.6	73.5	37.0	53.7	74.4	40.8	56.2
All ages (0+)	57.9	35.5	46.8	59.0	22.3	41.0	58.2	31.7	45.1	59.7	36.2	47.3	58.4	30.3	43.3	59.1	33.4	45.4

Source: Periodic Labour Force Survey 2023-24

**Table 7.1.2** Worker Population Ratio (WPR) (in per cent) according to usual status (ps+ss)

Age Group	All India			Kerala		
	Rural+Urban			Rural+Urban		
	Male	Female	Person	Male	Female	Person
	PLFS 2017-18					
15-29 years	48.3	13.5	31.4	40.1	8.6	23.8
15-59 years	74.9	23.8	49.5	73.4	24	46.8
15 years and above	71.2	22	46.8	65.8	20.4	41.2
All ages	52.1	16.5	34.7	50.5	16.4	32.4
	PLFS 2023-24					
15-29 years	57.3	25.6	41.7	41.3	16	28.5
15-59 years	80.6	43.7	62.1	76.1	39.6	56.5
15 years and above	76.3	40.3	58.2	71.1	36	52.2
All ages	56.4	30.7	43.7	56.5	29.5	42.1

Source: Periodic Labour Force Survey 2017-18 to 2023-24

It is evident from the **Figure 7.1.1** that, Worker Population Ratio (WPR) (in per cent) according to usual status (ps+ss) of India (at all ages) has continuously increased from 2017-18 to 2023-24, except for a slight decline in 2021-22. Kerala's WPR has risen continuously from 2017-18 to 2023-24 (32.4 per cent to 42.1 per cent).

According to PLFS 2023-24, female rural WPR is 31.8, and 27 per cent in urban. The corresponding all-India figures are 34.8 per cent and 20.7 per cent. Though female WPR has increased over the years in both India and Kerala, there is still a significant gap between rural and urban female WPR. In both India and Kerala, WPR (persons) in rural areas is higher than that of urban areas, in "all ages". WPR from 2017-18 to 2023-24 are shown in **Appendix 7.1.3**.

### Wage Rate in Kerala

As per the India Wage Report of International Labour Organisation (ILO 2018), Kerala, Jammu and Kashmir, Punjab, and Haryana have consistent high casual wages both in rural and urban area.

Kerala's high wage rate is because of the high human development index, social environment, political views, robust trade union, and the emergence of labour welfare boards. The wage

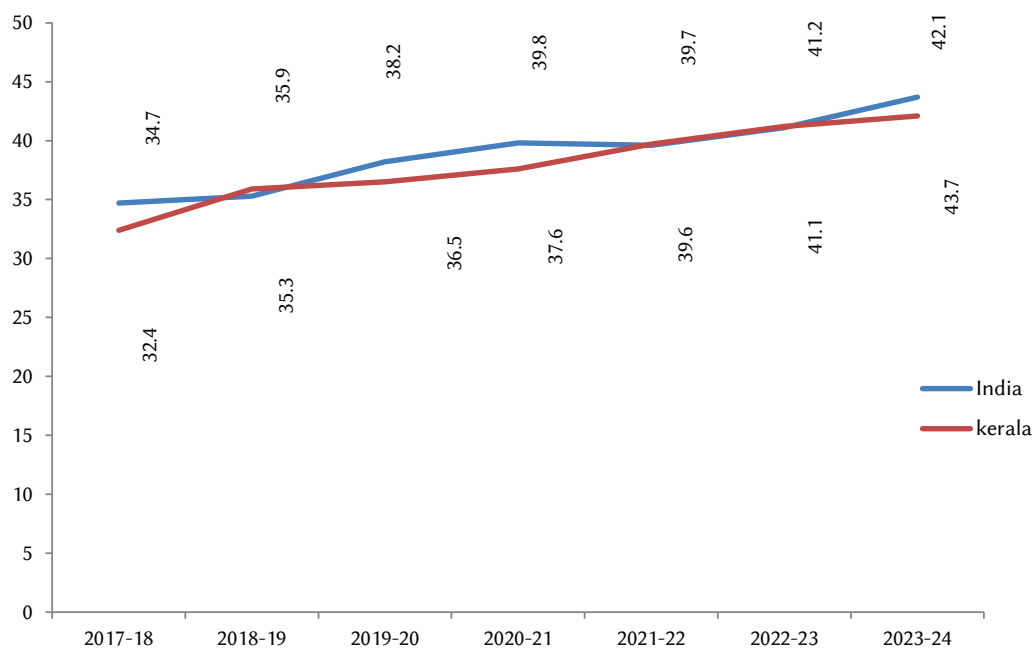
rates of male and female unskilled labourers in Kerala are much higher than the national average, as is the minimum wage. Minimum wages have been ensured in 85 sectors in Kerala. **Table 7.1.3** (A) depicts the State-wise average daily wage rate in rural India (men, non-agricultural labourers) and the **Table 7.1.3** (B) shows the average daily wage rate in rural India (men, agricultural labourers) in the major 16 States.

According to the 2023-24 estimates, Kerala ranks top in daily wage rate (State-wise average daily wage rates in rural India - Men – Non Agricultural Labourers) among the States with Rs 735.0 followed by Kashmir with Rs. 538.9 and Tamil Nadu Rs 519.1. It can be seen that the wage rate in Kerala is 97.9 per cent more than the all India wage rate in this sector.

It is also evident from the **Table 7.1.3** (B) that, from the year 2016-17 to 2023-24, as in non-agricultural work, the wage rate in agricultural work in Kerala is also much higher than the other States in India and all-India average rate.

According to the 2023-24 estimates, the wage rate in the agriculture sector in Kerala is 42.6 per cent higher than the wage rate in the next-ranking state of Jammu and Kashmir, and 116.6 per cent higher than the all-India rate.

**Figure 7.1.1** Worker Population Ratio ("all ages" in per cent) according to usual status (ps+ss), 2017-18 and 2023-24, India and Kerala



Source: Periodic Labour Force Survey 2017-18 and 2023-24



**Table 7.1.3 (A) State-Wise Average Daily Wage Rates in Rural India (Men – Non Agricultural Labourers)**

State/Union Territory	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Andhra Pradesh	232.4	247.5	271.2	291.3	305.3	337.7	374.5	405.4
Assam	233.8	245.5	258.3	263.6	299.3	306.4	333.3	364.2
Bihar	228.6	237.2	250.9	268.5	289.3	299.1	313.1	337.3
Gujarat	204.3	216.1	224.1	234.5	239.3	252.5	273.1	285.7
Haryana	352.7	355.5	362.3	376.9	384.4	409.3	451.0	471.2
Himachal Pradesh	303.4	330.4	336.4	344.1	342.1	389.8	416.3	437.4
Jammu & Kashmir	408.8	417.3	433.9	452.8	483.0	500.8	517.9	538.9
Karnataka	238.5	242.4	261.1	263.4	279.2	297.9	336.2	352.1
Kerala	615.6	625.6	657.2	670.4	677.6	681.8	696.6	735.0
Madhya Pradesh	184.4	198.1	202.4	205.9	232.6	230.3	246.3	262.3
Maharashtra	215.9	226.7	229.6	240.2	262.3	277.2	293.7	309.9
Punjab	300.5	313.1	319.2	331.9	344.2	356.9	375.3	392.9
Rajasthan	300.1	301.2	316.3	312.1	329.0	338.6	354.3	380
Tamil Nadu	389.6	401.7	414.3	438.6	449.5	462.3	481.5	519.1
Uttar Pradesh	222.7	244.7	261.1	272.3	286.8	302.9	323.6	354.8
West Bengal	259.9	279.3	287.0	291.1	305.8	320.7	338.0	354
All India	261.3	273.8	284.8	293.9	315.3	326.6	348.0	371.4

Source: Indian Labour Journal, Labour Bureau, Government of India, Various Issues \* Yearly average wage rates have been calculated from monthly average wage rates.\* All India data for 2020-21 is the average of 11 months as data for April 2020 is not available

**Table 7.1.3 (B) State-Wise Average Daily Wage Rates In Rural India (Men - Agricultural Labourers)**

State/Union Territory	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Andhra Pradesh	249.1	269.5	282.0	302.6	318.6	340.5	384.4	437.8
Assam	229.3	237.5	248.5	252.1	277.4	307.6	344.1	365.7
Bihar	212.7	223.0	240.3	258.4	272.6	290.3	308.7	337.9
Gujarat	184.0	187.9	199.3	208.6	213.1	220.3	241.9	256.1
Haryana	359.3	361.4	391.9	389.5	384.8	395.0	424.8	452.7
Himachal Pradesh	339.8	368.3	388.6	419.0	421.7	457.6	473.3	492.2
Jammu & Kashmir	409.8	436.0	443.6	451.6	501.1	524.6	550.4	566.1
Karnataka	251.9	267.3	288.7	292.0	312.5	335.2	379.5	415.4
Kerala	644.0	659.8	682.4	700.9	706.5	726.8	764.3	807.2
Madhya Pradesh	173.1	191.3	196.3	198.6	217.6	217.8	229.2	242.2
Maharashtra	196.8	207.4	213.7	231.8	267.7	284.2	303.5	325.0
Punjab	319.3	324.6	337.7	349.2	357.0	372.5	393.3	409.2
Rajasthan	285.5	287.1	292.9	298.1	327.1	358.3	366.4	388.8
Tamil Nadu	378.7	385.9	398.7	410.4	434.2	445.6	470.0	540.6
Uttar Pradesh	211.8	229.8	247.1	258.8	274.5	288.0	309.3	334.4
West Bengal	237.6	255.9	263.1	267.5	288.6	305.3	323.7	335.3
All India	252.6	267.1	277.4	287.1	309.9	323.2	345.7	372.7

Source: Indian Labour Journal, Labour Bureau, Government of India, Various Issues \* Yearly average wage rates have been calculated from monthly average wage rates.\* All India data for 2020-21 is the average of 11 months as data for April 2020 is not available

According to PLFS 2023-24 (April-June 2024), the average female wage earnings (Rs 0.0) per day from casual labour work other than public works in CWS in Kerala is 53.3 per cent higher than the corresponding all-India rate. However, female wages are only about half the male wages in Kerala.

### Labour and Labour Welfare in Kerala

The Government of Kerala aims to create job opportunities to enhance productivity, envisage schemes to develop skills, ensure gender equality, minimum wages, and health protection, thereby creating a better workplace atmosphere. The Government ensures the overall well-being of labourers in all sectors by ensuring wage protection and social security.

### Labour Welfare Boards

In Kerala, the Labour Department plays a key role in implementing labour welfare activities, and to create a conducive environment for harmony in employee-employer relationships. There are 28 Labour Welfare Boards in Kerala. Of these, 16 Welfare Fund Boards function under the Labour Department. The other 12 Boards function under various departments, such as Agriculture and Industry.

The Welfare Boards under the Labour Department and the number of registered members are shown in **Appendix 7.1.4**. There were 58,71,881 workers registered with the 16 Labour Welfare Boards under the Labour department in the year 2023-24. Out of the 16 boards, the Kerala Building and other Construction Worker's Welfare Board has the highest number of live members, i.e. 20,23,402 members in 2023-24. There has been a 14 per cent increase in the total number of members since 2022-23.

### Overseas Development and Employment Promotion Consultants (ODEPC)

Overseas Development and Employment Promotion Consultants Limited, a Public Sector Undertaking under the Department of Employment and Skills, has facilitated overseas recruitment for the past four decades. Its main objective is to identify suitable employment areas for educated job seekers, and skilled, unskilled and semi-skilled workers in foreign countries, at a low cost. An IATA - accredited travel division operates under ODEPC. ODEPC also facilitates packaged tours, training, and study abroad.

### Achievements

Foreign Recruitment: ODEPC mainly focuses on the recruitment of human power to Government organisations in overseas countries.

ODEPC has conducted 3790 recruitments for various foreign countries from 2016 to 2024 (**Table 7.1.4**), mainly to the Gulf countries, Germany, Belgium, and Uzbekistan. ODEPC recruited doctors, nurses, and other paramedical staff for various hospitals under the Ministry of Health in Saudi Arabia.

ODEPC has recruited 94 nurses to Belgium. The first batch of 22 nurses were sent in March 2022, the second batch of 37 nurses in January 2023 and the third batch of 35 nurses in January 2024. The fourth batch of this project is in progress, with 60 nurses being trained in Dutch language. A monthly stipend of Rs 15,000 is given to the participants in the course. In addition to this, 24 nurses selected through LELI, another programme for the recruitment of nurses to Belgium, have completed Dutch language training and moved to Belgium in September 2024.

ODEPC has also started the free recruitment of nurses to Germany. Under this scheme, 100 nurses were trained in the first batch, of which 70 nurses have been posted in Germany. The travel arrangements for the rest are in progress.

**Table 7.1.4** Details of recruitments conducted by ODEPC

Financial Year	Total employment in foreign countries
2016-17	650
2017-18	325
2018-19	347
2019-20	284
2020-21	646
2021-22	475
2022-23	157
2023-24	553
2024-25	353
<b>Total</b>	<b>3790</b>

Source: ODEPC

Through ODEPC, 100 English teachers were appointed in Government schools in Uzbekistan. In Dubai World Security, 230 candidates were employed. Employer Meets were organised on September 2022 in Riyadh, Saudi Arabia, Dubai, Abu Dhabi, and UAE in association with the Kerala Academy for Skills Excellence (KASE), under the Labour Department. Participants included 78 companies from Dubai, 46 from Abu Dhabi, and 67 from Saudi Arabia.

**Training:** ODEPC has started training centres in Thiruvananthapuram, Ernakulam, Angamaly, Kozhikode, and New Delhi, to provide training in foreign languages such as English and German to nurses who want to be posted in English-speaking countries including the UK and Ireland. These centres trained 1000 job seekers.

Asia's largest Occupational English Test (OET) exam centre was launched by ODEPC in January 2021, at Angamaly, Kerala. It is the first exam centre in India to be owned by the Government. To date, 12,000 persons have written the exam at this exam centre.

**Travel Division:** An IATA-accredited travel division has been operating under ODEPC since 1990. Tickets for international travel are now processed here. In the context of the Russia-Ukraine war, the State Government utilised the services of ODEPC's travel division to bring students back from Ukraine.

**Tour Division:** A tour division was launched in 2018, under the Travel Division, to execute tour packages in collaboration with leading tour operator Thomas Cook. Various types of tour packages are available for those who want to travel domestically or abroad. Luxury cruise packages are operated too. Special concessions are given to employees of Government/ Public Sector Undertakings.

**Study Abroad:** This scheme is to assist students wanting to obtain higher degrees and secure employment abroad. This has been introduced for countries such as USA, Canada, Australia, UK, New Zealand, Czech Republic, and Ukraine.

The *Unnati* Scholarship for Overseas Studies is an innovative scheme implemented by the Department of Scheduled Castes and Scheduled

Tribes Development along with ODEPC to support Scheduled Caste and Scheduled Tribe students who want to pursue higher studies in foreign countries. Scholarships of up to Rs 25 lakh are awarded, according to the annual family income of the student. Till date (October 2024), 212 students have gone abroad through this scheme, and are studying in foreign universities.

Including *Unnati* beneficiaries, ODEPC has facilitated the international education of 252 students.

### **Factories and Boilers Department**

The Department of Factories and Boilers is under the purview of the Ministry of Labour and Skills. The main responsibility of the Department is to check the compliance of factories with the Factories Act, 1948, and the Boilers Act, 1923. This department is vested with statutory enforcement powers to ensure the safety, health, and welfare of the approximately 7 lakh workers in registered factories in Kerala, and the general public in the vicinity of hazard-prone factories, through 20 different laws. The Department also has the mandatory function of eliminating occupational hazards, occupational diseases, and industrial disasters.

### **Remote Sensing-Enabled Online Chemical Emergency Response System (ROCERS)**

The first phase of the Remote Sensing-Enabled Online Chemical Emergency Response System (ROCERS) project was implemented at Ambalamugal in Ernakulam district, in collaboration with NRSA (National Remote Sensing Centre), Hyderabad and IGCAR (Indira Gandhi Centre for Atomic Research), Kalpakkam, Tamil Nadu.

If an industrial disaster occurs, residents in the vicinity, disaster management agencies, authorities including the Police, Fire and Rescue Services, and Revenue are alerted with the assistance of geospatial technology. These alerts are pre-emptive, and disbursed through mobile applications and offline.

### **e-Sanjeevani Scheme and COSHE Scheme**

The Out-Patient service of the Department of Occupational Health has been started and successfully implemented through the Government of Kerala's telemedicine scheme, e-*Sanjeevani*.

Factory workers can consult doctors of the department online from their workplaces, and receive a diagnosis and drug prescription, and rule out suspicions of occupational disease.

Under Continuing Occupational Safety and Health Education (COSHE), the department also provides free online training to doctors in factories to detect the 28 diseases mentioned in the Factories Act. COSHE is the first project of its kind in India.

**Enforcement Strategy:** As part of its enforcement strategy, officials of the Factories and Boilers department carry out priority inspections in hazardous and other factories. According to “Kerala – Central Inspection System” (K-CIS), if violations are found during inspections, legal action is taken against the factory management, and measures are taken to reduce accidents.

The Occupational Health Survey has been started in India to detect occupational diseases. With the help of Occupational Health Research Centre (OHRC), established in Kollam, an occupational disease survey study was completed among workers in coir, cashew, fish processing, crusher, packing, textile, and tea factories.

With the help of the Industrial Hygiene Laboratory, industrial hygiene surveillance studies are conducted in workplaces to identify factors that cause occupational diseases, and measures are taken to prevent occupational diseases by amending the relevant Factory Act.

### FAB SAFE

In case of an accident involving vehicles carrying hazardous chemicals transported from factories, first responders can be notified very quickly of chemical gas leakage or fire through the mobile application FAB SAFE. These notifications can facilitate the swift arrival of emergency crew members from the nearest factories, to take measures to reduce the impact and severity of the accident.

### Factory workers in Kerala

Though the number of establishments under the purview of the Factories and Boilers department has increased over the years, the number of workers has decreased. (**Appendix 7.1.5**)

**Table 7.1.5** Number of workers in the factories

Year	No. of Workers
2016	7,02,129
2017	6,78,058
2018	6,98,679
2019	7,26,195
2020	7,02,901
*2021	6,52,875
*2022	6,78,586
*2023	6,02,493
*2024	6,41,701

(As on 31.08.2024)

Source: Labour Commissionerate (up to 2020)

\* \*data provided by Factories and Boilers Department

### Safety of Factory Workers

As the statutory authority to ensure the safety, health, and welfare of factory workers and the general public living in the vicinity of factories, the Department of Factories and Boilers carries out various programmes for worker safety. In 2023-24 (As on 31.08.2024), the department carried out 37 priority inspections in Major Accident Hazard (MAH) factories, and 37 inspections in hazardous factories by specialist inspectors. The department has also been conducting training programmes not only for factory workers and employees, but also for school children and the general public near factory premises. Details of various activities done by Factories and Boilers Department are provided in **Appendix 7.1.6**.

### Industrial Accidents in Kerala

The number of fatal and non-fatal accidents in industries under the purview of the Factories and Boilers Department has been declining continuously since 2019. This can be credited to the department’s interventions. **Table 7.1.6** shows accident details from 2016 to 2024 (up to October).

### Industrial Disputes

A platform for raising grievances and for the settlement of the issues between employee and employer is an essential requirement to ensure harmonious labour relations in the State. The Industrial Disputes Act of 1947 provides the legal framework for the same, though it applies only to the organised sector. It also regulates lay-offs and retrenchment.

**Table 7.1.6** Industrial accidents in factories under the purview of Factories and Boilers Department in Kerala - 2016 to 2024 (in number)

Accident	2016	2017	2018	2019	2020	2021	2022	2023	2024 (up to October 2024)
Fatal	14	16	22	26	14	12	9	22	12
Non-Fatal	192	236	129	121	58	117	67	62	48
<b>Total</b>	<b>206</b>	<b>252</b>	<b>151</b>	<b>147</b>	<b>72</b>	<b>129</b>	<b>76</b>	<b>84</b>	<b>60</b>

Source: Factories and Boilers Department, GoK

The number of disputes pending at the beginning of the year 2023-24 was 1602 and the number of disputes that arose in 2023-24 was 2,192. The total number of disputes handled during the year 2023-24 was 3,794. There has been a significant decrease in these three categories, compared to previous years. The total number of disputes settled in the year 2023-24 was 2,156. The details of industrial disputes and settlements from 2016-17 to 2023-24 (up to 31.08.2023) are shown in the **Appendix 7.1.7**.

#### Number of Working days lost due to Strikes, lockouts and lay-offs

Strikes, lockouts, and lay-offs cause the loss of working days. In 2023-24, the number of workdays lost in Kerala for various reasons was 20,25,231. Details of the number of working says lost due to various reasons are shown in **Appendix 7.1.8, 7.1.9** and **7.1.10**.

#### Labour Commissionerate

The Labour Commissionerate emphasises on developing good employee-employer relationships by creating awareness among employees about their rights and duties. The department aims to increase efficiency without losing workdays, and to ensure the benefits of labour laws to the employee and society at large. In Kerala, the socio-economic security of the unorganised sector, including self-employed groups, are given due importance. Gender equality is a highlight of Kerala's labour sector.

#### Social security and welfare activities for workers in Kerala

*Major labour welfare schemes under the Labour Commissionerate*

##### 1. Income Support to Workers in Traditional Sector Activities

This is a flagship scheme of the Labour Commissionerate. This scheme was introduced in

2010-11 to disburse Rs 1,250 to workers engaged in traditional sectors such as beedi, khadi, etta and pandanus, fisheries, fish processing and coir, in the State. The Scheme is implemented through Departments of Coir, Fisheries, Khadi, Handloom & Textiles, and various welfare fund boards. An amount of Rs .69 crore has been spent on 3,96,181 beneficiaries in 2023-24 through the Income Support Scheme.

##### 2. Better accommodation for plantation workers and affordable housing for the unorganised poor

The scheme aims to provide housing to workers in the plantation sector, considering the working conditions in the plantation sector, wage system, lack of urban facilities, and poor infrastructure. Bhavanam Foundation Kerala (BFK) implements the Bhavanam Project – Own Your Own Housing Scheme for landless and houseless at Kulathupuzha estate, at the identified land of 5 acres which belongs to Rehabilitation Plantations Ltd. (RPL). The construction of 6 units under Phase 1, and the related land development, has been completed.

#### Social Protection for Unorganised Sector Workers

This scheme has three components:

##### a. Unorganised Daily Waged Employees Distress Relief Fund

This scheme was sanctioned in 2007-08 and implemented through the Labour Department to provide financial assistance of Rs 2,000 to workers defined as daily waged workers, workers not covered under any other welfare schemes, and workers that have sustained injury during the course of employment.

##### b. Tree Climbers Disability Pension Scheme

This pension scheme was introduced on January 1, 2012 to provide pension to the beneficiaries

of deceased workers who have received a financial assistance under the Kerala Tree Climbers Welfare Scheme.

c. **Maternity Allowances to Workers in the unorganised Sector**

The Government commenced a Maternity Allowance Scheme for workers in the unorganised sector in 2011-12. This is to ensure a uniform pattern of assistance in the payment of maternity benefits provided by the various Welfare Fund Boards, and to ensure that minimum eligible wages are paid as maternity benefit. The maternity benefit amount is being disbursed to workers through the various welfare fund boards.

An amount of Rs 5 crore has been spent on 3,100 beneficiaries in 2023-24 through the Social Protection for unorganised sector workers scheme.

**2. Employees State Insurance (ESI) Scheme**

The ESI Scheme of GoI aims at providing assistance to employees in case of sickness, maternity, disability, or death due to employment-related injury and to provide medical care to insured persons and their families. The comprehensive social security provisions are based on the ESI Act, 1948. This scheme covers all the employees working in non-seasonal factories running on power that employ 10 or more persons, and factories not using power that employ 20 or more persons. It also includes those working in shops, hotels, restaurants, cinemas, road motor transport undertakings and newspaper establishments. Each insured employee and their employer are required to contribute a certain per cent of their wages to the ESIC every month. The ceiling wage rates are revised from time to time. The payments are to be made on a monthly basis. There are 147 ESI dispensaries and 9 ESI hospitals in Kerala. District wise details of ESI Dispensaries and Hospitals are given in **Appendix 7.1.11**.

**3. Guest Workers in Kerala**

Till 2001, migrants to Kerala were primarily from neighbouring States including Tamil Nadu, Karnataka, and Maharashtra. However, in recent years, migrants are mostly from West Bengal, Assam, Odisha and Bihar. The largest number of migrant workers are in the construction sector

(17.5 lakh), followed by the manufacturing sector with 6.3 lakhs migrants. The distribution of registered migrant workers from other States/ Union Territories in various districts of Kerala under the Awaaz registration (as on 31.08.2023) is shown in **Table 7.1.7** and the number of guest workers registered under Migrants Welfare Board is shown in **Appendix 7.1.12**.

**Welfare activities for guest workers in Kerala**

A major hurdle to ensuring welfare for migrant workers in Kerala is the lack of accurate data on the number of guest workers. As per Parida and Raviraman’s study in 2021, the number of guest workers is nearly 31 lakh. The number of registered workers under the Aawaaz scheme of the Labour Commissionerate is over 5 lakh. The current migration pattern of these workers is to stay and work in Kerala for a short period of time, and return to their home State. It is therefore difficult to make an accurate estimate of this kind of migration flow.

**Table 7.1.7** Distribution of registered migrant workers from other States/ Union Territories in the districts of Kerala (as on 31.08.2023) as per AAWAZ Registration

Sl.No.	District	Total
1	Thiruvananthapuram	63,788
2	Kollam	24,946
3	Pathanamthitta	24,119
4	Alappuzha	36,927
5	Idukki	19,587
6	Kottayam	34,251
7	Ernakulam	1,15,053
8	Thrissur	41,900
9	Palakkad	24,694
10	Malappuram	29,856
11	Kozhikode	44,628
12	Wayanad	11,839
13	Kannur	28,874
14	Kasaragod	15,858
<b>Total</b>		<b>5,16,320</b>

Source: Labour Commissionerate

\*Parida, J K and K R Raman (2021), *A study on in-migration, informal employment and urbanisation in Kerala*

### **Apna Ghar**

The Government of Kerala initiated building dormitory facilities for migrant labourers in select centres under Apna Ghar scheme (a similar scheme finds a mention in the Union Budget only 2024-25). These facilities are designed with shared rooms, multiple kitchens, mess areas, bathrooms, toilets and recreational facilities. They also have sewage treatment plants, rain water harvesting systems, diesel generator backup, and CCTV systems. A dormitory facility with 620 beds has been completed under Apna Ghar in Palakkad district. The 100-bed facility at Kinalur, Kozhikode district (Phase 1) has also been completed in 2023. Health Insurance for Interstate Migrant Workers (AAWAZ)

The Government of Kerala has introduced a health-cum-death insurance scheme for guest workers under which an insured person is eligible for health insurance of up to Rs 25,000, and Rs 2 lakh of accident death insurance claim. A total of 5,16,320 guest workers have registered under this scheme. The State is aims to expand the coverage of this scheme to more of the migrant labour force. Awareness Programme for Guest Workers

This scheme includes medical camps, contact classes, advertisements on health awareness and labour rights, short films, etc., to facilitate the upliftment of migrant workers and ensure better health, with the assistance of other field departments such as Health, LSGD, etc.

## 7.2 EMPLOYMENT

### Global Employment Perspective

According to the International Labour Organisation's (ILO) "World Employment and Social Outlook: Trends 2024", joblessness and job gaps have both fallen below pre-pandemic levels. Global unemployment, however, was projected to rise in 2024, with growing inequalities and stagnant productivity as causes for concern. The global unemployment rate was 5.1 per cent in 2023, as compared to 5.3 percent in 2022.

In 2024, an extra two million workers were expected to be looking for jobs, raising the global unemployment rate to 5.2 per cent. While the jobs gap rate in 2023 was 8.2 per cent in high-income countries, it stood at 20.5 per cent in the low-income countries. Similarly, while the 2023 unemployment rate persisted at 4.5 per cent in high-income countries, it was 5.7 per cent in low-income countries. The ILO estimates that the 'jobs gap' -which measures the number of persons without a job but who want to work- stands at 402 million in 2024. This includes 183 million people who are counted as unemployed.

### Employment Scenario: India and Kerala Unemployment Rate

In the Periodic Labour Force Survey (PLFS), Unemployment Rate (UR) is defined as the

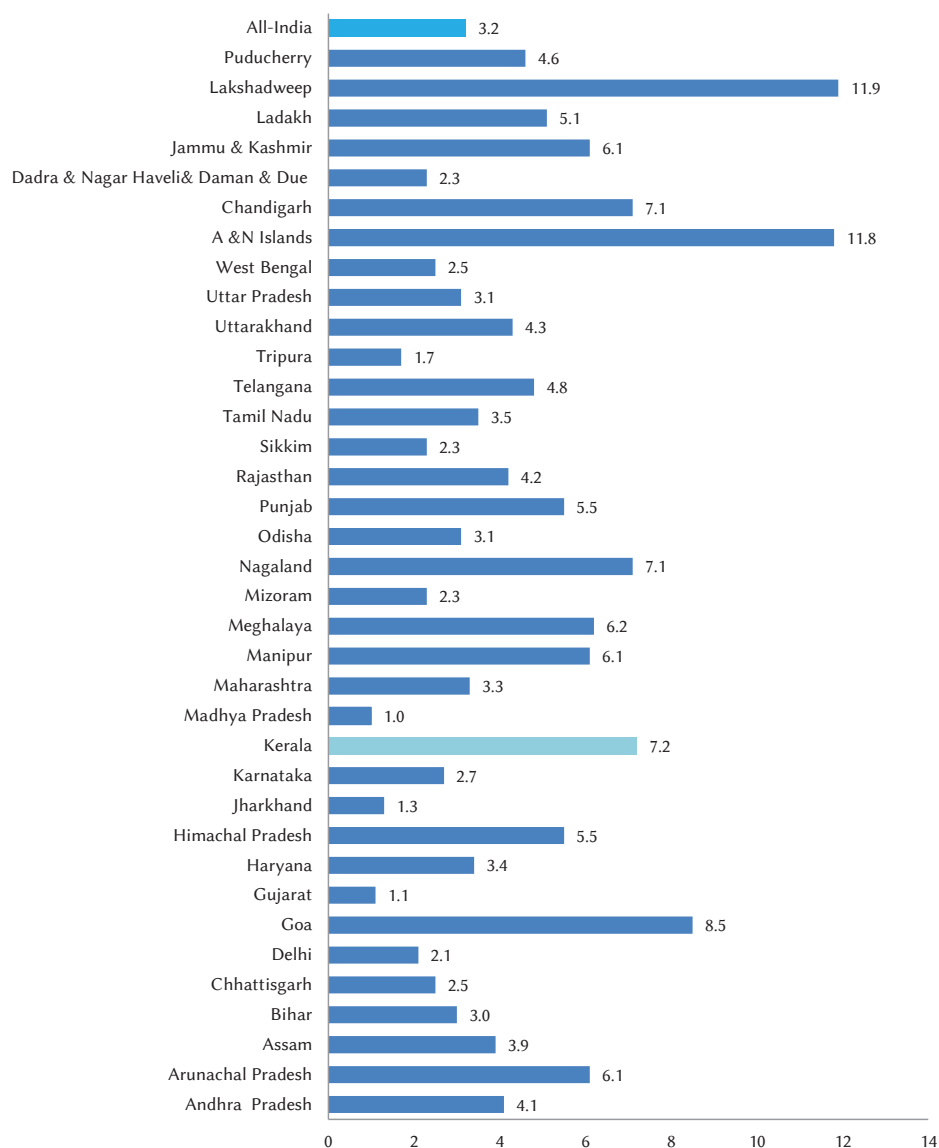
percentage of unemployed persons in the labour force, and is measured in terms of usual status principal status and the subsidiary status (ps+ss) and weekly status. This captures the portion of the labour force actively seeking/available for work. According to the PLFS conducted from July 2023 to June 2024, unemployment under usual status (ps+ss) for persons of age 15 years and above, Kerala has an unemployment rate of 7.2 per cent as against the all-India rate of 3.2 per cent (**Figure 7.2.1**).

The all-India unemployment rate has remained the same for the periods 2022-23 and 2023-24 i.e. 3.2 per cent. The unemployment rate among men and women remained same i.e. 3.2 per cent in 2023-24. In 2022-23, these rates were 3.3 per cent and 2.9 per cent, respectively. In 2023-24, unemployment rate was 2.7 per cent among men and 2.1 per cent among women in rural area, and 4.4 per cent among men and 7.1 per cent among women in urban area.

The unemployment rate in Kerala increased from 7.0 per cent in 2022-23 to 7.2 per cent in 2023-24. The unemployment rate in 2023-24 among males was 4.4 per cent, and 11.6 per cent among females. The unemployment rate is 4.6 per cent among males and 12.1 per cent among females in



**Figure 7.2.1** Unemployment Rate (UR) in per cent, according to usual status (ps+ss) for persons of ages 15 years and above, for each State/UT



Source: PLFS report, 2023-24, Gol

rural areas, while the rates were 4.2 per cent among males and 10.9 per cent among females in urban areas. Details of unemployment rate (in per cent) according to usual status (ps+ss) for persons of age 15 years and above for each State/UT are given in **Appendix 7.2.1**.

In educated (secondary and above) category of persons of age 15 years and above, in usual status (ps+ss), unemployment rate in India was 7.1 per cent, 6.5 per cent in rural areas and 7.9 per cent in urban areas in 2023-24. In this category, unemployment rates among rural males and rural

females of age 15 years and above were 5.6 per cent and 9.0 per cent respectively. In urban areas, the unemployment rate was 6.2 per cent among males and 13.3 per cent among the educated females of age 15 years and above. For educated (secondary and above) persons of age 15 years and above, unemployment rate in Kerala was 12.3 per cent, 14.1 per cent in rural and 10.4 per cent in urban areas in 2023-24. Details of unemployment rate (in per cent) according to usual status (ps+ss) for educated (secondary and above) persons of age 15 years and above, for each State/UT in 2023-24 are given in **Appendix 7.2.2**.

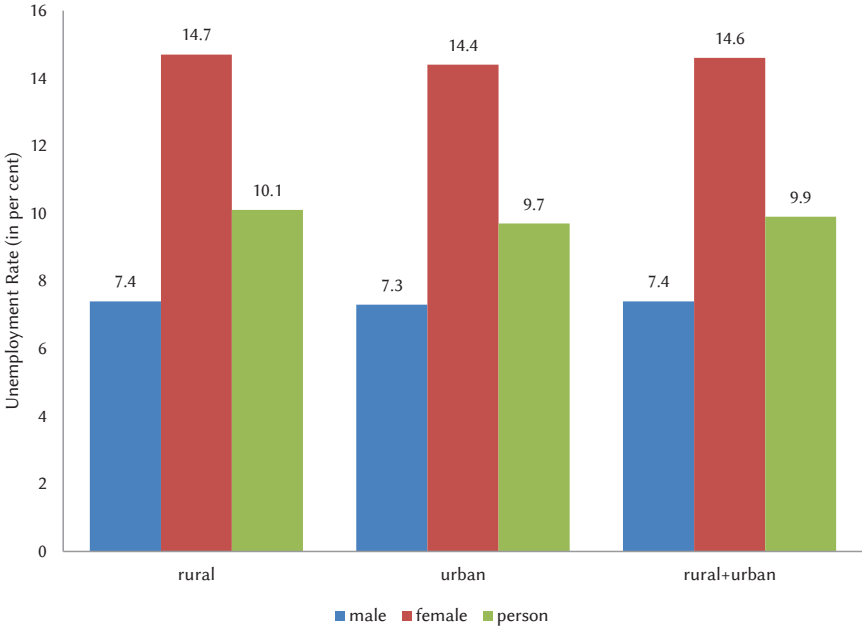
In current weekly status (CWS), for persons of age 15 years and above, the unemployment rate was 4.9 in India and the corresponding unemployment rate of Kerala was 9.9 in 2023-24. The unemployment rate in India was 4.4 per cent among males and was 3.9 per cent among females in rural areas, while the rates were 6.0 per cent among males and 8.7 per cent among females in urban areas. The unemployment rate in Kerala was 7.4 per cent among males and 14.7 per cent among females in rural areas, while the rates were 7.3 per cent among males and 14.4 per cent among females in urban areas in 2023-24. The details of unemployment rate in current weekly status are given in (Appendix 7.2.3). Unemployment rate in Kerala in 2023-24 as per Current Weekly Status (CWS) for persons of ages 15 years and above, in per cent is shown in (Figure 7.2.2).

The female Labour Force Participation Rate (LFPR) in all the age group in Kerala is estimated at 33.4 per cent, which is higher than the all India-level of 31.7 per cent in 2023-24. The LFPR among rural and urban women in Kerala is 36.2 per cent and 30.3 per cent respectively, while the corresponding figure for India is 35.5 and 22.3 respectively. (Appendix 7.2.4)

**Unemployment Rates (UR) of the Youth**

Productive employment of youth (persons aged 15-29) is essential for economic development. Unemployment rate (UR) among the youth is measured at the all-India-level in PLFS, and in the last three erstwhile quinquennial rounds of NSSO. UR of the youth is 10.2 per cent (usual status (ps+ss)), as per PLFS 2023-24. It is seen that over the period from 2004-05 to 2011-12, UR among the rural male youth went from 3.9 to 5 per cent. It rose to 11.6 per cent in 2020-21, and decreased to 8.7 per cent in 2023-24. UR among rural female youth went from 4.2 per cent in 2004-05 to 4.8 per cent in 2011-12. It rose to 8.2 per cent in 2020-21, and has remained the same 8.2 per cent in 2023-24. UR among the urban male youth increased from 7.5 to 8.8 per cent from 2004-05 and 2011-12. It rose to 16.6 per cent in 2020-21, decreased to 12.8 per cent in 2023-24. The UR for urban female youth went from 13.1 per cent to 14.9 per cent in 2004-05 and 2011-12, respectively, and rose to 24.9 per cent in 2020-21. UR declined to 20.1 per cent in 2023-24.

**Figure 7.2.2** Unemployment rate (in per cent) in Kerala in 2023-24 as per Current Weekly Status (CWS) for persons of ages 15 years and above.



Source: PLFS report, 2023-24, Gol  
 Note: The estimate of unemployed in current weekly status (CWS) gives an average picture of unemployment in a short period of 7 days during the survey period.

The UR among youth in Kerala is 35.1 per cent in rural areas and 24.1 per cent in urban areas, while the all India rate is 8.5 per cent and 14.7 per cent respectively, in 2023-24. Rural female UR in Kerala is 56.6 per cent, and urban female UR is 37.0 per cent. The corresponding UR among males is 22.2 per cent and 15.9 per cent, respectively. (Figure 7.2.3).

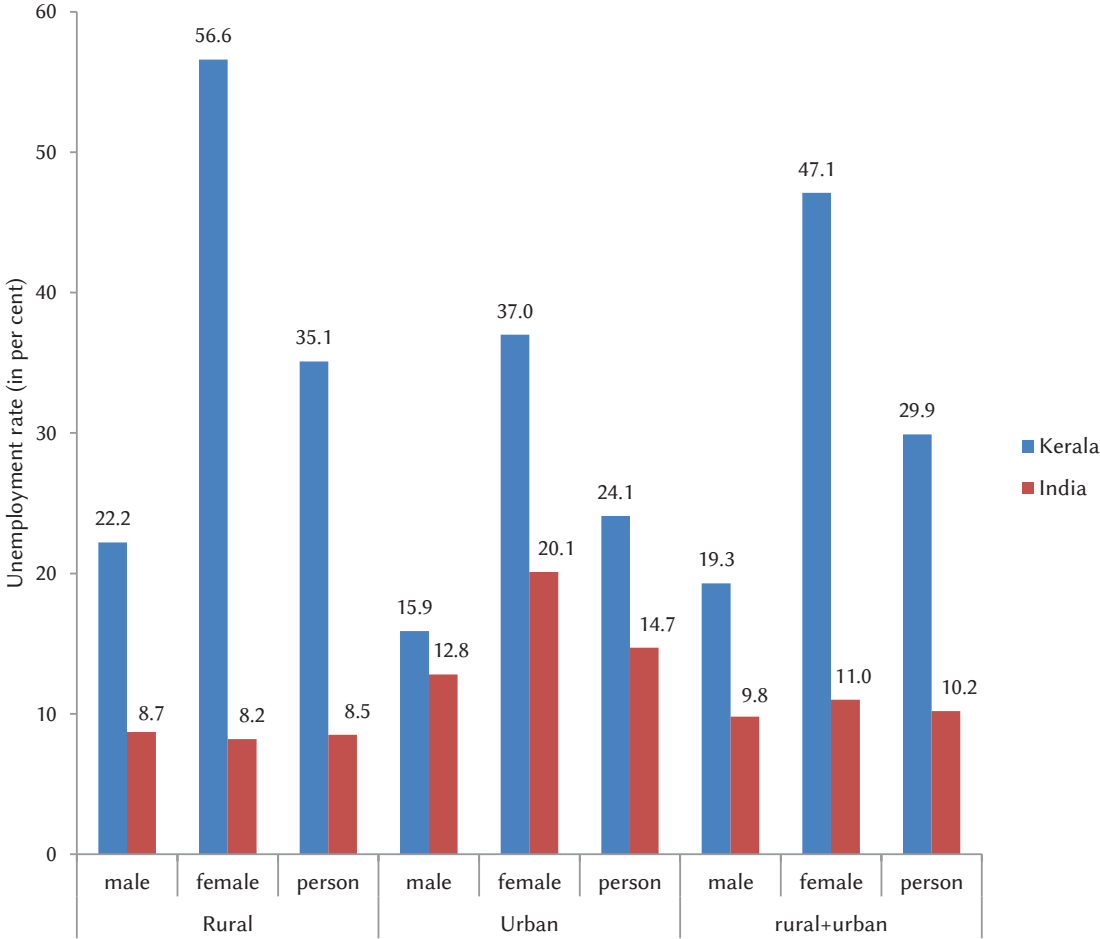
In order to face the challenge of unemployment among the youth, the ongoing programmes for skill development and employment generation are to be made effective to equip the youth to find better employment opportunities. Additionally, work-from-home and work facilities near home must be facilitated to attract more female youth to the work force.

**Employment in the Organised Sector in Kerala**

In Kerala, employment in the organised sector has remained more or less stagnant, showing only a marginal increase from 11.3 lakh in 2014 to 12.6 lakh in 2024 (as on March 31, 2024).

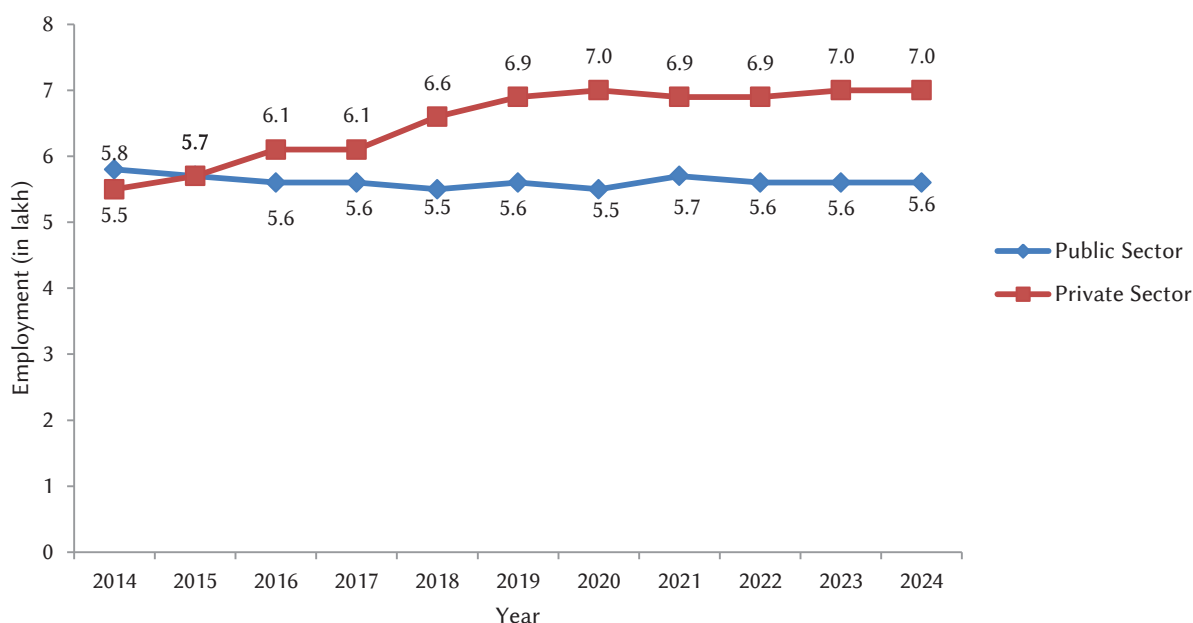
The organised sector in Kerala is comprised of private and public sectors. It is noteworthy that private sector employment showed an increasing trend up to 2020, declined slightly in 2021, but has since continued to increase. In 2024, out of the 12.6 lakh persons employed in the organised sector, 5.6 lakh (44.4 per cent) are in the public sector and 7 lakh (55.5 per cent) are in the private sector. Public sector employment shows stagnation since 2016. Employment in the organised sector is shown in (Appendix 7.2.5 and, Figure 7.2.4).

**Figure 7.2.3** Unemployment rate (in per cent) among the youth (15 to 29 years) in Kerala and India in 2023-24 as per usual status (ps+ss)



Source: PLFS report, 2023-24, Gol

**Figure 7.2.4** Employment in the organized sector in Kerala (in lakh)



Source: Directorate of Employment, GoK, 2024

Within the public sector in Kerala, 46.6 per cent are employed in State Government, 10.8 per cent in Central Government, 23.6 per cent in State quasi-institutions, 4.5 per cent in LSGs, and 14.5 per cent are in Central quasi-institutions in 2023-24. The percentage of work force in the public sector remained the same as the previous year. The distribution of employment in various branches in public sector in Kerala is detailed in (Figure 7.2.5 and Appendix 7.2.8).

Data on district-wise organised sector employment as on March 2024 shows that Ernakulam and Wayanad account for the highest and lowest employment, respectively. In Ernakulam this is 2.7 lakh persons, which accounted for 21.3 per cent of the State's total. In Wayanad, employment in the organised sector is 35,400 persons, which accounted for 2.8 per cent of the total employment. The data shows that only a marginal increase has taken place in the State's employment scenario. The district-wise employment in various branches under public and private sector in Kerala is detailed in (Appendix 7.2.7)

In Kerala, men outnumber women in public sector employment. In the public sector, as on March 31, 2024, 3,63,606 men and 1,94,473 women are employed. The private sector employs slightly more women than men- 3,56,415 and 3,41,065, respectively (Appendix 7.2.5). In 2023-24, the

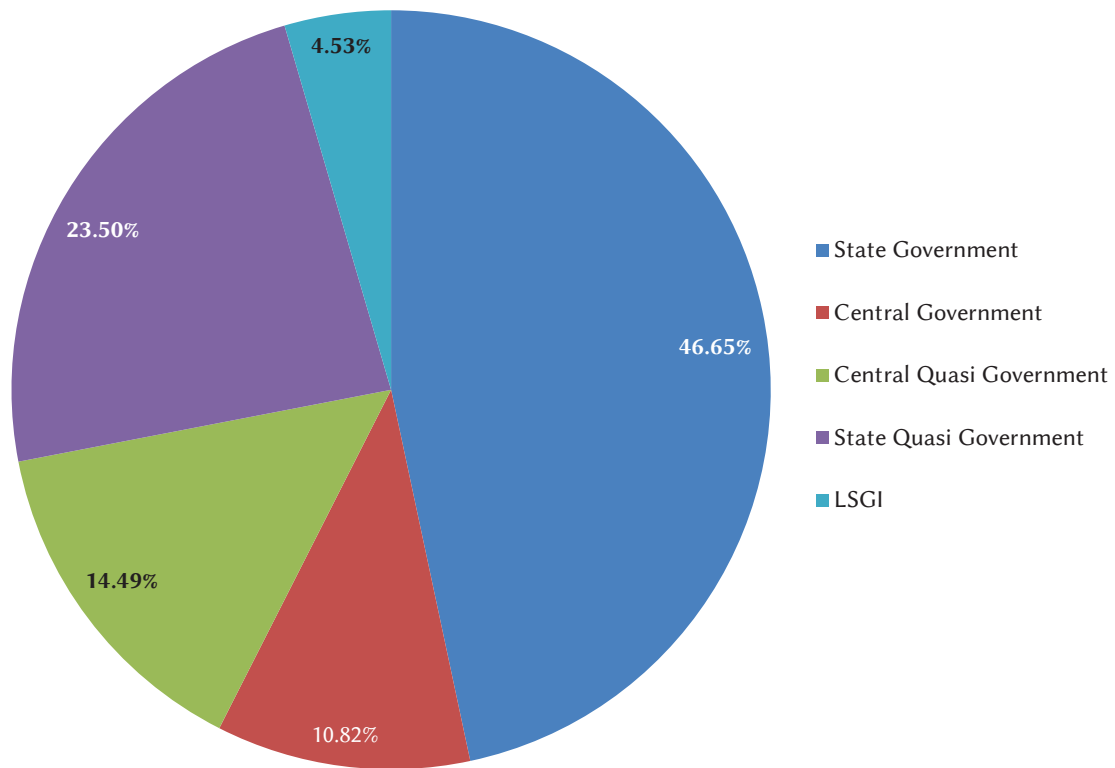
share of men in public sector employment was 65.1 per cent, while that of women was 34.9 per cent. Thiruvananthapuram (30,560) and Idukki (3,469) account for the highest and lowest women employees in the public sector, respectively. Women's participation in the public sector employment is shown in (Appendix 7.2.8) and (Table 7.2.1.)

**Table 7.2.1** Women's Participation in Public Sector Employment in 2024

Sl. No.	Branch	No. of Women Employed	Share (%)
1	State Government	105802	54.4
2	State Quasi Government	39191	20.2
3	Central Government	14782	7.6
4	Central Quasi Government	25424	13.1
5	Local Self Governments	9274	4.7
<b>Total</b>		<b>194473</b>	<b>100.0</b>

Source: Directorate of Employment, GoK, 2024

**Figure 7.2.5** Distribution of employment in various branches in public sector in 2024



Source: Directorate of Employment, GoK, 2024

Recent statistics on the industry-wise distribution of workers in the organised sector in Kerala indicates that the dependence on service sector continues to rise while the dependence on agriculture continues to decline. Employment in agriculture, relative to other sectors, has fallen. The shares of employment in education and manufacturing have risen. Major sectoral distribution of employment in the organised sector in Kerala, in 2024, is detailed in (Appendix 7.2.9) and (Figure 7.2.6.)

### Employment in the Unorganised Sector

The unorganised sector plays a crucial role in the Indian economy in terms of employment and its contribution to the Gross Domestic Product, savings, and capital formation. In India, and in Kerala, a high proportion of the socially and economically weaker sections of society are engaged in unorganised economic activities.

Employees of enterprises belonging to the unorganised sector have lower job security, no social protection, lesser chances of upward

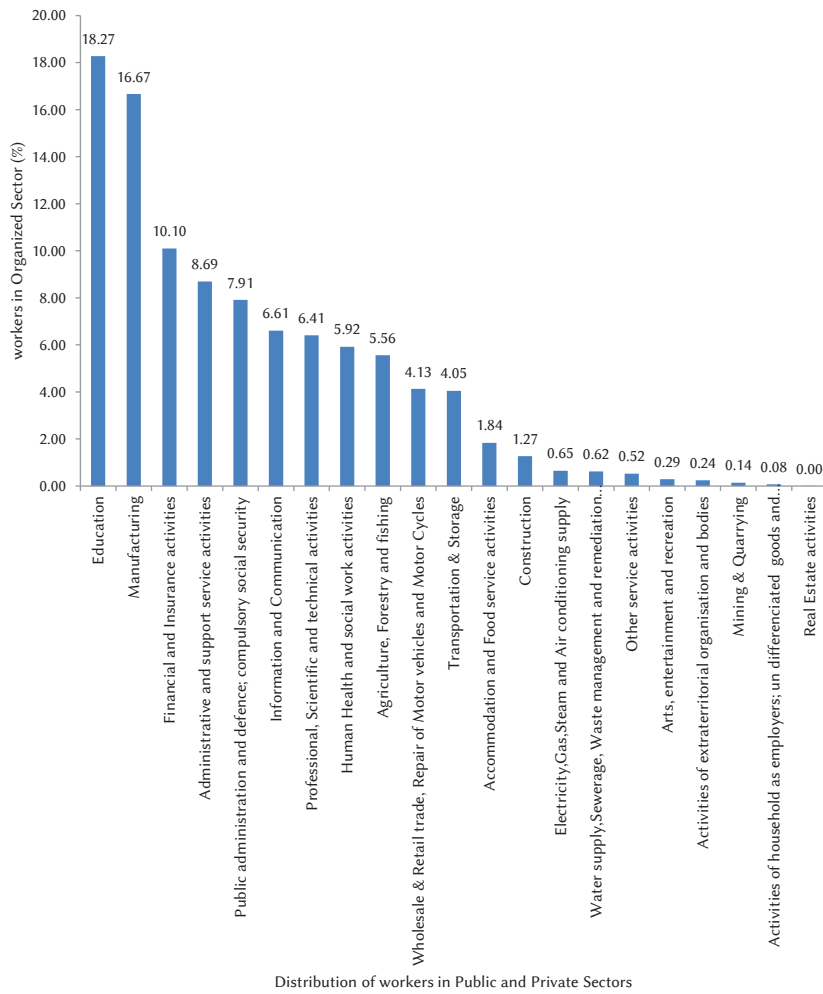
mobility, and no paid holidays. In Kerala, the Directorate of Employment is the nodal department entrusted with the responsibility of reducing unfair practices in the unorganised sector. In recent years, the Government of Kerala has initiated several measures to provide social security to workers in the unorganised sector.

### Employment Exchanges and their Services Registered Job Seekers

According to live registers of employment exchanges in Kerala, the total number of job seekers as on December 31, 2016 was 35.6 lakh, and it decreased to 26.33 lakh as on December 31, 2023. The number of job seekers up to July, 2024 is 25.9 lakh. Details of job seekers for various years are given in (Appendix 7.2.10) and (Figure 7.2.7.)

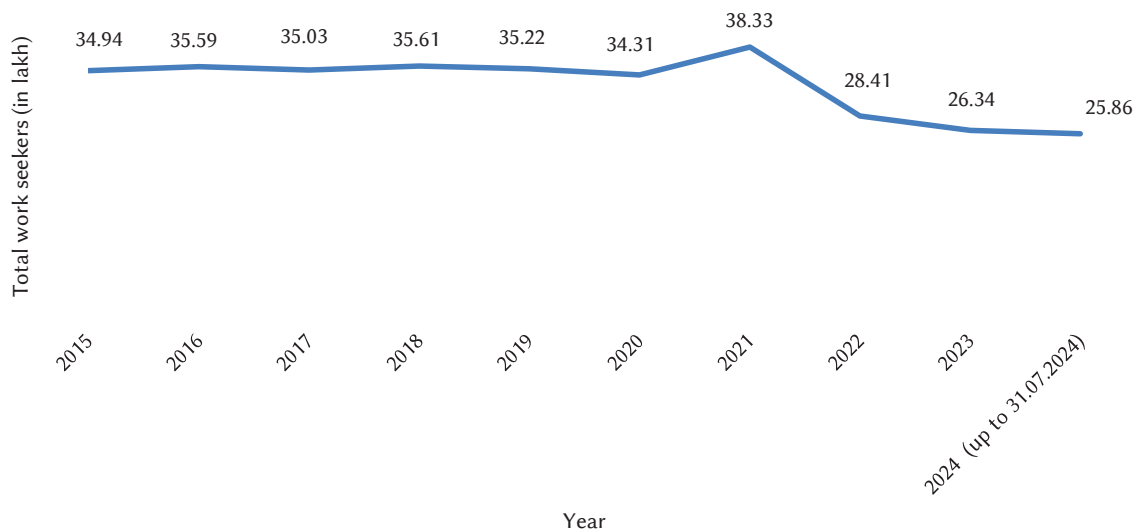
Live registers in Kerala indicate a larger number of women jobseekers than men. Of the total job seekers in 2024 (up to July 31, 2024), 64.0 per cent are women. Distribution of job seekers by educational-level indicates that only 6.1 per cent have qualifications below SSLC. About 93.9

**Figure 7.2.6** Major sectorial distribution of employment in the organised sector in Kerala March 2024, (in per cent)



Source: Directorate of Employment, GoK, 2024

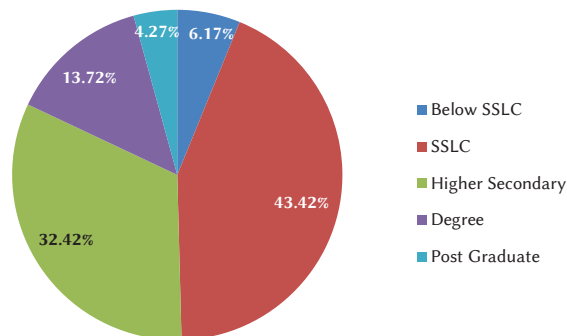
**Figure 7.2.7** Work Seekers in Kerala, (number in lakh)



Source: Directorate of Employment, GoK, 2024

per cent of the job seekers have qualifications of SSLC and above. The distribution of work seekers in Kerala by educational level is detailed in (Figure 7.2.8) and (Appendix 7.2.11.)

**Figure 7.2.8** Distribution of work seekers in Kerala by Educational-level in 2024 (as on July 31, 2024)



Source: Directorate of Employment, GoK, 2024

The number of professional and technical job seekers as on July 31, 2024 is 2.0 lakh. Data shows that of these, ITI certificate holders, diploma holders, and engineering graduates together constitute 63.3 per cent of the total professional and technical job seekers.

Among work-seekers in 2024 (as of July 31), 35,877 are engineering graduates, 9,024 are medical graduates, and 1,57,198 are other professional candidates. The distribution of work seekers in Kerala by educational level is detailed in (Appendix 7.2.12.) District-wise job seekers in Kerala are shown in (Figure 7.2.9.)

The district-wise details of work seekers as on July 31, 2024 show that Thiruvananthapuram District has the highest number of job seekers, followed by Kollam District. The total number of job seekers in Thiruvananthapuram District is 4,18,671, of which 2,65,938 are women and 1,52,733 are men. The lowest numbers are registered in Wayanad District – 68,529 persons. The details of work seekers are given in (Appendix 7.2.13.)

### Kaivalya

The National Employment Service (Kerala) has been implementing an employment rehabilitation scheme for candidates with disabilities, called Kaivalya, since 2016. The primary objective of the scheme is to create a social and physical environment that favours accessibility, integration, and the full participation of persons with

disabilities. Kaivalya comprises of the following four components;

1. Vocational and career guidance
2. Capacity Building
3. Coaching classes for competitive examinations
4. Self-employment loan schemes.

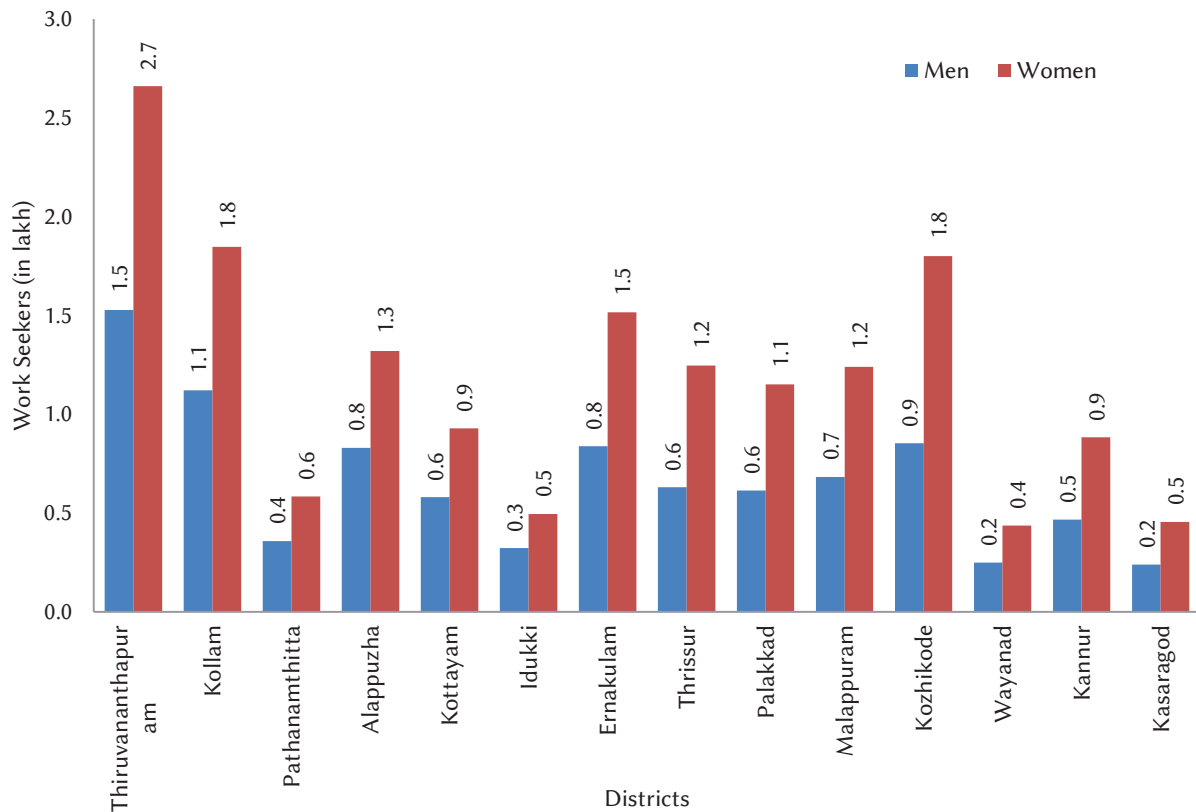
An amount of Rs 110.1 lakh was spent in 2023 for implementing the above activities, benefiting 221 persons. In 2024 (as on July 31, 2024), Rs 5.9 lakh has been disbursed. Details of amount disbursed and beneficiaries of Kaivalya are given in (Appendix 7.2.14)

### Self-Employment Schemes

Three self-employment schemes are implemented through the Employment Exchanges in Kerala.

1. Kerala Self-Employment Scheme for the Registered Unemployed (KESRU): KESRU has been implemented since 1999, and is intended for unemployed persons in the live register between the ages 21 and 50 years, with annual family income not exceeding Rs 1 lakh. Preference is given to those with professional or technical qualifications and beneficiaries of the unemployment dole scheme. Students are not eligible to apply for KESRU. Bank loans of up to Rs 1,00,000, with 20 per cent reimbursed as Government subsidy, are given for self-employment ventures to individuals. In 2023-24, an amount of Rs 57.5 lakh has been spent for 320 beneficiaries. In 2024-25, (as on August 31, 2024), an amount of Rs 30.9 lakh has been spent for 171 beneficiaries.
2. Multi-Purpose Service Centres/Job Clubs (MPSC/JC): This is a group-oriented, self-employment scheme for the development of enterprises in the unorganised sector. Bank loans up to Rs 10 lakh, with 25 per cent subsidy (subject to a maximum of Rs 2 lakh), are given to start self-employment group ventures. Groups of two to five members between the ages of 21 and 45, who are registered as unemployed in the live registers, are eligible. The scheme offers Credit Guarantee. In 2023-24, an amount of Rs 28.5 lakh was allotted to 35 job clubs. In 2024-25, (as on August 31, 2024), an amount of Rs 17.8 lakh has been spent for 19 job clubs.
3. Saranya: This employment scheme for destitute women aims at uplifting the most vulnerable among women in the State- widows, divorcees, deserted, unmarried women above the age of 30, unwed mothers belonging to Scheduled Tribes,

**Figure 7.2.9** Job seekers in Kerala, men and women in 2024 (in lakh)



Source: Directorate of Employment, GoK, 2024

women with physical disabilities, and wives of bed-ridden persons. Under this scheme, interest-free bank loans up to Rs 50,000, with 50 per cent subsidy, are given to start self-employment ventures. In 2023-24, an amount of Rs 714.3 lakh was spent for 1,609 beneficiaries. In 2024-25, (as on August 31, 2024), an amount of Rs 655.3 lakh has been spent for 1,308 beneficiaries.

### Model Career Centre

Model Career Centre is a joint venture of the Directorate General of Employment and Training, Ministry of Labour and Employment, Government of India, and the Department of National Employment Service, Government of Kerala. At present, one centre functions at the University Employment Information and Guidance Bureau, Thiruvananthapuram. The Centre acts as a one-stop solution centre for all assistance needed by aspiring youth to find suitable careers that match their qualifications and skills. The Centre's activities include partnering with industry, candidate engagement, job and skill mapping, and conducting placement drives/job fairs.

### Navajeevan

The Navajeevan scheme, implemented through the Employment Department, aims to ensure the financial self-reliance of senior citizens in the age group of 50 to 65 years, who were unable to secure employment despite registration at Employment Exchanges in Kerala, by providing suitable means of livelihood. Loans of up to Rs 50,000 are granted, 25 per cent of which (up to Rs 12,500) can be subsidy, and 75 per cent can be bank loan. Applicants should not have an annual income over Rs 1 lakh, and no collateral security is required. In 2023-24, an amount of Rs 33.9 lakh was disbursed among 273 beneficiaries. In 2024-25, (as on August 31, 2024), an amount of Rs 30.2 lakh has been spent for 252 beneficiaries.

### Samanwaya

This scheme is a Comprehensive Career and Employability Development Programme for SC/ST communities all over the State. Various services such as coaching for competitive examinations, skill development, support for self-employment, practical training for interview and



group discussion, assistance for online registration for competitive examinations, entrepreneurship development, career guidance and development, are offered.

**Niyukthi Mega Job fair**

The National Employment Service Department has started mega job fairs with the title Niyukthi throughout Kerala, from 2015. Niyukthi acts as a platform for potential job seekers to find suitable jobs. During 2023-24, one job fair was conducted.

**Unemployment Allowance Scheme**

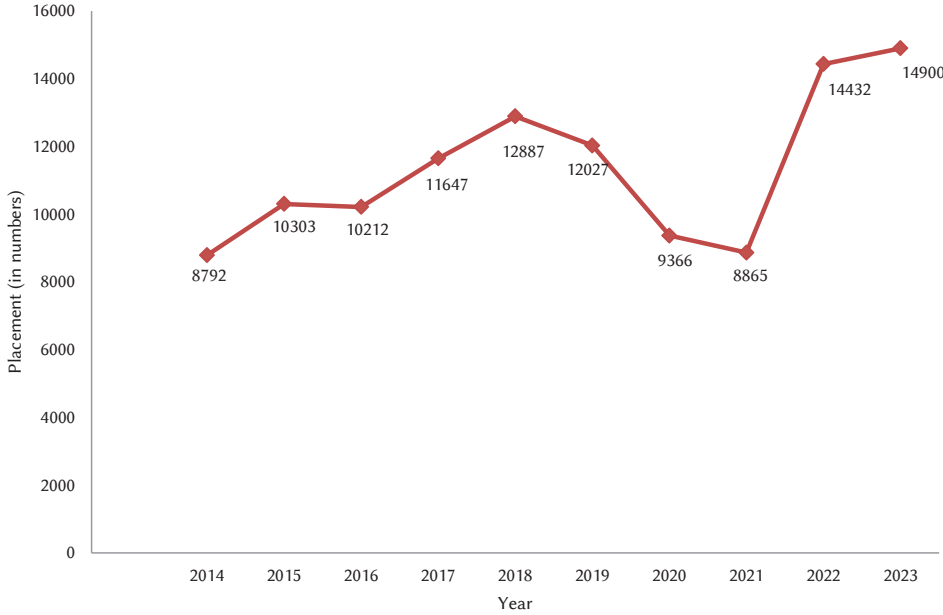
The Government of Kerala had introduced an unemployment assistance scheme in 1982. Under the scheme, unemployed youth over the age of 18, having passed SSLC (SC/ST and persons with disabilities candidates need only have appeared for the examination), with family income below Rs 12,000, monthly personal income below Rs 100, and having remained in the live register for over three years (two years for persons with disabilities), are eligible for an unemployment assistance of Rs 120 per month, up to the age of 35. With the enactment of the Kerala Panchayati Raj Act and Kerala Municipality Act, the unemployment assistance scheme was transferred to rural and urban Local Governments. Under the scheme, eligible candidates submit their application for unemployment allowance in the prescribed form to the Local Government.

In 2023, Rs 46.6 lakh was disbursed to 5,415 beneficiaries, and in 2024 (as on August 31, 2024), Rs 14.4 lakh was disbursed to 2,019 beneficiaries, as unemployment assistance. Through the self-employment schemes KESRU, MPSC/JC, Saranya, and Navajeevan, Rs 834.2 lakh was disbursed to 2,237 beneficiaries in 2024, and Rs 734.3 lakh was disbursed to 1,750 beneficiaries in 2024 (as on August 31, 2024). (Appendix 7.2.15)

**Placement through Employment Exchanges in Kerala**

The total placement through Employment Exchanges in Kerala has mostly fluctuated since 2010. In 2023, the placement through employment exchanges increased to 14,900 persons, from 14,432 in 2022. The placement through employment exchanges in Kerala since 2014 is given in (Appendix 7.2.16) and (Figure 7.2.10.)

**Figure 7.2.10** Placement through employment exchanges-Kerala



Source: Directorate of Employment, GoK, 2024

## 7.3 SKILL DEVELOPMENT

The development of skills can contribute to structural transformation and economic growth by enhancing employability and labour productivity.

In India, with one of the largest youth populations in the world, the relevance of skilling cannot be overstated. Despite being one of the fastest-growing economies, India faces problems of unemployment and under-employment, primarily due to skills mismatch. Skilling initiatives aim to bridge this gap and align workforce capabilities with market demands.

With the advantage of an educated, young population and a large diaspora working in various parts of the world, Kerala places a high priority on equipping its youth with employable skills. The State's economy is transitioning from traditional sectors to modern industries such as information technology (IT), tourism, healthcare, and renewable energy. This shift has underscored the need for a skilled workforce. Also, with the rising global demand for skilled labour across sectors such as IT, manufacturing, and healthcare, Kerala has the potential to become a global supplier of skilled professionals.

### **National Skill Development Mission (NSDM)**

The National Skill Development Mission (NSDM) was launched by the Government of India in 2015, to implement and coordinate all skilling efforts in the country towards the objectives laid down in the National Skill Policy. It aims to create convergence and expedite cross-sectoral decisions through a high-powered decision making framework. It has the mandate to converge, coordinate, implement, and monitor skilling activities on a pan-India basis. The Mission consists of a three-tier institutional structure, providing policy directives and guidance, reviewing and monitoring overall progress, and implementation in line with Mission objectives.

### **Challenges in Skilling and Entrepreneurship in India**

Countries with higher levels and better standards of skills adjust more effectively to the challenges and opportunities in domestic and international job markets. As per the NSSO, 2020-21 (78th round) Multiple Indicator Survey, the percentages of persons of age 15-35 years in formal and non-formal education and training during the last 12 months (from date of survey) at the all-India level are 25.6 per cent and 29.6 per cent in rural and urban area, respectively.

India currently faces shortage of well-trained and skilled workers. As per PLFS, 2023-24, 4.9 per cent persons in the age group 15-29 have received formal vocational/technical training (rural + urban). One of the biggest challenges of skill development in India is that about 73.2 per cent of the workforce engaged in informal/unorganised sector (workers in informal sector among workers in usual status (ps+ss) in non-agriculture sector, PLFS 2023-24). Consequently, it is difficult to map existing skills in the unorganised sector and gauge skilling requirements.

Women constitute almost half the population in India. The key challenge here is to increase women's participation labour force, which is directly linked to the economic growth of the country. According to PLFS 2023-24, the Labour Force Participation Rate (usual status (ps+ss), all ages) of women in rural area is 35.5 per cent and 22.3 per cent in urban area. In Kerala, this is higher at 36.2 per cent and 30.3 per cent, respectively.

### **Incremental Human Resource Requirements across 24 Sectors (2017-22)**

The Human Resource Requirement Reports have been commissioned by the National Skill Development Corporation (NSDC) under the Ministry of Skill Development and Entrepreneurship. The reports aim to understand the sectoral and geographical spread of increasing skills requirements across 24 high priority sectors between 2013-17 and 2017-22. The Human Resource Requirement across 24 Sectors in 2016 and projected estimates of 2022 are listed in **Table 7.3.1**.

### **Skill Development initiatives in Kerala**

Skill development is critical for achieving swift, sustainable, and inclusive growth, and to provide decent employment opportunities to Kerala's young population. Given its high social and human indicators, Kerala can contribute to the requirements of a technically trained workforce not only for the country's growing economy, but also for rest of the world.

As per the 2011 Census, Kerala is the most literate State in the country, with literacy rate at 94 per cent, as against Indian average of 74.0 per cent. The male literacy rate was at 96.1 per cent and female literacy rate at 92.1 per cent. The literacy levels in urban and rural areas are 95.1 per cent and 93 per cent respectively. However, In Kerala, there

is a gap in terms of skills suitable for the internal and international labour markets.

The convergence of skilling activities by various departments would help to avoid overlapping and to bring out synergy across the interventions. In this regard, the Government of India has launched Skill India Mission Operation (SIMO)/ Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) scheme, with a pan India view on the skilling activities. This scheme mandates a State Skill Development Mission.

For institutional strengthening at the National, State, and District levels, Kerala Academy for Skills Excellence (KASE) under the department of Labour and Skills has been designated as the State Skill Development Mission (SSDM). The Mission guides, coordinates, monitors, and evaluates skilling initiatives, and brings all skill development activities of the State under a single umbrella.

### **Skill Training Programmes through various department**

#### **1. Additional Skill Acquisition Programme (ASAP) Kerala**

Additional Skill Acquisition Programme (ASAP) Kerala is a Kerala Government undertaking under the Higher Education Department, which provides industry-relevant skills to students and the general public to enhance their employability. Skill training is imparted both online and in-person at schools, colleges, and Community Skill Parks. Major achievement of ASAP include the following. (For more details, see chapter 6.1)

- Accreditation of Skill Training Centres: 30 Skill Training Bodies (TBs) have been accredited by ASAP Kerala as of 31 August 2024.
- Centre for Skill Development Courses and Career Planning (CSDCCP): ASAP Kerala's field team is promoting CSDCCP to integrate skill development into various institutions' curricula.
- Drone Pilot Training for Police Department: A five day drone pilot training was conducted for 20 police officers in collaboration with the Police Department.
- Kerala Entrepreneurship Drive (Dreamvestor 2.0): ASAP conducted a programme to inspire college students' entrepreneurial ideas through workshops and competitions, with top teams receiving financial support.
- Exclusive Placement Grooming for EA WCD Batch: An exclusive four-phase grooming and placement program was organized, with mock

**Table 7.3.1** Human Resource Requirement across 24 Sectors (Estimates in millions)

Sl.No.	Sector	Human Resource Requirement Estimates	
		2016	2022
1	Agriculture	229	215.5
2	Building Construction and Real Estate	60.4	91
3	Retail	45.3	56
4	Logistics, Transportation and Warehousing	23	31.2
5	Textile and Clothing	18.3	25
6	Education and Skill Development	14.8	18.1
7	Handloom and Handicraft	14.1	18.8
8	Auto and Auto Components	12.8	15
9	Construction Material and Building Hardware	9.7	12.4
10	Private Security Services	8.9	12
11	Food Processing	8.8	11.6
12	Tourism, Hospitality and Travel	9.7	14.6
13	Domestic Help	7.8	11.1
14	Gems and Jewellery	6.1	9.4
15	Electronics and IT Hardware	6.2	9.6
16	Beauty and Wellness	7.4	15.6
17	Furniture and Furnishing	6.5	12.2
18	Healthcare	4.6	7.4
19	Leather and Leather Goods	4.4	7.1
20	IT and ITeS	3.8	5.3
21	Banking, Financial Services Insurance	3.2	4.4
22	Telecommunication	2.9	5.7
23	Pharmaceuticals	2.6	4
24	Media and Entertainment	0.7	1.3

Source: Environment Scan Report, 2016 (NSDC)

interviews and placement drives in collaboration with the H&R Block. Sixteen candidates took part and four were shortlisted for placement.

## 2. Skill Development Programmes of the Scheduled Tribes Development Department

In order to reduce the intensity of unemployment among Scheduled Tribe (ST) youth, the Scheduled Tribes Development Department intends to assist ST families with skill training in modern skill sets, and in earning a livelihood by giving assistance to individuals and self-help groups for self-employment. Various skill training programmes

and career guidance campaigns were organised. Details of skill training and placement in the last 5 year are listed in the **Table 7.3.2.**

The Department has conducted 17 skill training courses in the last five years, and 2,224 people have participated. As an outcome, 860 candidates have been employed in India, and 11 have been placed abroad.

## 3. Skill Training Programmes under SC Development Department

Skill development training programmes, including human resource development training and

**Table 7.3.2** Details of skill training and Placement for ST youth

Year	No. of skill training courses conducted	No. of person attended	Placement	
			India	Abroad
2020-21	6	1,600	306	11
2021-22	2	100	84	0
2022-23	2	150	140	0
2023-24	7	374	330	0
2024-25	AS sanctioned for 8 courses with 260 students (process on-going)			
<b>Total</b>	<b>17</b>	<b>2,224</b>	<b>860</b>	<b>11</b>

Source: Scheduled Tribes Development Directorate

job-oriented training programmes, are being implemented by the Scheduled Caste Development Department for Scheduled Caste (SC) persons.

Apart from providing high-end skills in collaboration with other agencies, skill training is also provided for those who would like to start a small enterprise. The details of the persons that have benefitted from these skill trainings and self-employment schemes are given in **Table 7.3.3**.

District-wise details of SC beneficiaries under the self-employment scheme in 2023-24 and 2024-25 (as on October, 2024) are given in **Table 7.3.3**. During 2023-24, 151 Scheduled Caste persons got employment through the self-employment training programme conducted by the Department, and an additional 65 in 2024-25 (up to October 31st).

#### **Skill Training Programmes under Kudumbashree**

Kudumbashree, the State poverty eradication mission, was formed with the objective of poverty eradication through the empowerment of women. As a part of skill development among women, this agency conducts several training programmes. It is the nodal agency of the centrally sponsored *Deendharyal Antyodaya Yojana*-National Rural Livelihood Mission [DAY-NRLM]. Under this scheme, with the aim of demand-led skill training at no cost to the rural poor, *Deen Dayal Upadhyaya Grameen Kaushalya Yojana* [DDU GKY] provides skill-based training to men and women, among whom large numbers are Kudumbashree members. DDU-GKY is a job-oriented skill development scheme jointly implemented by the Ministry of Rural Development (MoRD) and Kudumbashree. DDU-GKY is uniquely focused on rural youth

between the ages of 15 and 35 years from poor families. As on October, 2024, 76,509 persons have completed training. Among them 54,128 were placed, and 44,320 persons have completed three months in a job.

#### **4. Kerala Development and Innovation Strategic Council (K-DISC)**

K-DISC is the primary agency for promoting innovation in the State. K-DISC has been given the additional task of facilitating Kerala's transition to a knowledge economy. Promoting innovations for local economic development and local employment generation also are a priority.

One of the most important objectives of K-DISC is the strengthening of skills, behaviours, and attitudes of the knowledge economy talent pool, particularly of the youth, to strengthen innovation and eliminate barriers to physical, human and knowledge capital.

#### **5. Kerala Knowledge Economy Mission**

The Government of Kerala launched the Kerala Knowledge Economy Mission (KKEM) with the goal of providing employment to educated youths of Kerala. The Kerala Development and Innovation strategic council (K-DISC) was entrusted with the implementation of the scheme. As part of the Kerala Knowledge Economy Mission, the government envisions creating gainful employment opportunities for jobseekers through local demand generation and employment facilitation at both local and international levels.

Till September 2024, 13,25,084 jobs have been created. Along with KKEM partners, 1,20,586 people were found employment. Direct

**Table 7.3.3** Number of SC persons that benefited under Self Employment scheme during 2023-24 and 2024-25

Sl. No.	District	2023-24	2024-25*
		No. of beneficiaries	No. of beneficiaries (as on 31.08.24)
1	Thiruvananthapuram	10	5
2	Kollam	5	3
3	Pathanamthitta	4	1
4	Alappuzha	15	3
5	Kottayam	0	18
6	Idukki	3	2
7	Ernakulam	28	5
8	Trissur	27	3
9	Palakkad	14	12
10	Malappuram	20	7
11	Kozhikode	7	1
12	Wayanad	3	0
13	Kannur	5	2
14	Kasaragod	10	3
<b>Total</b>		<b>151</b>	<b>65</b>

Source: Scheduled Caste Development Directorate  
\* (up to 31.08. 2024)

**Table 7.3.4** DDU GKY status in Kerala

	DDU GKY status			
	Commenced	Completed	Appointed	3 months Job Completed
Cumulative	85,844	76,509	54,128	44,320
2024-25 (as of October 2024)	1,242	1,127	442	891
2023-24	3,584	5,146	3,404	3,422
2022-23	7,020	8,234	6,124	4,326
2021-22	5,664	5,718	1,568	3,143
2020-21	3,358	3,152	1,787	2,931
2019-20	15,221	12,812	9,957	9,100
2018-19	16,428	13,736	10,972	9,656
2017-18	12,998	10,693	9,196	5,093
2016-17	10,722	11,630	8,232	5,077
2015-16	9,607	4,261	2,446	681

Source: Kudumbashree

employment was provided to 45,370 people. A digital platform was created for employers, job seekers, skill providers, and systems that prepare job seekers for employment. Mechanisms have been created through local governments and academic institutions to mobilise job seekers. Special mechanisms were prepared by the respective departments to organize women with career breaks, marginalised sections including SC, ST, trans people, and fisher folk. Career fairs and road shows were organised to bring in employers. A new model scheme called Recruit-Train-Deploy was also implemented for industry relevant and meaningful employment. Details regarding the performance of KKEM are given in **Table 7.3.5**.

## 6. Industrial Training Department

The Industrial Training Department (ITD) functions under the Labour and Skills Department, Government of Kerala, with the objectives of providing Skill and Apprenticeship Training. ITD runs a variety of skill training programmes in Industrial Training Institutes in the State. It also registers youth for Apprenticeship training across various establishments in the State.

It is also the State-level nodal agency for implementing various skill development activities of the Director General of Training (DGT), Ministry of Skill Development and Entrepreneurship, Government of India. The department implements the major two schemes introduced by the DGT, namely Craftsman Training Scheme and Apprenticeship Training Scheme, through various Government and private Institutes in urban, semi-urban, and rural areas of the State. The free training and other assistance given to the trainees help bring marginalised sections of society to the mainstream of technological advancement.

- a) Craftsman Training Scheme (CTS)  
The Craftsman Training Scheme was introduced by the Government of India in 1950 to ensure a steady flow of skilled workers in different trades for domestic industry, to quantitatively and qualitatively raise industrial production through systematic training, and to reduce unemployment among educated youth by providing employable training. The National Council for Vocational Training (NCVT) is the apex authority in the country for the

implementation of the scheme. As per the scheme, National Trade Certificate (NTC) is issued to the trainee who completes the training in a particular trade and passes the All India Trade Test.

- b) Apprenticeship Training Scheme (ATS)  
The Apprenticeship Training Scheme is conducted as per the provisions mentioned in the Apprentices Act 1961. This Act was enacted to regulate the programme of training apprentices in the industry so as to conform to standard syllabi, period of training, skill sets, etc., and to utilise the facilities available in industry for imparting practical training with a view to meet industry requirements of skilled labour. Apprenticeship is a contract between an apprentice and an employer to provide a stipend fixed as per the Apprentices Act, 1961. The Central and State Governments act as the third party in regulating contracts and monitoring the process. The details of apprentices under Industrial Training Department are shown in **Appendix 7.3.6**.
- c) Industrial Training Institutes  
There are 104 Government Industrial Training Institutes functioning in the State, with a total capacity of around 33,000 seats (1st year and 2nd year), of which 30 per cent seats are reserved for women candidates. This includes 14 women ITIs in the Government sector.

The List of Government and Private ITIs and year-wise enrolment details, trade-wise details (1st year and 2nd year courses), institution-wise details of apprentices, and placement details, are shown in **Appendices 7.3.1, 7.3.2, 7.3.3, 7.3.4, 7.3.5, and 7.3.6, 7.3.7**.

As seen in **Appendix 7.3.1**, the total seat strength in Government ITIs in 2023-24 is 23,617 and the total enrolment of students is 22,467. Among the total enrolment in 2023-24, 5,544 are women. The numbers of Scheduled Caste and Scheduled Tribe students are 4,544 and 930, respectively. The number of women and the number of Scheduled Castes and Scheduled Tribes students have shown a slight increase as compared to the previous year.

**Appendix 7.3.7** indicates the placement details of ITI students in the last nine years from Government and private ITIs. In 2023 and 2024, 9,891 students from government ITIs and 10,767

**Table 7.3.5** Achievements of the Kerala Knowledge Economy Mission KKEM

Sl.No	Components	Achievements (up to Sep. 2024)
1	Employers Registered	6,606
2	Job Seekers registered	17,42,555
3	Vacancies Mobilized	13,25,084
a	Domestic	10,57,855
b	International (Onsite and Online)	11,427
c	International (through NORKA)	784
d	National	2,55,018
4	Vacancies Freelancing	3,279
5	Vacancies brought by Foundit	4,47,287
6	Vacancies Third Party(Monster...etc)	6,63,085
7	Applied ( Distinct )	3,02,388
8	Interviewed ( Distinct )	39,036
9	Selected / shortlisted ( Distinct )	34,763
10	Employment provided	1,20,586
11	Direct (Distinct)	45,370 (42,413)
12	Third Party ( Employment Exchange, KASE, ASAP, Kudumbashree )	75,216
13	Job Seekers - Skilling provided through DWMS	18,785
14	Employment Exchange	21,107
15	Kudumbashree	42,410
16	KASE	4,865
17	ASAP	1,847
18	NORKA	3,274
19	ODEPC	1,713

Source: Kerala Knowledge Economy Mission

students from private ITIs have been placed in jobs. The total placements include 3,322 women and 401 SC/ST students.

d) Skill Updating Institute for Industrial Training (SUIT) – Kerala, Kazhakkuttom

SUIT was started in 1999 at Kazhakkuttom, Thiruvananthapuram, to update the skills and knowledge of instructional staff and others, in pace with technical developments. The activities of this Institute are as follows:

Achievements of the department include acquisition of land for West Eleri ITI, the provision of nutritious food to around 32,000 trainees in 104 Government ITIs, and the construction of new buildings at ITI Venganoor,

Attingal, Perumati, Madaru, and Women's ITI Kannur.

### 7. Kerala Academy for Skills Excellence (KASE)

The Kerala Academy for Skills Excellence (KASE) stands as a beacon of skill development and empowerment in Kerala, established with the vision of nurturing talent and bridging the gap between education and industry. KASE has emerged as a pioneering institution in fostering skill development initiatives. By aligning its initiatives with the evolving needs of the industry, KASE has become a catalyst for socio-economic growth, transforming lives, and propelling Kerala towards a brighter future.



KASE has been set up to act as the apex entity to initiate, regulate and co-ordinate focused skill development for different industrial domains. KASE is also designated as the State Skill Development Mission (SSDM) to function as the nodal body for the convergence of all skill training initiatives of the State. The main objectives of SSDM are to promote, establish, setup, monitor, govern and regulate institutions and academies for skills excellence for development.

**Table 7.3.6** Details of SUIIT training programmes 2023-24

Course Title	No. of Training	No. of officials
Orientation Training for ACD Instructors	1	168
Leap Training For ACD Instructors/Employability Skill Instructor	1	168
SUIIT off-campus training programme	2	370
DGT field institute training	4	120
IMG training with the support of SUIIT Kerala	16	474
Others	3	9
<b>Total</b>	<b>27</b>	<b>1309</b>

Source: SUIIT, Thiruvananthapuram

### Skill Convergence in Kerala

Various departments have their own skilling programmes, which inadvertently result in duplication. This emphasises the need for convergence across departments under a mission at the State level. KASE guides, coordinates, monitors, and evaluates skilling initiatives, and brings all skill development activities of the State under a single umbrella.

A brief overview of major initiatives of KASE is as follows;

#### District-Level Skill Development and Community Engagement

Recognising the unique demands of different regions, Kerala has adopted a decentralised approach to skill development. Through the formation of District Skill Committees under the chairmanship of District Collectors, KASE empowers Local Governments to identify skill requirements within their districts. These committees gather insights on local demands and evaluate proposals from district-based agencies to bridge specific skill gaps.

### Digital Platform Development

To streamline the process of data collection, assessment, and communication, KASE is developing a digital platform that will serve as a centralised repository of information. This platform will enable District Skill Committees and District Skill Development Centres to effectively coordinate with one another, ensuring transparency, accountability, and quick access to information.

### Ensuring quality in curriculum and trainer standards

Quality assurance in training programmes is paramount to ensure that Kerala's workforce meets both national and international standards. KASE has adopted a systematic approach to maintaining quality, starting with curriculum design and extending to trainer qualifications.

To coordinate quality control measures, KASE is in the process of forming a State Quality Cell. This cell will function as a central body responsible for monitoring quality standards across all skill development programmes in Kerala, thereby reinforcing the State's commitment to excellence in skill training.

Below are the key activities for the year 2023-24 at three levels, namely, Skill Development Mission, Skill Secretariat, and Skill Training Agency.

### District Skill Development Centres

District Skill Development Centres (DSDCs), formerly known as Kaushal Kendras, are rural skill hubs specifically focused on youth in rural areas. The District Skill Development Centre (DSDC) aims to foster skill development opportunities for diverse segments of the population, including those hailing from rural backgrounds.

KASE envisages District Skill Development Centres as an arm of District Skill Committees. DSDC shall serve as the single window for all information on skill/ vocational training in addition to its function as a skill delivery centre. The DSDCs are envisaged to provide comprehensive information to all stakeholders and beneficiary groups. At present, six District Skill Development Centres are functioning in Thiruvananthapuram, Kollam, Palakkad, Kozhikode, Kasaragod, and Pathanamthitta.

Key achievements during the year 2023-24 include the inauguration of DSDC in Thiruvananthapuram, the signing of MoUs with establishments such as Adani Skill Development Corporation, Unnathi Foundation for conducting the UNXT programme, and Edunet Foundation in association with EY for delivering courses. Similarly, various training courses such as Lasher and Diploma in Warehouse Management, Communicative English courses, and Digital Literacy course were also conducted.

### **Skill Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP)**

SANKALP, an initiative of the Ministry of Skill Development and Entrepreneurship (MSDE), is aided by the World Bank, with the Central share of the total fund allocation being 60 per cent, and the State share, 40 per cent.. The scheme was launched on January 19, 2018. It was initially set to end by March 2024, but has been extended until March 31, 2025.

### **KASE is the Single Nodal Agency for implementing SANKALP in the State.**

SANKALP aims to address the on-going challenges including the universalisation of the National Skills Qualification framework (NSQF), standardisation of certification and, assessments, bringing about convergence, infusing quality in skill development programmes, and making them market relevant while ensuring private participation, specifically in the context of short-term training.

*District Skill Committee:* As part of the SANKALP Scheme, District Skill Committees have been formed in all the districts under the Chairmanship of District Collector. District Skill Committees work as a group to plan, coordinate, and monitor the various Skill development initiatives in the district.

*District Skill Development Plan:* Training projects are progressing in accordance with the District Skill Development Plan prepared in association with the District Skill Committees. District Skill Development Plans submitted by the districts were evaluated using the Project Evaluation Matrix developed by KASE. Targets for districts are to train 1,792 candidates in the first phase and 1,295 candidates in the second.

*Revival of the Traditional Sector:* Training for the revival of Balaramapuram handloom has been completed in Trivandrum, and all 60 women candidates have been as permanent workers in a registered society, on daily wages. Training for Periyar Pottery workers were conducted at the Integrated Rural Technology Centre, Palakkad. The training for the weavers in Cannanore Home Furnishing (Kannur) through Indian Institute for Handloom Technology, Kannur has also been completed. Projects for the revival of Thazhava Screw Pine Mats, cardamom cultivation, terracotta products processing, value addition of Non-Timber Forest Products, and Marayur Jaggery, are also in pipeline.

*Short-Term Training under the Inclusion Component:* Based on the District Skill Development Plans submitted, skill training programmes were organised for candidates from marginalised communities. Under the inclusion component of the scheme, 675 candidates have been trained, 451 candidates have been certified, and 43 candidates are reported to be placed. Other skill training initiatives are on-going.

*Job Fairs and apprenticeship promotion activities:* Job Fairs were conducted in all the districts through the Kerala State Job Portal. The Job Fairs aimed to provide placement to the general public and to candidates who have completed short-term skill training programmes. A total of 3,233 candidates were offered placements through these fairs. Apprenticeship awareness programmes were also conducted across the State along with the job fairs.

*Skill Summit/Training Service Provider's Summit (TSP Summit):* As part of expanding the Skill Convergence activities in the State, SSDM conducted the first Skill Summit for industry personnel and training partners, with over 200 participants, in Trivandrum. The summit was inaugurated by the Honorable Minister for Labour and Skills, Government of Kerala. Following this, a second summit was held in the district of Ernakulam, with 179 Training Service Providers in attendance. Summits are also planned for the remaining 12 districts.

### **International Skill Training & Employability Programme (iSTEP)**

The international outreach initiative, iSTEP, is a system envisaged for the faster, simpler, and more efficient processing required for setting up of Centres of Excellence (CoE) in various sectors. Models under iSTEP are as follows:

- Centres of Excellence (CoE)
- Accreditation of Skill Training Courses

The various centre of excellence functioning under KASE are detailed below:

#### **Centres of Excellences (CoEs)**

##### **Nursing Institute for Career Enhancement (NICE)**

Nursing Institute for Career Enhancement (NICE), the Centre of Excellence in Nursing, is the first-of-its-kind initiative in India which provides world-class training facilities for the enhancement of the employable skills of nurses. KASE partnered with M/s. Trivandrum Speciality Hospitals (NMC Healthcare Group, UAE) to set up this Centre of Excellence in Nursing at the KINFRA International Apparel Park, Thiruvananthapuram. The Centre has been operational since July 2, 2015 and offers a varied range of courses such as Advanced Nursing Excellence Programme, Fresher's Nursing Excellence Programme, OET/IELTS, Nursing Excellence Programme, etc.

##### **Enlighten Skill Programme for Oil and Rig (ESPOIR)**

KASE has partnered with Eram Engineering WLL, Qatar to set up the Centre of Excellence in Oil and Rig at Inkel Tower, Angamali, Kochi to equip interested youth with requisite skills needed for this industry. The programme offers courses in mechanical, instrumentation and electrical related trades such as Industrial Electrician, Instrument Technician, Pipe Fabricator, Certified Welders, Instrument Fitter, Certified Scaffolders, Supervisors, etc. ESPOIR focuses on imparting practical skills and hands-on training through its well-equipped labs and workshops which meet international standards. The Institute is also actively involved in the upliftment of the students belonging to Scheduled Caste community.

##### **Indian Institute of Infrastructure & Construction (IIIC)**

Indian Institute of Infrastructure and Construction (IIIC) is the Centre of Excellence (CoE) in the infrastructure and construction domain, which

is intended to provide employable skills to personnel in all cadres of the infrastructure and construction sector. This includes lower level staff to supervisory and managerial personnel, to make them employable in the national and international market. The Institute also acts as an intermediary to connect skilled personnel that have successfully completed the courses of IIIC with probable employers.

##### **Establishing Multi-Language Learning Institute at Angamaly in partnership with ODEPC**

KASE, in partnership with Overseas Development and Employment Promotion Consultants Ltd. (ODEPC), has established the Multi-Language Learning Institute at INKEL Towers, Angamaly, for conducting IELTS/OET courses. The courses provided by the institute aim to provide finishing skills to qualified nurses, to make them readily employable in the international market, and to be an intermediary that connects nurses that have successfully completed the courses with probable employers.

##### **Centre of Excellence in Renewable Energy**

KASE, in association with ANERT, has established the Centre of Excellence in Capacity Building in Renewable Energy projects, as well as green jobs for imparting skill development training and quality control in Kerala. The Centre of Excellence has been established at the Headquarters of ANERT, at Thiruvananthapuram, with various extension centres and technology centres across the State.

##### **Centre of Excellence in Life Science**

KASE, in association with Noorul Islam Institute of Medical Science (NIMS) & Research Foundation, has established a Centre of Excellence in the life science sector. The Centre conducts short-term, job-oriented skill training programmes in molecular diagnostic techniques. The Centre aims to train students in state-of-the-art technology, with skills to make them employable within the country and abroad in the application areas of biotechnology, molecular diagnostics, and healthcare, and to promote entrepreneurship and growth of biotechnology in the state of Kerala.

##### **OET Examination Centre**

KASE, in association with Overseas Development and Employment Promotion Consultants Ltd. (ODEPC), has established an Occupational

English Test centre at INKEL Towers, Angamaly for healthcare professionals. The centre assesses the language communication skills of healthcare professionals who wish to register and practice in an English-speaking environment.

### Accreditation of Skill Training Institutes

Reputed skill training institutions can associate with KASE for accreditation, to enhance their reach and acceptance in attracting suitable candidates. The training and placement details through Centres of Excellence and accredited institutes under- iSTEP are enumerated in **Table 7.3.7**. In the last five years, 7,749 candidates have been placed through the iSTEP initiative.

### Skill Development Programmes in association with other Departments

KASE, in association with Scheduled Caste Development Department and the Women and Child Development Department, has signed a Memorandum of Understanding for conducting skill training programme for SC youth and women

beneficiaries. A total of 154 students have been trained under this scheme and 20 students have been placed. The training and placement of the remaining students are in progress.

### Women Empowerment Programme

Under the Women Empowerment Scheme, KASE has successfully conducted skill training programmes for women of various categories with a view to providing better earning opportunities and also to enhance their livelihoods. The programmes were implemented through KASE Centres of Excellence and also through various other skilling institutions. KASE has trained 666 students and successfully placed 72 students under the said training programme from 2021 to 2023.

As the Approach Paper of the 14th FYP notes,skilling is crucial to modern employment, and Kerala has the potential to be India's skilled-labour hub. The State's skilled professional workers have been the preferred choice of employers in India and other parts of the world.

**Table 7.3.7** Placement details of various institutions under the KASE

Placement details under iSTEP	Year				
	2020-21	2021-22	2022-23	2023-24	2024-25
CoEs / Projects					
NICE	107	86	8	11	33
ESPOIR	122	168	93	192	17
IIIC	28	132	142	62	58
Establishing Multi-Language Learning Institute at Angamaly in partnership with ODEPC	8	8	5	21	9
Centre of Excellence in Renewable Energy	0	0	0	0	0
Centre of Excellence in Life Science	0	0	0	0	0
OET Examination Centre	0	0	0	0	0
Accreditation of Skill Training Institutes					
SMRI	5	0	7	2	0
Blitz Academy	103	0	0	0	0
Other Department Projects					
SCDD Project	0	0	0	20	0
Women Empowerment Program	0	50	22	0	0
Others (including State Job Portal, PMKVY & SANKALP)	1028	4858	323	21	0
<b>Total</b>	<b>1401</b>	<b>5302</b>	<b>600</b>	<b>329</b>	<b>117</b>

Source: Kerala Academy for Skill Excellence (KASE), Kerala

The Government of Kerala recognises that skill training and development play a crucial role in promoting economic growth. A relative abundance of educated and skilled workers, a history of entrepreneurship, and exposure to the wider world are our strengths. As global manufacturing becomes more automated and knowledge-intensive, Kerala's strengths with respect to school and higher education make it better equipped than most other States to deal with the new challenge.

CHAPTER

08

INITIATIVES FOR SOCIAL  
INCLUSION



# INITIATIVES FOR SOCIAL INCLUSION

## 8.1 GENDER AND DEVELOPMENT

Women's empowerment is a prerequisite for human and sustainable development and the achievement of the United Nations Sustainable Development Goals. Achieving gender equality and empowering all women and girls is Goal 5 (SDG 5) of the United Nations (UN) Sustainable Development Goals. The UN recognises ending discrimination against women as not only a basic human right, but as a necessary condition for a sustainable future. It is very evident that significant progress toward gender equality and women's empowerment has happened in the past four decades. However, as a global community, we are still far away from being a gender-equal world.

Gender Development Index (GDI) and Gender Empowerment Measure (GEM), developed by the United Nations Development Programme, are commonly used gender-related indices. The GDI addresses basic capabilities and living standards. It uses the same variables as the Human Development Index (HDI), but focuses on the inequality between men and women, as well as on the average achievement of all people taken together. India's HDI score was 0.644 in 2022, placing the country 134 out of 193 countries and territories. Although much debate has arisen surrounding the reliability and usefulness of the Gender Development Index (GDI) in making

adequate comparisons between different countries, it indicates the need to promote gender-sensitivity and gender sensitive development. Countries are divided into five groups by absolute deviation from gender parity in HDI values, and India's position in the Gender Development Index group is 5. This implies low equality in HDI achievements between women and men (Human Development Report 2023/2024).

India is ranked 129th in terms of gender parity among 146 countries in the World Economic Forum's Global Gender Gap Report 2024. Further, the Gender Inequality Index (GII) also offers a picture of gender disparities in India in sectors such as health, empowerment, and the labour market. A low GII value indicates low inequality between women and men, and vice-versa.

### **Kerala Stands Out Among the States of India in Terms of Several Indicators of Women's Development.**

Kerala took a historic step in 2010 by implementing legislation to reserve 50 per cent of seats for women in Local Government. In 2021, there were 602 women who headed Local Self-Governments (LSGs) out of a total of 1,200 LSGs



**Table 8.1.1** Percentage of literacy at various levels in adults (age 15-49), in India and Kerala

Rural/Urban	Kerala			India		
	Urban	Rural	Total	Urban	Rural	Total
Male literacy	99.2	97.4	98.2	89.6	81.5	84.4
Female literacy	99.1	97.5	98.3	83.0	65.9	71.5
Male who ever used Internet	78.3	74.2	76.1	72.5	48.7	57.1
Female who ever used Internet	64.9	57.5	61.1	51.8	24.6	33.3

Source: NFHS-5, 2019-20

(Department of Panchayat, Kerala Government 2021). Kudumbashree Mission, one of the largest women empowerment programmes in India has also played a key role in women's development. Women's participation in LSGs needs to be seen also as a reflection of Kudumbrashree's constant involvement in empowering lakhs of women through training, entrepreneurship support, and education. Social spending in Kerala is still sensitive to areas like gender and development. The Government of Kerala and its various agencies play a significant role in paving the way towards a gender-equal society.

As per the 2011 Census, the ratio of women to men in Kerala is 1,084, which is high compared to the national figure of 940. Women constitute 52 per cent of the total population in Kerala. Children aged 0-14 years represent 23.4 per cent of the total population in Kerala, 48.9 per cent of whom are girls. In contrast to the national average of 11 per cent, 22 per cent of all households in Kerala are female-headed. In recent years, there has been an increase in women's employment in Departments such as Police and Excise. In 2024, 239 women police personnel were recruited. In the Excise Department, 593 women were inducted for patrolling in 2024. The total beat officers in the forest department is 3,126, of which 756 are women. After the pandemic, a substantial number of health workers have been recruited, a large share of which are women.

### Education and Gender Parity

The socio-cultural development of the State can be attributed to its high female literacy and education, among other factors. Kerala has the highest female literacy rate among Indian States at 92 per cent and the gender gap in literacy is very small (Census, 2011). It is also seen that the gender gap has narrowed during these six decades in Kerala

(for more details see Chapter 6 of this Review). As per NFHS-5, 2019-20 statistics, the literacy rate of women (age 15-49) in Kerala has further increased to 97.4 per cent. However, women lag behind men in terms of other levels of literacy such as computer literacy and basic internet knowledge. This is prominent in rural areas. The gender as well as rural-urban differences in different levels of literacy is given in **Table 8.1.1**.

In the case of general education, enrolment is universal at the primary-level, and gender parity has been achieved. Girl students constitute 50 per cent of the total student enrolment in schools. Girls outnumbered boys in terms of enrolment in higher secondary education at 50.8 per cent. At the tertiary-level as well, the enrolment of girls is higher than boys. However, the percentage of girls in technical schools is very low, at 6.4 per cent. Details are given in **Table 8.1.2**.

The enrolment of girls in undergraduate and post-graduate courses in Arts and Science colleges in Kerala was 65.3 percent in 2023-24. Out of the total annual intake of students in engineering colleges and polytechnics, girls constitute 49.0 per cent in engineering colleges and 24.4 per cent in polytechnics. The enrolment of girl students in agricultural courses under Kerala Agricultural University is 77.4 per cent. More than 60 per cent of students in Kerala Veterinary and Animal Sciences University in 2023-24 were girls. Similarly, more than 70 percent of students at the Kerala University of Fisheries and Ocean Studies (KUFOS) are girls. **Table 8.1.3**

**Table 8.1.2** Enrolment of Girls at Different Levels, Kerala 2024-25

Area	Total	Girls	Percentage
LP	12,50,184	6,15,578	49.2
UP	11,30,853	5,56,917	49.2
HS	12,62,605	6,17,199	48.9
*HSS	3,84,557	1,95,358	50.8
VHSS	27,587	10,575	38.3
Technical High schools	7,832	503	6.4

\*Data pertains to 2023-24

Source: DGE, DVHSE, DTE, DHSE

**Table 8.1.3** Enrolment of Girls at Different Levels, Kerala 2023-24

Category	Girls	Boys	Total	Percentage
UG and PG (Arts and Science)	2,30,929	1,22,588	3,53,517	65.3
Poly Technic*	3,042	9,419	12,461	24.4
B.Tech and M.Tech*	3,841	3,994	7,835	49.0
UG and PG (KAU)	675	197	872	77.4
UG and PG (KUFOS)	342	127	469	72.9
UG and PG (KVASU)	340	159	499	68.0
Health and Allied Sciences*	21,832	5,356	27,188	80.3

\* Annual intake details

Source: DTE, DCE, KAU, KUFOS, KVASU, KUHS

Girls constitute a large majority of students in medical science-related courses. Female annual intake in medical education shows that more than 80 percent of female students in medical education in Kerala are girls. (**Table 8.1.4**)

**Table 8.1.4** Proportion of Annual Intake of Girls in Medical Education, Kerala 2023-24 as on August 2024

Name of Branch	Male	Female	Total	Female percentage
Modern Medicine	2,048	3,908	5,956	66
Dental	347	1,810	2,157	84
Homeo Medicine	44	346	390	89
Ayurveda Medicine	148	915	1,063	86
Unani Medicine	16	39	55	71
Sidha Medicine	4	19	23	83

Source: Kerala University of Health Science (KUHS)

### Health Status of Women in Kerala

Kerala has achieved a high status in terms of most indicators related to women's health such as maternal mortality, life expectancy, and sex ratio. Life Expectancy at birth of women in Kerala is at 77.9 years, the highest in India, and much higher than that for women in India as a whole (70.7 years). The high health status of women in Kerala compared to women in other parts of the country is a reflection of the overall social development of the State. As per the figures released by the Registrar General of India, all demographic indicators are favourable to women in Kerala (**Table 8.1.5**).

Low maternal mortality rate and high female life expectancy in Kerala are attributed to the extensive public provisioning for maternal health care in the State. As per the SRS Statistical Report 2018, the total fertility rate of women in Kerala in the age group of 15-49 who are illiterate is 1.8, and that of literate women is 1.7. At the national level, it is 3 and 2.1, respectively. The universal access to health care institutions helps to ensure maternal care, as well as institutional delivery, to all. For more details of maternal care indicators of Kerala, see **Table 8.1.6**. These achievements are the results of decades-long efforts of the Government of Kerala since its formation, in providing public health care.

The high literacy, educational status, and favourable health indicators are however not reflected in the lifestyle health indicators. In terms

**Table 8.1.5** Health Status of Women in India and Kerala

Sl. No.	Indicator		Kerala	India
1	Infant Mortality Rate #	Total	6.0	30.0
		Male	6.0	30.0
		Female	7.0	31.0
2	Mean age at effective marriage of female *	Below 18	17.0	16.8
		18-20	19.1	19.2
		Above 21	24.6	24.0
		All age	23.2	22.3
3	Maternal Mortality Rate**		43.0	113.0
4	Expectancy of Life at Birth***	Total	75.3	69.4
		Male	72.5	68.2
		Female	77.9	70.7

\*SRS Statistical Report 2018

\*\*Special Bulletin on MMR 2016-18

\*\*\*SRS Life Table 2014-18

Source: # SRS bulletin 2021 October

**Table 8.1.6** Indicators of Maternal Care

Indicators	India			Kerala		
	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-20)	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-20)
Adolescent pregnancy	16.0	7.9	6.8	5.8	3.0	2.4
Mothers with Antenatal Check-ups	43.9	58.6	70.0	91.9	95.1	93.6
Institutional Births (per cent)	38.7	78.9	88.6	99.3	99.8	99.8
Mother and Child Protection (MCP) card holder (per cent)	NA	89.3	95.9	NA	84.2	91.3
Total Fertility Rate (children per women)	2.7	2.2	2.0	1.9	1.6	1.8
Full Antenatal Care (per cent)	11.6	21.0	NA	66.7	61.2	NA
Mothers received post natal care (per cent)	34.6	62.4	78.0	84.6	88.7	93.3
Delivery by caesarean (per cent)	8.5	17.2	21.5	30.1	35.8	38.9
Anaemic adolescent (per cent)	55.3	53.1	57.0	32.8	34.3	36.3
Experienced violence during pregnancy (per cent)	NA	3.9	3.1	NA	1.2	0.5

Source: National Family Health Survey

of Body Mass Index, obesity, and anaemia, women in Kerala do not fare as well, as per the reports of NFHS 5, 2019-20. In Kerala, as well as India, the percentage of women with Body Mass Index below normal is high compared to their male counterparts, even though Kerala women fare better in comparison with the all India average. In the case of obesity, the percentage of women in

Kerala is higher than that of India, as well as that of their male counterparts in the State. In the case of anaemia, the percentage has increased from 2015-16 to 2019-20, though Kerala's situation is better than the all India average (**Appendix 8.1.1**). Adolescent pregnancy is also very low in Kerala. As the proportion of the ageing population in Kerala is high, non-communicable diseases such as

hypertension, diabetes, and cardiovascular diseases are also on the rise. The lack of physical activities creates a number of health issues such as obesity and a high prevalence of non-communicable diseases among women. According to NFHS-5 statistics, 24.8 per cent of women in Kerala have diabetes mellitus and 30.9 per cent have hypertension.

As per NFHS-5, anaemia among women and children in Kerala has also increased as compared to NFHS-4. This is in spite of various schemes such as Supplementary Nutrition Programme, Poshan Abhiyaan, and First 1,000 days implemented by the Women and Child Department (WCD) to improve the nutritional status of women and children. In addition to this, the State Government has initiated a new programme providing egg in two days per week and milk in two days per week in all Anganwadi Centres, in 2022-23. To address the issue of malnutrition, health and nutrition platforms must be integrated at the community-level, along with awareness creation among the public. The VIVA Programme to address anaemia among women was launched on January 12, 2021. The programme is implemented by the Health department, in collaboration with LSGs and WCD.

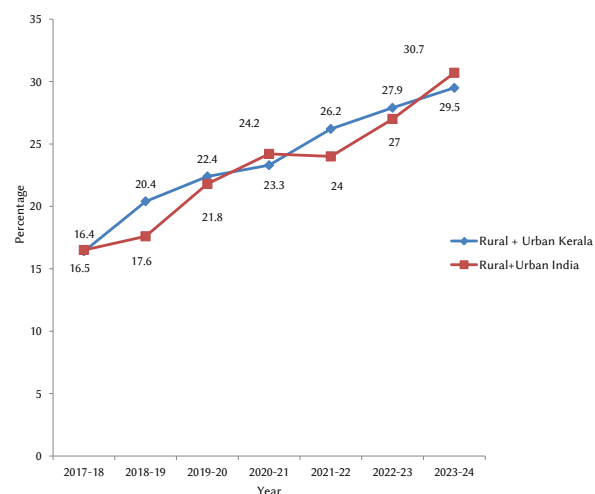
With regard to family planning, the knowledge of contraception is almost universal in Kerala. The availability of contraception within and outside marriage is a concern. Male participation in contraceptive methods is negligible as per NFHS 5. Data indicates that the female sterilisation rate in Kerala is 46.6 per cent, as opposed to the male rate of 0.1 per cent. At the national-level, it is 37.9 per cent among females and 0.3 per cent among males.

### Participation in the Economy

Though in terms of health, education, and many other development indicators, the women of Kerala fare better than their male counterparts, there is room for improvement in their participation in the economic domain. During the previous rounds of NSSO, there were wide gaps between men and women both in terms of the Labour Force Participation Rates (LFPR) and Worker Population Ratio (WPR). The gender paradoxes in contemporary Kerala society are particularly reflected in the low labour participation rate and a disproportionately high unemployment rate of women. Labour force participation rates of women in urban areas have

always been much higher in Kerala, reflecting the advantages of a literate State. The recent Periodic Labour Force Surveys (PLFS) shows that gap between men and women has been reduced to some extent, in this regard. Likewise, in 2021-22, they have reached a better position when compared to their counterparts in India (Appendix 8.1.2). As per PLFS 2018-19, both male and female LFPR and WPR had increased slightly when compared to their counterparts at national-level. This has again reduced in 2020-21, with the impact of COVID-19 pandemic on the economy. Female WPR in Kerala has increased from 20.4 per cent in 2018-19 to 29.5 per cent in 2023-24 in all age groups. In the productive age group of 15-59 years, the WPR of women in Kerala is 39.6 while the all India average is 43.7, in 2023-24. Women's participation in Labour Force in Kerala and India (All Ages) is depicted in Figure 8.1.1

**Figure 8.1.1** Women's participation in Labour Force in Kerala and India (All Ages)



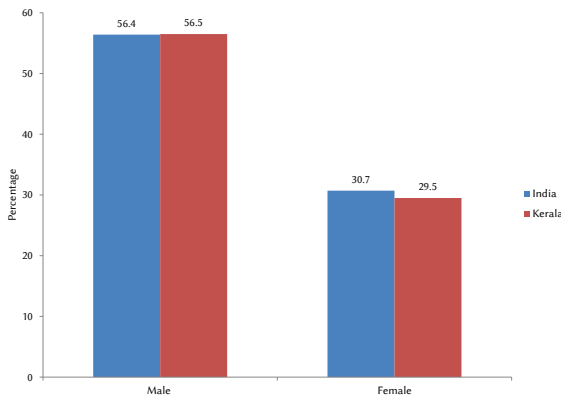
Source: Periodic Labour Force Survey 2023-24

WPR in India and Kerala is brought out in Figure 8.1.2. Though both male and female WPRs show upward trends, the increase was taken up by self-employment and casual labour, especially in rural areas. The detailed discussion on LFPR and WPR is given in Labour and Labour Welfare section in Chapter 7 of this Review

### Inequality in Wage Rates

In terms of wages and remuneration, significant gender inequality exists in the State, as well as at national-level. The prevalence of inequality in the wage rates among men and women in

**Figure 8.1.2** Worker Population ratio of Males and Females in Kerala and India (All Ages)



Source: Periodic Labour Force Survey 2023-24

salaried jobs, self-employment, and casual work has been detailed in the section on Labour and Labour Welfare in Chapter 7 of this Review. The gender disparity in wage rate is prevalent not only in informal or unorganised sector, but also in regular/salaried employment, as shown in **Appendix 8.1.3**. The gender difference in earnings is more prevalent in casual labour work than in salaried jobs and self-employment. Though women and men in Kerala are better paid in casual work than their counterparts in India, the gender difference in wage rates persists in Kerala as well (**Table 8.1.7**).

The economic empowerment of women is attained when they become an integral part of labour force and are gainfully employed without having to bear the full burden of household and care responsibilities. Recognising the value of unpaid domestic labour and care work done by women in homes is a significant step towards engendering development and rethinking women’s participation in production. The 14th Five-Year Plan supports measures to reduce the burden of household drudgery on women.

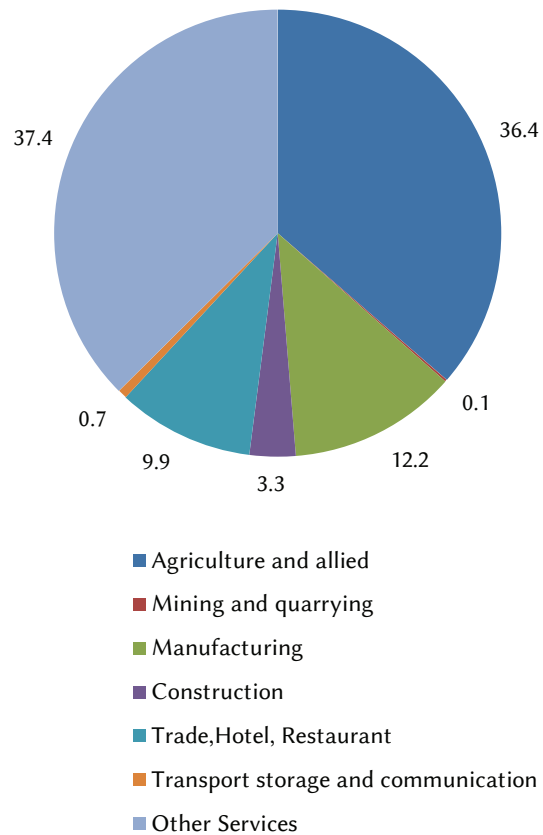
### Industrial Distribution of Women Workers

As per PLFS 2023-24, the proportion of women in manufacturing is high in Kerala, compared to all India (**Figure 8.1.3**). This may be because large numbers of women are engaged in low productivity, labour intensive, traditional industries such as handloom, khadi, coir, and cashew. The concentration of women in low remunerative industries is clear from the membership of women in different Welfare Fund Boards in Kerala.

### Status of Employment

The status of female employment given in **Table 8.1.8** shows that out of total employed women in Kerala, nearly half were in regular salaried employment, which is more than double that of the rest of India. It is also more than the share of self-employed women in Kerala. While “helper in household enterprise” occupied the majority of the female workforce in the rest of the country, in Kerala, this accounts for only 10.1 per cent. This points towards the better quality of employment that the State has been able to provide its female workforce. Kerala has a relatively good share of women regular salaried employees compared to all India-level in 2022-23 and in 2023-24. Kerala has a small share of women casual labourers compared to all India level.

**Figure 8.1.3** Industry-wise proportion of female workforce in Kerala in 2023-24



Source: PLFS 2023-24.

### Women in Organised Sector

In 2024, the proportion of women workers (43.9 per cent) in the organised sector in Kerala was low compared to that of men (56.1 per cent).

**Table 8.1.7** Gender Difference in Average Wage/Salary/Earnings per day from casual labour work other than public works

Period	Kerala/India	Rural		Urban	
		Male	Female	Male	Female
July-Sep-2019	Kerala	667.7	372.0	744.5	385.7
	India	297.3	185.0	375	243.4
Oct-Dec 2019	Kerala	721.4	395.6	736.5	369.4
	India	305.4	193.1	384.3	244.1
July-Sep 2021	Kerala	758.4	439.8	812.6	490.2
	India	381.0	260.7	450.4	317.4
Oct-Dec 2021	Kerala	824.5	452.0	821.0	412.1
	India	387.0	260.8	466.1	322.1
Jan- Mar 2023	Kerala	834.5	431.5	881.0	440.8
	India	413.2	280.2	506.7	343.0
April- June 2023	Kerala	845.6	418.9	903.3	493.5
	India	416.1	286.7	515.3	332.8
July- Sep 2023	Kerala	858.0	363.0	906.0	553.0
	India	423.0	289.0	520.0	345.0
Oct- Dec 2023	Kerala	855.0	434.0	914.0	508.0
	India	435.0	287.0	530.0	348.0
Jan- Mar 2024	Kerala	889.0	440.0	914.0	540.0
	India	437.0	286.0	529.0	358.0
April- June 2024	Kerala	884.0	454.0	932.0	505.0
	India	444.0	299.0	537.0	364.0

Source: Periodic Labour Force Survey 2023-24, CWS

**Table 8.1.8** Percentage distribution of working women in India and Kerala (CWS)

Employment Category		2022-23		2023-24	
		India	Kerala	India	Kerala
All self employed	Own Account Worker, Employer	64.3	35.9	66.6	33.9
	Helper in household enterprises				
Regular salaried		18.6	47.4	18.5	49.7
Casual labour		17.1	16.7	14.9	16.4

Source: PLFS

However, the total number of women workers in the organised sector has increased during the last ten years (**Appendix 8.1.4**). It can be seen that out of the total women workers (5,50,888) in the organised sector, a majority (64.7 per cent) are engaged in the private sector (**Table 8.1.9**).

An examination of sector-wise percentage shares of employment statistics in the organised sector shows that females are in a disadvantaged position compared to their male counterparts in the public sector. Women's employment in the public sector is 1.9 lakh, which accounts for 34.8 per cent in 2024. The situation is better in the case of the private sector, where 3.5 lakh women (51.1 per cent) are employed.

The employment of women in the organised sector has been growing over the last 6 years, both in public and private sectors (**Figure 8.1.4**). The increase in private sector employment is more than that of the public sector, and women outnumbered men in the private sector in 2023 and 2024.

An examination of the distribution of public sector employment of women in different types of Government organisations as shown in **Table 8.1.10** reveals that the proportion of women was high in the State Government in 2022-23 and in 2023-24.

The District-wise employment of women in different type of Government organisations is given in **Appendix 8.1.5**. The number and proportion of women workers in the public sector are highest in Kollam, followed by Wayanad. The highest number of women workers in State Government are in Thiruvananthapuram, followed by Thrissur. In the case of women in Central Government employment, Thiruvananthapuram followed by Ernakulam, stand ahead.

### Skill and Entrepreneurship Development

Kerala State Industrial Department, Kudumbashree, Women Development Corporation, and several other Government Departments conduct various programmes including Entrepreneurship Development Programmes (EDPs), to cater to the needs of potential women entrepreneurs who may not have adequate educational background and skills. There are also several other schemes of the Governments at Central and State-levels, which provide assistance to set up training-cum-income generating activities for needy women, to make them economically independent. Some banks and financial institutions like NABARD also implemented special schemes for women entrepreneurs. In addition to the special schemes for women entrepreneurs, various Government schemes such as Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), National Rural

**Table 8.1.9** Employment in the Organised Sector in Kerala, in number and in per cent

Year	Public Sector		Private Sector		Total	
	Women	Total	Women	Total	Women	Total
2019	1,93,807	5,60,619	3,42,877	6,86,881	5,36,684	12,47,500
Percentage to the total	34.6	100	49.9	100	43.0	100
2020	1,93,224	5,54,919	3,68,153	6,99,447	5,61,377	12,54,366
Percentage to the total	34.8	100	52.6	100	44.7	100
2021	1,94,080	5,56,634	3,49,978	6,91,134	5,44,058	12,47,768
Percentage to the total	34.9	100	50.6	100	43.6	100
2022	1,94,191	5,56,933	3,51,822	6,93,146	5,46,013	12,50,079
Percentage to the total	34.9	100	50.7	100	43.7	100
2023	1,94,323	5,57,495	3,54,098	6,95,293	5,48,421	12,52,788
Percentage to the total	34.9	100	50.9	100	43.8	100
2024	1,94,473	5,58,079	3,56,415	6,97,480	5,50,888	12,55,559
Percentage to the total	34.8	100	51.1	100	43.9	100

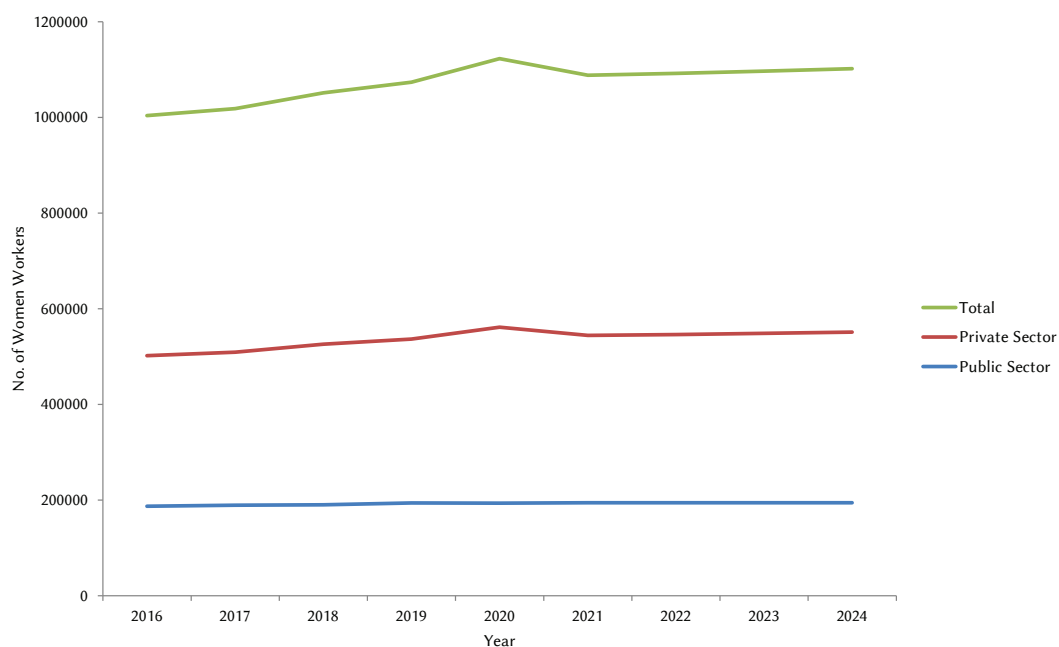
Source: Directorate of Employment

**Table 8.1.10** Distribution of Women Employees in Different Levels of Government in Kerala

Year	2023-24			2022-23		
	Type of Government	Total	Women	Percentage to the Total	Total	Women
Central Government	60,360	14,782	24.5	60,215	14,751	24.5
State Government	2,60,353	1,05,802	40.6	2,59,560	1,05,711	40.7
Central Quasi	80,893	25,424	31.4	80,812	25,407	31.4
State Quasi	1,31,173	39,191	29.9	1,31,614	39,182	29.8
LSGI	25,300	9,274	36.7	25,294	9,272	36.7
<b>Total</b>	<b>5,58,079</b>	<b>1,94,473</b>	<b>34.8</b>	<b>5,57,495</b>	<b>1,94,323</b>	<b>34.9</b>

Source: Directorate of Employment

**Figure 8.1.4** Growth of women’s employment in organised sector



Source: Directorate of Employment



### Box 8.1.1 Women Initiatives in STEM

Women in STEM (Science, Technology, Engineering, and Mathematics) are a critical area of focus globally, aiming to address the historical and systemic underrepresentation of women in these fields. Promoting gender diversity in STEM is essential not only for equity, but also for fostering innovation and progress. Equal access and participation in STEM for women and girls is key to the 2030 Agenda for Sustainable Development. A 2020 report by the World Bank on global trends in the participation of women and girls in STEM found that even though graduation rates are higher among women than men, women are less likely to undertake studies in STEM fields, particularly engineering, Information and Communication Technology (ICT) and physics.

Women-centric activities of the State have resulted in nudging more women to pursue careers and courses in STEM than in the past. This is evident from the fact that nearly 40 per cent of total students in higher education are women pursuing courses in Science and Technology. Even more interestingly, 66 per cent of the total students in science are girl students. The trend is also very impressive when we consider the fact that the proportion of girls in science are 62 per cent and 67 per cent, respectively, for UG and PG courses.

The following are the two initiatives by the Government in this regard

- **WESAT (Women Engineered Satellite)**

The satellite project, WESAT (Women Engineered Satellite) is a ground-breaking mission, initiated by the Space Club of LBS Institute of Technology for Women, Poojappura. It is the first satellite project led by an all-women institute in the Country. The purpose of WESAT is to measure the UV rays in space and on the earth's surface, and their influence on the warm temperatures and climate change phenomena in Kerala. This is an important area addressed by the Government of Kerala in view of the severe floods in 2018.

- **Scheme for Her Empowerment in Engineering education (SHE)**

To enable girl students to realise their potential, and support achievements in technical fields. Major programmes conducted under this initiative include THE LOCKDOWN TALK SERIES which consisted of 13 online sessions that covered a variety of topics, right from competitive exams to general topics like mental and physical health, and an inter-collegiate debate competition for female engineering students of the State, on whether the pandemic work culture is detrimental to women in tech.

Source: LBS, DTE

Livelihood Mission (NRLM), MSME schemes of Kudumbashree, and entrepreneur support scheme for small and micro enterprises of the Industries department also provide certain special incentives and concessions for women entrepreneurs. The Government has also made several relaxations for women to facilitate their participation in these schemes. Additional Skill Acquisition Programme (ASAP), Kerala Academy for Skills Excellence (KASE), Kerala Start Up Mission, and the Labour Department have various skilling programmes for women, to create a skilled labour force of women and to create more opportunities for women.

#### Women in IT Sector

The IT sector (Techno Park, Cyber Park, and Info Park) has shown an increase in employment in 2022-23 and 2023-24. The proportion of women employees remained constant in this period for Techno Park, Info Park, and Cyber Park. (Table 8.1.11). Kerala University of Digital Sciences, Innovation and Technology–Women Incubation, Start-ups and Entrepreneurship (WISE) scheme aims to empower woman through entrepreneurship. Start-up Mission (of Industries department) has given employment opportunities to 60,000 employees, of which 22,400 are women.

**Table 8.1.11** Employment generation in Information Technology (IT) sector in Kerala

IT Parks	2022-23			2023-24		
	Total	Women	Per cent	Total	Women	Per cent
Techno Park	72,000	32,400	45.0	75,000	33,750	45.0
Info Park	67,000	26,800	40.0	70,000	28,000	40.0
Cyber Park	2,078	832	40.0	2,200	900	40.0

Source: Techno Park, Info Park, Cyber Park

### Economic Participation of Women through Kudumbashree

Kudumbashree, a community organisation of Neighbourhood Groups (NHGs) of women set up in 1998 as the State Poverty Eradication Mission, functions under the Local Self Government Department. Women's empowerment is one of the stated goals of Kudumbashree. Initially focused on thrift and loan activities, the NHGs empower women through income generation activities and micro-credit, and engage in a range of activities such as health, nutrition, agriculture, and social development. Kudumbashree has played an important role in the financial inclusion of underprivileged women, and has enhanced their financial status through its thrift and credit programmes. Internal loans are given to the members from the pooled small regular savings (thrift) of neighbourhood groups. Though an NHG is autonomous and has a discretionary role in financial activities, each NHG is bound to act in accordance with Kudumbashree by-laws. Their activities are to be reported to the respective Area Development Societies (ADS) and Community Development Societies (CDS). The total thrift collected by NHGs in 2023-24 was more than Rs 707.5 crore, and the internal loan generated out of this thrift amount is more than three times the thrift amount (Table 8.1.12)

In 2018, Kudumbashree initiated the *Harsham* programme, realising the opportunities in the service sector in Kerala. *Harsham* aims at providing an intensive training of 15 days to women to equip them to provide service in the geriatric care sector. Training for caregivers was provided with the assistance of doctors, nurses, and hospital managements in selected hospitals in the State. *Harsham* team is all set to provide full-time professional care on an enterprise model to the elderly, provide daytime care, provide service as bystanders in hospitals, and extend service as

caretakers for the elderly in care homes. Training has been provided to 636 people, out of which 198 have already had the opportunity to serve on a monthly salary basis in various firms/care homes/houses.

The major income generation activities under Kudumbashree are Joint Liability Groups (JLGs) and enterprises. Women are aggregated into small farming groups called Joint Liability Groups, and are supported by Kudumbashree with training, financial assistance, convergence opportunities facilitated by District missions, and are provided exposure to a vast arena of livelihood ventures for income enhancement. Most of the women involved in collective farming activities have previous experience in farming as wage earners, workers, or helpers in their family farms, or as casual labour in agriculture. This project has transformed them from the status of labourer to women farmers. For sustainable financial growth and quality of life, the support extended apart from the above include linkage loans from nationalised banks at practically a zero-percentage interest with no collateral security, and the continuous and uninterrupted service of Community Resource Persons called Master Farmers throughout the year for all activities. As shown in Table 8.1.13, more than 4 lakh women farmers are actively involved in farming, cultivating more than 16,000 hectares of land in 2023-24.

### Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA)

In Kerala, over 90 per cent of the workers in MGNREGA are women. There has been an increase in person days of employment generated in 2023-24 compared to 2022-23, and the percentage of women person days generated through MGNREGA is 89.3 per cent (Table 8.1.14).

**Table 8.1.12** Financial Inclusion through Neighbourhood Groups

	2019-20	2020-21	2021-22	2022-23	2023-24
No of NHGs	2,87,723	2,94,436	3,06,551	3,17,226	3,17,526
No of NHG Members (in lakh)	45.1	45.8	45.9	48.0	48.1
Amount of Thrift (in crore)	443.7	406.7	514.0	532.0	707.5
No of Bank linked NHGs	73,522	2,50,018	52,837	93,080	63,579
Disbursement of bank loans(in crore)	2,670	4,070.3	3,436.0	6,550.8	4,634.0
Internal Loan (in crore)	1,778.4	1,323.1	2510.0	2,660.0	2,438.7

Source: Kudumbashree

**Table 8.1.13** Joint Liability Groups and Micro Enterprises under Kudumbashree

Year	Joint Liability Groups (JLGs) under Kudumbashree	
	2022-23	2023-24
No. of JLGs	74,783	87,323
No of JLG members	3,73,915	4,03,809
Total area cultivated (in Ha)	38,956.8	16,417.1
Area of Fallow land cultivated (in acre)	4,468.7	47
	Women Enterprises under Kudumbashree	
No of Enterprises	1,06,981*	1,41,407*
No. of Women Members	2,83,512	3,22,576

\*including Start-up Village Entrepreneurship Programme (SVEP)  
Source: Kudumbashree

In Women Mate deployment vis-a-vis Group-wise Task Naapi Payment System (GTNPS), 100 percent of selected mates are women. Annual training is given to all mates deployed in the State, and 56,579 mates were trained in 2023-24.

### Women Empowerment and Participation in Decision Making

Women need to play a proactive role in decision-making at home, as well as in the policy decisions of the State. This would ensure an integration of their needs and interests into the development process, and in developing a gender-just society. In Kerala, 72.7 percent women in the age group 30-39, and 56.5 percent in the age group 20-24 participate in decision-making process such as in healthcare, major household purchasing, and their visits to family or relatives. Further, 73.1 per cent of employed women are involved in everyday

decision-making, while it is 67.8 per cent among the women who are not employed. Decision making power also increases with education. Only 65 per cent of women with less than five years of schooling participate in decision making, whereas 70 per cent of women with 12 or more years of schooling are involved in decision making.

Of women aged 15-49 years, 76.5 per cent have bank accounts in their names. In the age group of 40-49, 61.4 per cent women, and in the age group of 30-39, 62.6 percent women have bank accounts, and are aware of micro-credit programmes. However, only 35.9 per cent women in the age group 15-19 know about micro-credit programmes. Also, 15.4 per cent of employed women and 7.8 per cent unemployed women have taken loans from micro-credit programmes. Further, 24.5 per cent women own a house individually or jointly

**Table 8.1.14** Status of MGNREGA Employment Provided in Kerala from 2018-19 to 2023-24

Year	No. of Active Job Cards (No. in Lakh)	No. of households got Job (No. in Lakh)	per cent of women person days generated	Person days generated (No.in Lakh)	Average wage rate per day per person in Rs	Average days of employment provided to a household	No. of H Hs completed 100 days of wage employment
2018-19	20.2	14.8	90.4	975.2	274.2	66.0	4,41,479
2019-20	20.0	14.4	89.8	802.3	274.3	55.7	2,51,141
2020-21	20.4	16.2	90.5	1023	294.6	63.2	4,70,410
2021-22	21.6	16.4	89.6	1059.7	294.9	64.4	5,12,823
2022-23	21.8	15.5	89.8	965.8	310.5	62.3	4,49,638
2023-24	21.6	15.2	89.3	994.6	331.8	67.7	5,69,108

Source: MGNREGA data base

with their partners among the women aged 15-49 years, whereas only 11.5 per cent women own land alone or jointly. Some 86.5 per cent of women in the age group 15-49 years have mobile phones.

Women's participation in the decision-making of the family is considered here in terms of three indicators as in NFHS, 2019-20- the percentage of women who usually participate in the household decisions, the percentage of women having a bank/savings account that is operated by them, and the percentage of women having a mobile phone that they themselves use. As shown in **Table 8.1.15**, women in Kerala actively participate in the decision-making process, more than their counterparts at the all India level.

The participation of women voters in the Lok Sabha elections has increased over the years from 46.6 per cent in the third Lok Sabha election in 1962, to 66 per cent in the election for the 16th Lok Sabha. The participation of women voters in Kerala is very high compared to the all-India average. However, in terms of women's representation in Parliament and Legislative Assembly, Kerala lags behind. In the 16th Lok Sabha, women constitute 12 per cent of the total Members of Parliament, while only one woman MP (5 per cent) could reach the Parliament from Kerala. Likewise, the representation of women in the State Assembly is also low.

However, the participation of women in Local-Self Governments is higher than the all-India average, and half the position in elected bodies of LSGs is reserved for women. It is remarkable that of the total number of persons elected to LSGs in the elections of 2020, 54 per cent were women. Women's representation in the apex bodies of social, political, and religious significance is negligible, despite there being adequate representation at the lower rungs of such institutions. It is appalling to note that women MLAs elected in Kerala have never exceeded 10 per cent of the composition of Kerala's Legislative Assembly, in its 64-year political history.

### Violence Against Women

Crimes against women continue to be a significant worry in Kerala, though the total number of crimes against women has decreased in the last two years. The Crime Record Bureau in Kerala gives data on crimes against women in the categories of rape, molestation, kidnapping and abduction, eve teasing, dowry death, cruelty by husband/relatives, other offences. The highest proportion of crimes committed are in the category of other offences (33 per cent) and cruelty by husband/relatives (24.1 per cent). Crimes against women in Kerala during the year 2016-2024 is shown in **Appendix 8.1.6**. According to the National Family Health Survey (NFHS-5) data for 2018-19, 9 per cent of women in Kerala have experienced physical violence, and 1 per cent have experienced sexual violence.

**Table 8.1.15** Women's Participation in Decision Making in India and Kerala

Indicators	India			Kerala				
	NFHS-5 (2019-20)		NFHS-4 (2015-16)	NFHS-5 (2019-20)		NFHS-4 (2015-16)		
	Urban	Rural	Total	Urban	Rural	Total	Total	
Currently married women who usually participate in household decisions (per cent).	91.0	87.7	88.7	84.0	93.6	94.6	94.0	92.1
Women having a bank/savings account that they themselves use (per cent)	80.9	77.4	78.6	53.0	78.9	78.2	78.5	70.6
Women having a mobile phone that they themselves use (per cent)	69.4	46.6	54.0	45.9	86.2	86.9	86.6	81.2

Source: NFHS

### **Programmes Initiated by the State Government to Address Gender-Based Violence**

The prevention and redressal of gender-based violence and rehabilitation of the survivors are important for women's development. This includes several departments like WCD (the nodal agency), and the police and judiciary critical for redressal. A large number of measures ranging from gender sensitisation, public awareness, community-based crime and vulnerability mapping, counselling to adolescent girls, self-defence training, pink police control rooms, shelter homes, short stay homes, one stop crisis centre, medical care for victims of violence, and so on are part of the programme.

### **Setting up of the Department of Women and Child Development**

One significant achievement of the Government was the setting up of the Department of Women and Child Development (WCD) in June 2017, bifurcating the Social Justice Department to give a more focussed thrust to activities aimed at social assistance and empowerment of women and children. It is an umbrella structure that includes the State Women's Commission, State Women's Development Corporation, State Commission for Protection of Child Rights, Gender Park, *Nirbhaya* project, women and children homes, ICDS, and Anganwadis. A large part of its working is concerned with running 44 welfare institutions for the care, protection, and rehabilitation of women and children (16 for women and 28 for children); NGOs and voluntary organisations also play a major role in providing institutional care to the vulnerable population. The Department of Women and Child works to ensure the holistic, physical, psychological, cognitive, and emotional development of women and children, and to build a gender-sensitive family and community.

*Nirbhaya* Policy: The Government of Kerala formulated the *Nirbhaya* Policy to combat sexual violence against women and children, and to safeguard them against trafficking for exploitation. The *Nirbhaya* cell has been formed under the Directorate of Women and Child Development. *Nirbhaya* programmes include shelters for sexually abused women, where they are provided life skill education to earn a living and gain employment. The *Nirbhaya* Cell has set up 23 child care institutions across the State, including, 14 Entry homes, 3 SOS homes, 1 Model Home, 1 Mental Health Home, 1 Thejomya After Care home, 1

Integrated care Centre, and 2 After care homes (for rehabilitation of CSA survivors who are above 18 years).

**One Stop Centres:** These centres by WCD provide support to women affected by violence in public and private places, within the family, community, and at the workplace. These Centres provide a range of integrated services including, transportation, medical assistance, and facilitation in dealing with the police and accessing legal aid, psychosocial counselling, and temporary shelter, if required. In 2019-20, Kerala became one of the first States in India to have One Stop Centres in all the districts. In 2023-24, 4,131 beneficiaries were supported through One Stop Centres.

**Aswasanidhi:** Realising the need to provide financial support to victims of sex crimes and heinous gender-based violence, the State Government has announced the establishment of a corpus fund of Rs 300 lakh in the State Budget of 2018-19 to provide interim relief to such victims. The Department of Women and Child Development maintains it for release to victims of sex crimes, domestic violence, acid attacks and heinous gender based violence. The expenditure incurred in 2023-24 was Rs 2 crore for 271 beneficiaries.

**Dheera:** An innovative project named *Dheera* is being implemented by the Women and Child Development Department, through the *Nirbhaya* Cell, with the help of the Police Department, in order to instil confidence and courage, improve physical and mental health, raise awareness on the elimination and prevention of violence, and provide self-defence training to girl children. In each district, 3 Panchayats are selected and 30 children from each Panchayat are given martial arts training in Karate, Taekwondo, and Kalaripayattu by master trainers. In 2023-24, 1260 beneficiaries benefitted.

**Dowry Prohibition:** A popular campaign to eradicate dowry was initiated by WCD in 2019-2020. A five year long action plan has been prepared aiming at the complete eradication of dowry through awareness creation and empowerment. The importance of women's education and economic independence are highlighted to ensure an umbrella approach. The initial phase of the campaign was a success mainly

because of the use of novel tools like memes to address the youth. The campaign will continue over the next 3 years. As per the amendment (July 13, 2021) of the Kerala Dowry Prohibition Rules, District Dowry Prohibition Officers (DDPOs) were appointed to create awareness about the ill effects of dowry among the public, and to manage the activities against dowry in all the districts.

**Dowry Complaints portal:** As part of the effective implementation of the Dowry Prohibition Act, the Department has launched a Dowry Complaints portal. Through this portal, individuals, the public, or organisations can submit a complaint regarding the receiving or payment of dowry.

**One Day Home:** With an objective to ensure safe accommodation for women who travel alone and reach the capital city for various purposes, a One Day Home was started in the 8th floor of the Kerala State Road Transport Corporation building in the heart of Thiruvananthapuram city, as a joint venture of the Thiruvananthapuram Municipal Corporation and the Women and Child Development Department. The main objective of the scheme is to provide a safe stay and food at a reasonable rate. The One Day Home started functioning from March 7, 2020. In 2023-24, Rs. 10,46,025 has been spent on the One Day Home project.

*Thejomaya* After Care Home has been established at Edakkattuvayal, Ernakulam. It is intended for POCSO survivors in Women and Children Homes who have completed their studies and are interested in various vocations. In 2020-21, a career assessment programme was done with the help of HLFPPPT (Hindustan Latex Family Planning Promotion Trust), and 42 residents were selected for various vocations including catering, tailoring, beautician, driving, etc. A psychological intervention programme/wellness programme was also conducted for 26 residents. In 2023-24, 16 children were placed at various institutions after vocational training.

**Home for Mental Health:** The Home for Mental Health is intended for POCSO survivors of Women and Children Homes with psychological problems. The Government has sanctioned Rs 39.9 lakh to start the Home for Mental Health in Thrissur and entrusted Gandhi Bhavan International Trust, an NGO, with it. The home started functioning in 2019-20.

**Kathorth:** This online consultation programme of WCD for women commenced in February 2021, and is aimed at resolving their various issues through counselling, legal aid, and police assistance. Complaints can be submitted through the website *kathorthu.wcd.kerala.gov.in*.

**SOS Model Home:** This model shelter home was started in Thiruvananthapuram for POCSO survivor girls below the age of 12 years.

### **Initiatives of WCD during 13th Five-Year Plan (2017-22)**

In Kerala, women not only outnumber men, but also outlive them. The marital status of women could influence the overall-level of support and economic security they receive from their family and community. Statistics shows that only 3.5 per cent of the total male population in Kerala are widowers, while the proportion of the widowed female population is 11.6 per cent. This gender gap adversely affects women in every sphere of her life. It is in this context that the Government of Kerala introduced a scheme, *Mangalya*, to encourage widow remarriage. The scheme imparts financial assistance for widows and divorced women to remarry. With an objective of providing a safe and better living environment to destitute and homeless widows, the *Abhayakiranam* scheme provides monthly financial assistance of Rs 1,000 to the close relatives of destitute widows who provide protection and shelter them. The majority of the families of widows live in deplorable conditions. The *Sabayabastham* scheme proposes to extend a helping hand to these families by way of providing financial assistance for self-employment. *Padavukal* is a scheme which gives educational assistance for professional courses to the children of widows whose annual income is less than Rs 3,00,000.

**Snehitha:** The Kudumbashree Gender Help Desk, *Snehitha*, provides services to women and children in distress. The services include short stay homes for women and children facing atrocities and violence, individual, adolescent and premarital counselling, awareness campaigns, legal and medical assistance, and rehabilitation through convergence with other departments and NGOs.

**VIVA Programme:** The VIVA Programme to address anaemia among women was launched on January 12, 2021 to study the problem of anaemia among women in Kerala and devise programmes

to eradicate anaemia. Steps have been taken to implement various programmes to spread the message through mass media to raise anaemia awareness in the public domain. The programme is implemented by the Health department in collaboration with LSGs and WCD.

**Bhoomika:** The Government implements a programme on medical and psychological care for the victims of gender-based violence/social abuse with the support of NRHM. *Bhoomika*, a gender-based violence management centre provides social and psychological support to the victims.

**Mithra Helpline (181):** This helpline was initiated by the Kerala State Women's Development Corporation (KSWDC) and is presently functioning successfully as a 24/7 accessible and emergency response service for women in need.

**Aparajitha is online:** This is a quick-response mechanism for grievance redressal on the harassment of women and girls, and is operated by the Department of Police.

### **Kerala State Women's Development Corporation (KSWDC)**

KSWDC aims at the all-round development of women in the State to make them active participants in social development and progress. The Corporation focuses on providing financial support to women entrepreneurs, training, and gender awareness programmes. The Corporation has been implementing the "She Pad" project since 2016 for the benefit of girl students of Government/Aided schools across the State. During the financial year 2023-24, LSGs have successfully implemented the project in 2,531 schools across the State, and around 6 lakh students have benefitted. KSWDC conducts the Menstrual Hygiene Awareness Programme for students of Government/Aided schools where the "She Pad" project has been implemented. KSWDC successfully executed this programme in 1,475 schools and benefited more than 5 lakhs students. During 2023-24, KSWDC executed the programme in 414 schools, benefiting 36,110 students. The KSWDC launched the M Cup programme in the year 2021-22 for the supply of menstrual cups, free of cost, to women above 18 years. The programme includes awareness sessions on the use of menstrual cups for the beneficiaries. KSWDC has distributed 5,016 menstrual cups to women beneficiaries across the State.

KSWDC currently operates 11 *Vanitamitra Kendra*-Working Women's Hostels in various districts. In the financial year 2023-24, two new hostels were established in Palakkad and Pathanamthitta districts to meet the growing demand. Currently, there are 1,100 residents across nine districts.

The Safe Stay project is to ensure safe, secure, and affordable short-stay facilities for women travellers. A comprehensive app called "Safe Stay" has been developed and the Corporation has partnered with 30 women's hostels for the programme.

### **Gender Sensitisation Programme for Police**

**Personnel:** the *Bodhyam* gender sensitisation programme for police personnel was launched by KSWDC on September 4, 2019. The training was conducted in batches coordinated from Police Training College (PTC), Thiruvananthapuram and Kerala Police Academy (KEPA), Thrissur. The aim of the programme is to improve the effectiveness of emergency response services for women, as well as to create a gender-friendly environment in the State. In the financial year 2023-24, the Corporation has successfully trained and sensitised 893 police personnel.

**Women Cells in Colleges:** As part of its gender awareness programmes, KSWDC has started Women Cells in selected colleges in the State which have initiated various programmes including gender awareness trainings, open forums, cultural programmes, manuscript publishing, training in IT/soft skill, creative workshops, and community intervention programmes in selected colleges in Kerala. The main objective of a Women Cell is to make the youth aware of social issues, and to equip them with adequate management skills to handle day-to-day affairs. In 2023-24, 20,000 students from 100 colleges became the part of Women Cell activities. Women Cells were started in co-ed colleges to promote the idea of gender equality and create gender-friendly campuses in the State.

**Finishing School for Women:** KSWDC started "Reach" for enhancing employable skills among women to improve their job prospects. In 2023-24, 2,819 students were provided training. Through the advanced skill enhancement programme in nursing (ASEPN), 285 nursing professionals were trained.

**Gender Park:** This is an initiative under the aegis of the Women and Child Development Department to pioneer gender equity and empowerment in the State. Its main campus located at Kozhikode is a convergence centre for various projects, and cultural and academic programmes. It includes an International Convention Centre (ICC), Amphitheatre, Library and the Heritage Museum. The library has been specifically designed to stack books relating to gender studies. As the first gender-based initiative of its kind in the country, the library aims to enhance research and learning, promote gender awareness, and foster the empowerment of distinct gender groups in society. A Gender Data Hub was established in collaboration with UN Women, along with the Heritage Museum and Library, which would make Gender Park the South Asian hub for gender related activities. A Memorandum of Understanding was signed between Gender Park and UN Women in December 2020 to come together as equal partners to address gender equality in the South Asian region. The Gender Park, in partnership with UN Women, aims to examine gaps in the urban planning process. The broad idea behind this project is to examine how the planning and development of urban spaces including land use planning, regional/city/zonal planning, and the provisioning of public infrastructure affect women and transgender persons' access to public spaces. *Aarppo* is a festival-like event that celebrates the diversity and creativity of women and transgender individuals. This innovative platform empowers them to express their thoughts and ideas through art and culture, showcasing their unique talents and perspectives.

**Gender Self-Learning Programme (GSLP):** GSLP was initiated by Kudumbashree in 2007 in order to make women capable of learning and understanding the gender issues themselves. It is a “participatory education programme through which women in NHGs address gender and its manifestations in their lived experience.” The learning process helps the women to develop a collective consciousness on women’s issues and an understanding of how to express their views. Under this programme, 86,307 women were trained as resource persons for a cascading training programme till NHG-level and in all, 4,33,313 women underwent training, including resource persons and 3,47,006 support team members. The programme is expected to cover

35 lakh women in the State. The five thematic areas selected for the learning process are: (1) women and employment, (2) women and health, (3) women and mobility and (4) gender justice and equality and (5) theme against dowry and gender-based violence. The theme against dowry and gender-based violence started in 2021 with the name *Sthreepakshbanavakeralam* programme. Gender awareness trainings are organised at various levels for Kudumbashree officials, resource persons, officials from other departments, Kudumbashree workers, students, and auxiliary group members. Recently, an international seminar on Women Empowerment Strategies in the post Covid World viz ‘Revitalizes’ was organised under the leadership of the Thrissur District Mission at KILA, Thrissur, regarding gender development activities and the post-covid context. Currently, gender point persons are selected from NHG, ADS, and CDS-levels, and training has been planned with the available modules through activity based, theatre activity based, and AI activity based learning.

**Kerala Women’s Commission:** Gender Awareness Programme-A significant activity of KWC is the training of *JagrataSamithi* (a watchdog institution at the grassroot-level), which can work effectively in the prevention of crime with community participation. The Commission conducts seminars/legal workshops, and training programmes for Panchayat *JagrathaSamithis* on various laws related to women and other legal procedures and adalaths. In order to sensitise the youth about issues in adolescence, a year-long awareness programme, *Kaumaram Karuthakko*, was conducted by the Commission. From 2011-24 (as on March 31, 2024), the Women’s Commission received a total of 78,237 complaints of various natures including violence against women, property-related issues, domestic violence, issues related to family problems, and so on. The highest number of cases was in Thiruvananthapuram (28,103 complaints) followed by Kollam with 7,400 complaints. Out of the total, 14,175 complaints were related to family problems, 8,070 domestic violence cases, and 6,574 were property-related. Category-wise and district-wise details of complaints received as on March 2024 are given in **Appendix 8.1.7.**

*Saranya* is a self-employment scheme to provide financial assistance to unemployed widows, deserted/divorced/unmarried women, unwed mothers, women with disabilities, and wives of



bed ridden persons. It is implemented by the Employment Department. In 2023-24, 1,609 women benefitted from the scheme. In 2023, 69 women, and 5 women in 2024 (upto July 2024), received financial assistance through *Kainalya*, a rehabilitation and welfare scheme of registrants with disabilities in employment exchanges, implemented by the Employment Department.

The International Centre for Free and Open Source Software (ICFOSS) provides support through gender and technology hackathon, back to work, women winter school and summer school, virtual training, campaigns. and fellowships in their gender technology initiative component.

### **Transgender Community in Kerala**

The Government of Kerala issued a rights-based transgender policy in 2015, after the landmark judgment of the Supreme Court of India in 2014 which firmly established the right to equality and equal protection for transgender persons (TGs). The Transgender Persons (Protection of Rights) Act, 2019, has raised several concerns regarding the status of transgender people in India, especially with respect to the right of self-identification. The visibility of transgender people in the public sphere in Kerala has also increased in the last few years. However, the issues of people with other sexual identities are still not highlighted in this manner. The survey conducted by the Social Justice Department on transgender persons revealed that they are unable to acquire even basic capabilities essential to a life of well-being and dignity. Hence, interventions for the inclusion of transgender persons cannot be limited to merely economic measures.

Various schemes for the welfare of transgender persons are being implemented by various departments, but primarily the Social Justice Department. Likewise, schemes/programmes aiming at the welfare of LGBT individuals have been initiated under the Health and Family Welfare department. DHS has initiated steps for sex reassignment surgeries in Kottayam Medical College. A programme, *Nisarga*, has been started by the Directorate of Homeopathy to provide counselling and medication for transgender persons. Apart from these, the Kerala State Literacy Mission Authority (KSLMA) has initiated a special literacy programme which focuses on providing free and continuing

education for transgender persons in the State. As part of the *Samanwaya* programme, they have joined the 4th, 7th, 10th and 12th standard equivalency programme of KSLMA. In 2022-23, 96 transgender persons benefitted from the programme. As part of the continuing education programme, KSLMA conducted a survey among 918 persons from the transgender community, which revealed that 20.3 per cent were unemployed and 16.7 per cent worked in the private sector. While 1.6 per cent had Government jobs, 5.9 per cent were working in semi-Government institutions. Over 30 per cent were engaged in some form of self-employment. A majority of the people who were employed had not disclosed their distinct gender identity in any official records. The survey also found that 6 out of 100 transgender persons were engaged in begging, and 8 out of 100 in sex work. Over 4 per cent did not have any documents to prove their identity. The survey found that only 1.2 per cent of the transgender persons surveyed were unable to read or write. The number of school dropouts among transgender persons increased as they progressed to higher classes, mostly due to social stigma. While 10.6 per cent of transgender persons dropped out of school between classes IV and VII, around 40 per cent dropped out between classes VII and X. Among the transgender persons surveyed, 26.5 per cent had passed the plus two courses. While 13.6 per cent transgender persons were graduates, 2.1 per cent were post graduates. Around 67.1 per cent of the persons surveyed were keen to enroll in the continuing education programmes of KSLMA.

Various schemes are implemented by the Government of Kerala on a rights-based approach for the well-being of transgender persons. In 2018-19, the Transgender Person Cell in the Social Justice Directorate was set up for the design, coordination, and implementation of various activities for transgender persons, giving them a voice in their own planning. Since then, all the schemes under SJD have come under this comprehensive umbrella scheme, *Mazhavillu*. Community-level programmes, institutional intervention, research and survey, sensitisation and workshops, and skill development are the major components of the scheme. Transgender persons' arts festival was organised, marriage assistance was provided, and they are included as a priority category in the LIFE Housing Mission project. A transgender persons helpline

was established. Financial assistance is given for education (the number of school drop outs being high), vocational training, self-employment, and to write competitive exams. Financial assistance for Sex Re-assignment Surgery (SRS) in hospitals based on medical advice was increased to Rs 2 lakh in 2019, and further to Rs 5 lakh by 2020. The National Portal for Transgender Persons (NPTP) is a platform that allows transgender people to apply for and receive identity cards and certificates online. In Kerala 1,208 transgender persons have been issued Transgender ID cards upto May 2024. Hostel facility, beautician course, continuing education scheme, sewing machine distribution, entrepreneurship development programmes (KSWDC), TG short stay/shelter homes, further treatment post SRS surgery, HIV zero surveillance centre, driving training, TG-friendly toilet, self-employment assistance, *Varnam* (TG fest), and sensitisation in schools/colleges, and among various officials, and elected representatives are the other schemes for transgender persons implemented by SJD.

KSWDC launched a self-employment loan scheme for transgender persons in 2020-21 to help them become self-reliant through self-employment. This scheme is being implemented with the funding support of the Directorate of Social Justice. An amount of Rs 30 lakh was sanctioned in the initial phase for the disbursement of loans, and 22 transgender persons benefitted from the scheme.

### **Gender Budgeting**

A gender-responsive budget at the local-level was introduced in Kerala at the time of 9th Five Year Plan, with the mandatory inclusion of the Women Component Plan (WCP) in Local Self-Governments' Annual Plan. With the devolution of 35-40 per cent of funds from the State to the LSGs, the first form of gender budgeting in the State was in 1996, when each Panchayat was directed to prepare a chapter on the status of women in their Development Plan document. During the 9th Plan, 10 per cent of the Plan Outlay of LSGs had to be set apart to address the needs of women, or women-specific projects, which came to be known as the Women Component Plan (WCP).

To institutionalise the process of Gender Budgeting, the Gender Budget Statement was introduced in the Union Budget 2005-06. In Kerala, conscious efforts have been taken to make

the State Budget gender responsive. While the process started with the 11th Plan, the first Gender Budget for the State Plan was released in 2017-18, aggregating resources earmarked for girls/women across departments as a separate document included in the Budget papers.

In 2023-24, an amount of Rs 1,479.5 crore (6.7 per cent) has been provided for women-specific schemes (Part A), and an amount of Rs 3,190.7 (14.4 per cent) for composite schemes in Part B has been made available for women. A total amount of Rs 4,670.2 crore has been earmarked for women, which is 21.1 per cent of the total outlay. Out of this amount, Rs 5.0 crore is allocated for *Mazhavillu*, the scheme for transgender persons. Gender budgeting in the State has a total outlay of Rs 4,661.5 crore for the 2024-25 financial year. Allocations for women have touched a high of 21. per cent of the total Plan outlay, up from 20.9 per cent (Rs 4,665.2 crore) in 2022-23. While the resource allocation for 90-100 per cent of women-specific schemes is 10.5 per cent, up from 7.3 per cent in 2022-23, it is 10.8 per cent for schemes for which the resource allocation is less than 90 per cent.

### **Way Forward**

Giving gender a central place in planning and development is important because discrimination against women is not solely a women's issue, but crucial to the progress of society as a whole. The efforts of the Government to generate employment for women has yielded positive outcomes in terms of a significant increase in female employment. There is an urgent need to sustain this initiative and provide quality employment, with emphasis on new skilling programmes. Kerala is well ahead of other States in terms of certain important dimensions of women empowerment. However, there are areas of concern such as wage disparity, the concentration of women in low income jobs, and gender-based violence, that need to be addressed. The participation of women in decision-making bodies at higher levels (Legislative Assembly and Parliament) is another issue that needs to be considered seriously.



## 8.2 ADDRESSING SOCIO-ECONOMIC VULNERABILITIES

### **Scheduled Castes and Scheduled Tribes**

In Kerala, Scheduled Castes and Scheduled Tribes communities constitute 9.1 per cent and 1.5 per cent of the population, respectively. District-wise details of Scheduled Castes and Scheduled Tribes population are given in **Appendix 8.2.1** and **8.2.2** respectively. A comparative picture of literacy rates and sex ratios of Scheduled Castes and Scheduled Tribes populations in Kerala relative to national figures is presented in **Appendix 8.2.3**. As per Rule 14(a) of the Kerala State and Subordinate Service Rules 1958, 10 per cent representation (8 per cent for Scheduled Castes, 2 per cent for Scheduled Tribes) is reserved to Scheduled Castes/Scheduled Tribes in Gazetted, Non-Gazetted and Last Grade posts in Government departments. According to the annual review data of General Administration (Employment Cell-A) Department, as on January 1, 2024, 33 out of 90 State Government departments reported Scheduled Castes/Scheduled Tribes representation at 12.04 per cent with 9.71 per cent Scheduled Castes and 2.33 per cent Scheduled Tribes. The same report points out that as on January 1, 2023, 78 out of 89 departments reported that Scheduled Castes/Scheduled Tribes representation in State Government was 9.51 for Scheduled Castes and 2.99 per cent for Scheduled Tribes. The Government of Kerala has been successful in filling the backlog vacancies of Scheduled Castes

and Scheduled Tribes in Government services with backlog vacancies reducing from 1120 in 2018 to 372 in 2024 for Scheduled Castes and from 1148 to 431 for Scheduled Tribes in the same period. Between 2018 and 2024, 2,936 Scheduled Castes and Scheduled Tribes backlog vacancies were filled by the Government through special recruitment process. Details of data on Scheduled Castes/Scheduled Tribes representation in Government Departments is given in **Appendix 8.2.4**.

### **Development Programmes for Scheduled Castes and Scheduled Tribes**

The Government of Kerala is committed to the development and well-being of Scheduled Castes and Scheduled Tribes. It is the policy of the Government to allocate a share of the total State Plan Outlay which is higher than the proportional representation of Scheduled Castes and Scheduled Tribes in the total population, to support their welfare and development. At present, 9.81 per cent of total State Plan outlay is earmarked for the welfare of Scheduled Castes and 2.83 per cent for the Scheduled Tribes. The Government of Kerala allocates Plan fund to the Scheduled Castes/Scheduled Tribes Development Departments and the Local Governments for implementing various development programmes. Besides this, the Central Government also provides funds for Centrally Sponsored Schemes. Out of the total

State Plan Outlay, around 45 per cent of funds allocated for Scheduled Caste Sub Plan (SCSP) and 23 per cent of funds allocated for Tribal Sub Plan (TSP) are devolved to the Local Self Governments for implementing schemes under decentralised planning, and the remaining funds are allocated to the Scheduled Castes/Scheduled Tribes Development Departments. The Plan Outlay set apart for the development of Scheduled Castes and Scheduled Tribes in 2024-25 is Rs 2979.40 crore and Rs 859.50 crore respectively out of the total State Plan Outlay of Rs 30370 crore. Year-wise details of allocation from 2017-18 to 2024-25 under SCSP and TSP is given in **Table 8.2.1**.

### Development of Scheduled Castes

According to the 2011 Census, the Scheduled Castes population of Kerala is 30.39 lakh, constituting 9.10 per cent of the total population of the State. There are 53 Scheduled Castes communities and 26,342 Scheduled Castes Nagars<sup>1</sup> in the State and the communities like Vedar, Nayadi, Kalladi, Arundhathiar/Chakkiliar are identified as the vulnerable communities among Scheduled Castes representing 3.65 per cent of the total Scheduled Castes population in the State.

In 2023-24, an amount of Rs 2,979.40 crore was earmarked in the Budget for the welfare of Scheduled Castes. Out of this, an amount of Rs 1,638.10 crore was allocated to the Scheduled Castes Development Department and Rs 1,341.30 crore to Local Self Governments. Scheduled Castes Development Department spent Rs 1262.96 crore (77.10 per cent) while the Local Governments utilised Rs 930.02 crore (69.34 per cent) out of the allotted budgeted outlay. Out of Rs 2,979.40 crore earmarked for the welfare of Scheduled Castes in the 2024-25 Budget, Rs 1,638.10 crore was allocated for the Scheduled Castes Development Department and Rs 1,341.30 crore was allocated for the Local Self Governments. The details of the allocation of SCSP funds from State Plan Outlay and its utilisation from the year 2017-18 to 2024-25, is given in **Appendix 8.2.5**. Likewise, the scheme-wise outlay and expenditure and the physical achievements for the years 2023-24 and 2024-25 (as of October 23, 2024) of the schemes implemented by Scheduled Castes Development Department are given in **Appendix 8.2.6** and **8.2.7** respectively. The Scheduled Castes Development Department is implementing a variety of schemes and programmes for the welfare of Scheduled Castes. Some of the major programmes and schemes are summarised below.

**Table 8.2.1** Year-wise Outlay for SCSP and TSP 2017-18 to 2024-25, in Rs crore

Year	Total State Plan Outlay	SCSP Outlay				TSP Outlay			
		Sched-uled Castes Development Department	Local Self Govern-ments	Total	Per cent of Total State Plan	Sched-uled Tribes Development Department	Local Self Govern-ments	Total	Per cent of Total State Plan
2017-18	26,500	1,427.60	1,172.05	2,599.65	9.81	575.08	176.00	751.08	2.83
2018-19	29,150	1,570.36	1,289.26	2,859.62	9.81	632.59	193.60	826.19	2.83
2019-20	30,610	1,649.00	1,353.84	3,002.84	9.81	663.27	202.99	866.26	2.83
2020-21	27,610	1,487.39	1,221.15	2,708.54	9.81	598.26	183.10	781.36	2.83
2021-22	27,610	1,487.39	1,221.15	2,708.54	9.81	598.26	183.10	781.36	2.83
2022-23	30,370	1,638.10	1,341.30	2,979.40	9.81	657.95	201.55	859.50	2.83
2023-24	30,370	1,638.10	1,341.30	2,979.40	9.81	657.95	201.55	859.50	2.83
2024-25	30,370	1,638.10	1,341.30	2,979.40	9.81	657.95	201.55	859.50	2.83
<b>Total</b>	<b>2,32,590</b>	<b>12,536.04</b>	<b>10,281.35</b>	<b>22,817.39</b>	<b>9.81</b>	<b>5,041.31</b>	<b>1,543.44</b>	<b>6,584.75</b>	<b>2.83</b>

Source: Budget Documents, GoK.

<sup>1</sup>Through G.O (Ms) No:16/2024/SCSTD, dated 18/06/2024, Govt. of Kerala directed to use terms such as 'Nagar', 'Unnathi' and 'Prakrithi' instead of 'Colony', 'Settlement' and 'Ooru' for referring to the residing areas of the people of Scheduled Castes and Scheduled Tribes Communities.

## Major Development Programmes for the Welfare of Scheduled Castes

### Land and Housing

The Government of Kerala provides financial assistance for purchasing land to the landless Scheduled Castes households under the scheme 'Land to landless families for construction of houses'. In 2023-24, 3,340 families were assisted under this scheme. Out of the budgeted outlay of Rs 180 crore, Rs 127.60 crore (70.99 per cent) was spent in 2023-24. Number of families benefited under this scheme from 2017-18 to 2023-24 are given in **Figure 8.2.1**.

District-wise details of land provided to Scheduled Castes under the land to landless scheme from 2022-23 to 2024-25 (as of August 31, 2024) is given in **Appendix 8.2.8**.

Under the housing scheme, LIFE Mission has undertaken the construction of new houses and completion of incomplete houses undertaken by Scheduled Castes Development Department from 2007-08 to 2016-17. From 2017-18 onwards, construction of new houses is being implemented under three phases of LIFE Mission. As on August 31, 2024, construction of 1,10,930 houses of the Scheduled Castes beneficiaries is completed so far in all the three phases, along with the additional beneficiary lists, LIFE 2020 and Extreme Poverty Eradication Programme (EPEP).

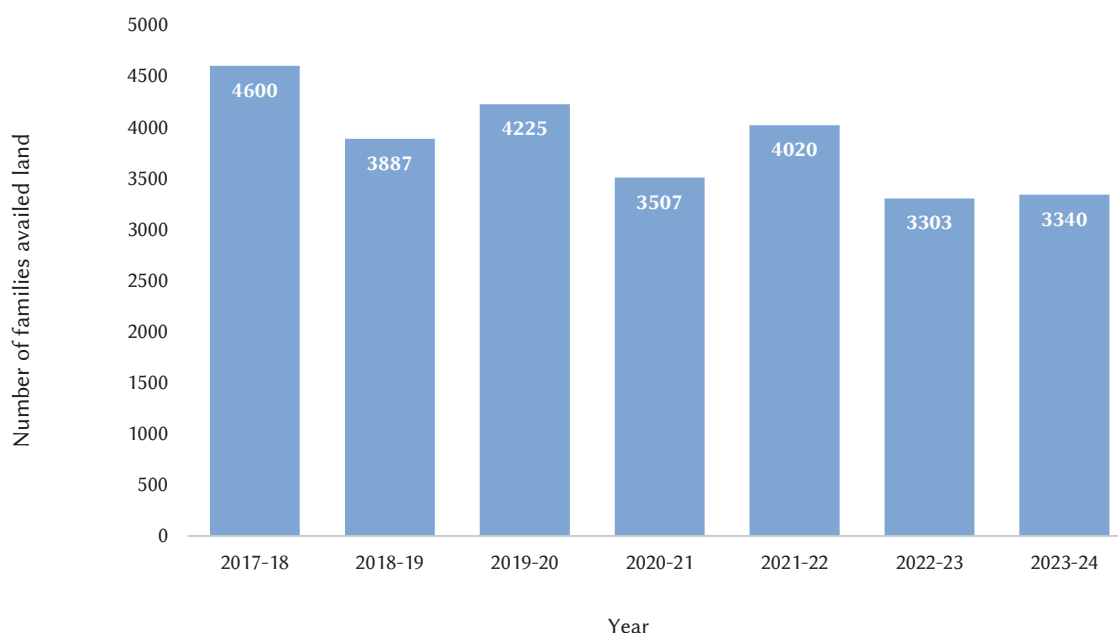
In the first phase of LIFE Mission (completion of incomplete houses), construction works of 19,153 houses were completed out of the eligible 19,566 incomplete houses identified.

In the second phase (housing for homeless with land), out of the total 93,785 eligible beneficiaries, 59,283 families executed agreement and 52,086 beneficiaries completed house construction. The construction of 7,197 houses is progressing. In the third phase (housing for landless and homeless), out of the total identified beneficiaries, 7,835 families executed agreement for construction, and 6,087 families completed the construction. The construction of 1,748 houses is progressing.

In the additional list for Housing for homeless with land, 21,812 of the 32,854 eligible beneficiaries executed agreement and 18,488 houses were completed and construction of 3,324 houses is progressing. Likewise, in the additional list of Housing for landless and homeless, 2,734 of the 17,656 eligible beneficiaries executed agreement and 1,251 houses were completed and the construction of 1,483 houses is progressing.

As regards LIFE 2020 (Housing for homeless with land), 30,804 of the 69,309 eligible beneficiaries executed agreement and construction of 13,728 houses were completed and construction of 17,076 houses is progressing. Likewise, in LIFE

**Figure 8.2.1** Number of Scheduled Castes Families Availed Land, 2017-18 to 2023-24



Source: Scheduled Castes Development Department

2020 (Housing for landless and homeless), out of the total eligible beneficiaries 1,186 beneficiaries executed agreement, 137 finished construction while construction of 1,049 houses is progressing. The phase-wise progress in house construction for Scheduled Castes as on August 31, 2024 is provided in **Table 8.2.2**. District-wise details of the house construction under LIFE Mission is given in **Appendix 8.2.9**.

An initiative called SAFE (Secure Accommodation and Facility Enhancement) has been introduced for maintenance, completion and renovation of houses built after the year 2010 that are technically completed but uninhabitable. Under this initiative, Rs 2 lakh is provided for the renovation/maintenance of the houses.

### Education

Scheduled Castes Development Department runs 87 nursery schools, 11 Model Residential Schools, 44 Industrial Training Institutes, 86 pre-matric hostels, 19 post-matric hostels, 7 subsidised hostels, 4 Pre-Examination Training Centres, an Institute for Civil Services Exam

Training Society (ICSETS), a Community College in Vadakkancherry, Centre for Research and Education for Social Transformation (CREST) in Kozhikkode and a Medical College in Palakkad for imparting education to Scheduled Castes students. Palakkad Medical College is a pioneering initiative of the Scheduled Castes Development Department which creates opportunities for around 70 Scheduled Castes students annually to pursue MBBS. The 44 ITIs affiliated to NCVT offers training in 11 trades and gives admission to around 1600 trainees per year. Two new Model Residential Schools were started in Kozhikode and Kannur Districts in 2020-21. Government provides various types of educational assistances such as primary/secondary education aid, lump sum grant, monthly stipend, pocket money, tuition fee re-imburement for unaided school students, special incentive, medical and engineering coaching assistance, pre-matric and post-matric scholarships, overseas scholarships etc. for improving the educational status of Scheduled Castes students. Major educational assistances given to Scheduled Castes students in 2023-24 is listed in **Box 8.2.1**. An online centralised system called 'E-grantz' is

**Box 8.2.1** Major educational assistances given to Scheduled Castes students in 2023-24

<b>Educational Assistance</b>	<b>No. of students benefited</b>
• Pre-matric scholarships	4,09,821
• Post-matric scholarships	1,37,389
• Primary education aid	2,62,577
• Additional State Assistance to Post-matric students	1,37,389
• Assistance for studying abroad	364
• Assistance for studying in other States	402
• Assistance for purchasing laptop	578
• Assistance for purchasing stethoscope	134
• Ayyankali Talent Search scholarship	6,439
• Special incentive (Cash award given to those students who achieve excellence in annual examinations including SSLC to PG and other professional courses)	12,196
• Initial expenses to those admitted to Engineering/ Medical Courses	449
• Vision-2013 (Medical and Engineering Coaching)	228

Source: Scheduled Castes Development Department, 2024

**Table 8.2.2.** Details of house construction for the Scheduled Castes beneficiaries under LIFE Mission

Phases of LIFE Mission	Details of Construction	Construction as on August 31, 2024	
		Total No. of Houses/ Beneficiaries	%
Phase I (Completion of incomplete houses)	Eligible Beneficiaries	19,566	100
	No: of Completed Houses	19,153	97.89
	Ongoing	0	
Phase II (Homeless with land)	Eligible Beneficiaries	93,785	100
	Beneficiaries who executed agreement	59,283	63.21
	No: of Completed Houses	52,086	55.53
Phase III (Landless and Homeless)	Ongoing	7,197	7.67
	Eligible Beneficiaries	22,570	100
	Beneficiaries who executed agreement	7,835	34.71
Additional List (Homeless with Land)	No: of Completed Houses	6,087	26.96
	Ongoing	1,748	7.7
	Eligible Beneficiaries	32,854	100
Additional List (Landless and Homeless)	Beneficiaries who executed agreement	21,812	66.39
	No: of Completed Houses	18,488	56.27
	Ongoing	3,324	10.11
LIFE 2020+EPEP (Homeless with Land)	Eligible Beneficiaries	17,656	100
	Beneficiaries who executed agreement	2,734	15.48
	No: of Completed Houses	1,251	7.08
LIFE 2020+EPEP (Landless and Homeless)	Ongoing	1,483	8.39
	Eligible Beneficiaries	69,309	100
	Beneficiaries who executed agreement	30,804	44.44
All Phases Combined	No: of Completed Houses	13,728	19.8
	Ongoing	17,076	24.63
	Eligible Beneficiaries	47,629	100
All Phases Combined	Beneficiaries who executed agreement	1,186	2.49
	No: of Completed Houses	137	0.28
	Ongoing	1,049	2.2
All Phases Combined	Eligible Beneficiaries	3,03,369	100
	Beneficiaries who executed agreement	1,43,220	47.2
	No: of Completed Houses	1,10,930	36.56
All Phases Combined	Ongoing	31,877	10.50

Source: LIFE Mission, GoK



in place for the disbursement of scholarship to all pre-matric and post matric students belonging to Scheduled Castes/Scheduled Tribes/Backward Class communities. In 2019-20, the rate of assistances, including lump sum grant, stipend, and scholarships given to Scheduled Castes, Scheduled Tribes and OEC students for pre-matric, post-matric and professional courses were enhanced. Details of lump sum grant, stipend and pocket money provided to Scheduled Castes students in 2023-24 (as of August 31, 2024) are given in **Appendix 8.2.10** and the number of students who availed various kinds of scholarships and assistance from 2019-20 to 2024-25 (as on August 31, 2024) are given in **Appendix 8.2.11**.

‘Construction of Study Rooms (Padanamuri)’ scheme was introduced in the year 2017-18 aiming to support around 6 lakh Scheduled Castes students studying in various Pre Matric and Post Matric institutions across Kerala. Providing a conducive study environment at house is essential as the economic condition of the parents may prevent the arrangements of such facilities to their children. This initiative intends to provide financial assistance of Rs 2 lakh for the construction of an additional room of 120 sq.ft to the existing house of Scheduled Castes Students studying in class V to XII in Government, aided, special, technical schools and Kendriya Vidyalayas and whose family/parents have an annual income of up to Rs 1 lakh. Furthermore, the project aims to provide additional facilities such as bookshelf, chair, table, fan, light, computer and computer table. Construction of 3,782 study rooms were completed in 2023-24 for the students of high school and higher secondary classes. Out of this, 292 study rooms were for those children who belong to the vulnerable communities among Scheduled Castes. Likewise, 980 study rooms, including new and spillover projects, were constructed in 2024-25, of which 7 study rooms for students from the vulnerable communities among Scheduled Castes (as of August 31, 2024).

### **Health**

Under the health care scheme, treatment assistance is provided to the deserving patients through ‘T-Grants’ site. Financial assistance of Rs 2 lakh is provided as relief for the death of sole income earning member of a Scheduled Castes family is also a part of the scheme. Treatment assistance for various diseases was given to 7,672 persons in 2023-24 across the State. As on August 31, 2024,

total of 4,643 persons received treatment assistance under this scheme. In the case of financial assistance for the death of sole income earner of Scheduled Castes households, 785 families in 2023-24 and 277 families in 2024-25 (as of August 31, 2024) received assistance. Besides this, 29 homoeo dispensaries are functioning in Scheduled Castes nagars. In 2023-24, Rs 34.74 crore and in 2024-25 (as of August 31, 2024), Rs 17.39 crore were spent under health care scheme. Details of outlay and expenditure under health care scheme and number of patients availed treatment assistance for the last five years are given in **Appendix 8.2.12**.

### **Skill Training and Employment**

For providing livelihood security to the weaker sections, various types of job oriented skilling programmes are implemented for the people of Scheduled Castes. In 2023-24, Rs 36.57 crore was spent for the scheme. Self-employment assistance is given to individuals/self-help groups with one-third of the loan as subsidy for undertaking self-employment ventures. Self-employment subsidy was given to 151 beneficiaries in 2023-24. Details of assistance under the self-employment scheme for 2023-24 and 2024-25 (as of August 31, 2024) is given in **Appendix 8.2.13**. Financial assistance of upto Rs 1 lakh is given for unemployed Scheduled Castes youth from families with an annual income limit of below Rs 2.50 lakh for seeking job abroad. In 2023-24, assistance was given to 749 persons for seeking job abroad and in 2024-25 (as of August 31, 2024) 532 persons availed this assistance. The details of foreign employment assistance are given in **Appendix 8.2.14**. In order to help Scheduled Castes youth to secure jobs and to start new enterprises, skill development trainings were conducted in areas like information technology, automobile, electrical, textile designing, health care, printing technology etc. through agencies like KELTRON, KASE, ASAP, CIPET, Kuttukkaran Institute etc. In 2023-24, 806 persons received training through various skill development programmes and 103 of them who had completed the training, got job placements.

The ‘WINGS’ scheme was introduced to expand scholarship opportunities for Scheduled Castes/Scheduled Tribes youth in commercial pilot training, aiming to secure employment in that field. Three Scheduled Castes students can avail this scholarship, and at present, five Scheduled Castes students are studying at the Rajiv Gandhi Aviation Academy in the Commercial Pilot license course.

### Box 8.2.2 Unnathi-Overseas Scholarship for Scheduled Castes Students

The 'Unnathi Overseas Scholarship' scheme of Scheduled Castes Development Department is a merit-cum-means scholarship catering to the higher educational aspirations of the talented and meritorious Scheduled Castes students who wishes to pursue post-graduate-level (or above) courses in prestigious foreign universities. Along with facilitating their access to a broader area of knowledge and ensuring bright career prospects, the scholarship helps to widen their global exposure and thereby helps in social mobility. As per the revised guidelines of the scheme (G.O.(P)5/2023/SCSTDD dated 01/08/2023), the courses covered under the scheme includes Post-Graduate Degree, Post Graduate Diploma considered equivalent to Post Graduate Degree, M Phil and equivalent programmes, Ph.D. and Post-Doctoral programmes. The scholarship amount is determined based on the following three annual family income slabs of the students.

- Students with an annual family income up to Rs 12 lakh will be awarded full scholarship of Rs 25 lakh. A total of 175 scholarships will be awarded annually.
- Students with annual family income above 12 lakh and up to Rs 20 lakh will be entitled to get a total of Rs 20 lakh (which includes tuition fee of Rs 15 lakh and Rs 5 lakh for accommodation and living expenses, visa charges, air fare admissible etc.). A total of 25 scholarships will be awarded annually.
- Students with an annual family income above Rs 20 lakh will receive tuition fee assistance of up to Rs 15 lakh. A total of 25 scholarships will be awarded annually.

For any specific year, if eligible candidates are not available to the extent prescribed for any of the above listed categories, the vacant numbers in that category for that year will be added to the next below enumerated category. In addition to the above categories, 25 students with an annual family income above Rs 20 lakh will be provided with interest free education loan by the Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes Ltd. And the Government will bear the interest component. In 2023-24 alone, Government supported 364 Scheduled Castes students to study in reputed foreign educational institutions, and 64 students were assisted so far in 2024-25 (as on August 31, 2024).

Source: Scheduled Castes Development Department, 2024

The 'Lakshya' initiative was started with an aim to provide scholarship for Scheduled Castes youth to receive coaching for Civil Service Examination at recognised institutes across India. At present, 60 scholarships are provided and it includes course fees, hostel fees, book allowance and assistance for test series.

An initiative called TRACE (Training for Career Excellence) has been started to provide internships/apprenticeships/placement training for qualified Scheduled Castes youth for allowing them to acquire professional experience. TRACE offers qualified Scheduled Castes youths with the opportunity to gain work experience and skill development through apprenticeships/job training over a period of 2 years, in Government system and in the implementation of various schemes. In 2024-25 (as of August 31, 2024), 23 apprentice nurses and 32 paramedical apprentices were appointed. Likewise 300 B.Tech, M.Tech graduates and Civil Engineering diploma holders are working as Accredited Engineers and Overseers along with 225 Apprentice Clerks, 1,216 Scheduled

Castes Promoters, 60 Community Social Workers and 69 law graduates under the Justice, Welfare and Legal Assistance (JWALA) project. These apprenticeship programmes will help them to gain experience in Government system and programme implementation.

#### Unnathi-Kerala Empowerment Society

One major initiative in the realm of employment is the inception of 'Unnathi-Kerala Empowerment Society'. It envisions a thriving, inclusive ecosystem empowering vulnerable Scheduled Castes and Scheduled Tribes communities with livelihood opportunities and aims to transform educated Scheduled Castes and Scheduled Tribes youths into both entrepreneurs and employers. This is to be achieved by providing them with the necessary education, skill training, and job/entrepreneurship opportunities with the broader goal of socio-economic development in the changing modern world. The Empowerment Society will support Scheduled Castes and Scheduled Tribes youth groups/co-operatives and individuals in their entrepreneurial endeavors and in the

improvement of their livelihood opportunities. It has the potential to re-orient the employment, entrepreneurship and livelihood programmes of the Scheduled Castes Development Department and to facilitate the activities/programmes that needed to address the second generation needs of the Scheduled Castes communities.

### **Infrastructure Development in Scheduled Castes Nagars**

For providing better infrastructure facilities in the habitats, the 'Ambedkar Village Development Scheme' was launched in Scheduled Castes nagars, where more than 25 Scheduled Castes families reside. As part of the scheme, Rs 1 crore is provided to each nagar for undertaking various developmental activities including provision of drinking water, toilet and sanitation, waste management, road connectivity, electrification, land protection wall, irrigation, playground, community hall, renovation of houses, financial support for income generating activities, assistance for protection and renovation of burial grounds inside/adjacent to the nagar. Works have been undertaken in 62 nagars in the year 2023-24. The details of the 'Ambedkar Village Development Scheme' is given in **Appendix 8.2.15**.

### **Other Social Development Programmes Assistance for Marriage**

Under this scheme, financial assistance is given to Scheduled Castes families to support the marriage of the girls. In 2023-24, 5,053 Scheduled Castes families were assisted under the scheme and Rs 54.82 crore was spent. In 2024-25, by disbursing Rs 20.61 crore, 1,721 Scheduled Castes families were assisted under the scheme (as of August 31, 2024). The rate of marriage assistance was enhanced from Rs 50,000 to Rs 75,000 in 2016-17. It has been further enhanced to Rs 1,25,000 as per the announcement in the Budget speech of 2021-22. Number of persons benefited from the scheme for the last five years is given in **Figure 8.2.2**. Details of Outlay and expenditure under marriage assistance scheme is provided in **Appendix 8.2.16**.

### **Special Package for Vulnerable Communities**

A special package was introduced in 2019-20 for providing assistance for purchasing agricultural land for vulnerable communities such as Vedar, Nayadi, Kalladi and Arundhathiyar/Chakklariar. Under this package, assistance was provided up to a maximum of Rs 10 lakh for purchasing minimum 25 cents of land. In 2023-24, Rs 50 crore was

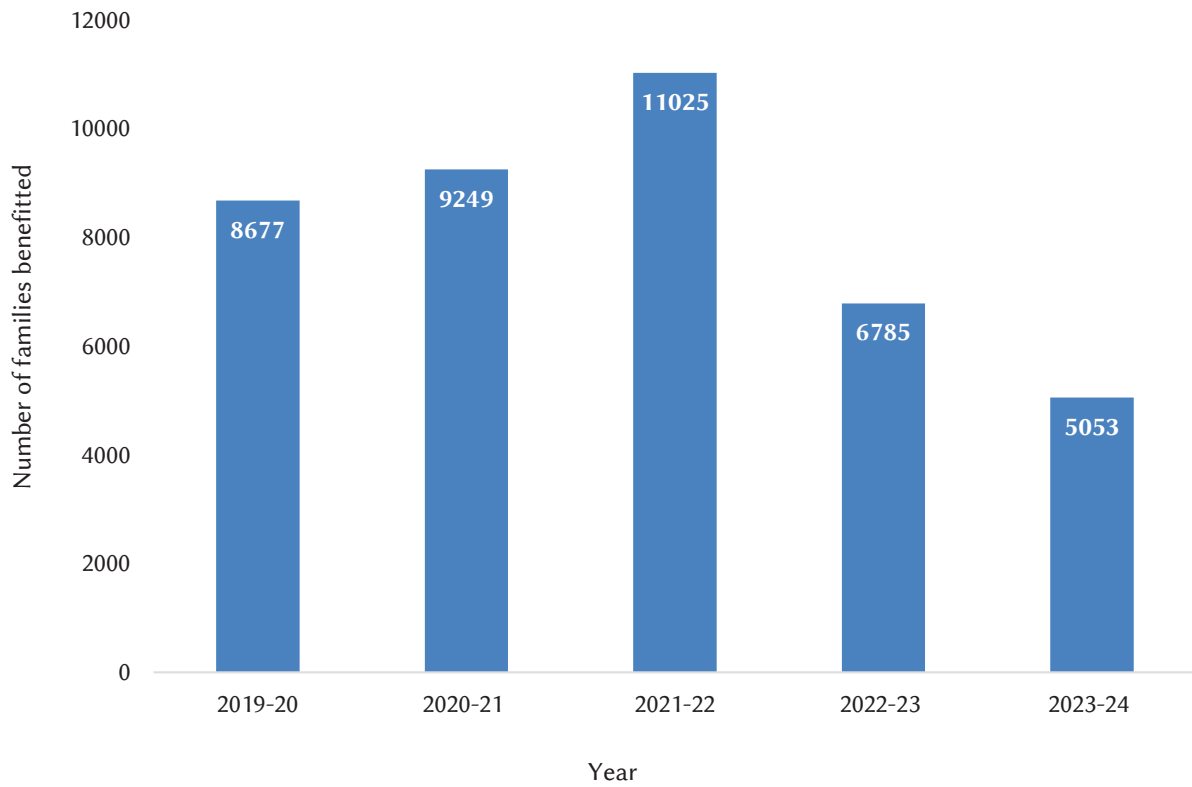
earmarked for the development activities for the vulnerable communities, and Rs 32.38 crore was expended. Altogether, assistance was provided to 7 beneficiaries for the purchase of agricultural land and 193 families for purchasing land for house construction in 2023-24. Besides this, assistance was provided for the construction of 292 study rooms, 497 houses, and 208 toilets, including both new and spillover projects from prior years. Additionally, in 2023-2024, 330 families received assistance for home repairs, of which 210 were spillover projects.

A micro planning programme called HOME (Household Oriented Micro Planning for Empowerment) has been designed for the comprehensive development of the families from the vulnerable communities among Scheduled Castes. HOME is conceptualised and devised as a programme for the socio-economic and educational development of the families belonging to these vulnerable communities. The programme aims to devise and implement social welfare programmes and sustainable income augmenting projects as a permanent solution to the backwardness of these communities. The approach of the initiative is to assess the needs of each family through family based micro planning and to devise plans according to their needs with complete participation of these families. Its implementation is conceptualised in 4 phases, i.e., (1) house visit-data collection of the families of vulnerable communities included in the Extreme Poverty Survey list, (2) preparation of beneficiary list based on deprivation factors, (3) Micro-level plan formulation and (4) plan implementation and evaluation.

### **Legal services**

The Government of Kerala shows its commitment in protecting the Constitutional rights of Scheduled Castes. It strives for the strict implementation of the Protection of Civil Rights Act, 1955 and The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 by allocating the required resources. Special Courts, Scheduled Castes Protection Cell and Special Police Stations have been formed in the State for the trial of offences and provision of relief and rehabilitation of the victims of atrocities. In 2023-24, Rs 3.90 crore was expended. Inter caste marriage assistance were provided to 736 couples under this scheme in 2023-24. Apart from this, 296 victims of atrocities received compensation

**Figure 8.2.2** Number of families benefitted under Marriage Assistance Scheme (Rs in lakh)



Source: Scheduled Castes Development Department, 2024

### **Box 8.2.3** Assistance for the Development of Vulnerable Communities

Vedar, Nayadi, Kalladi, Arundhathiar/Chakkiliar are identified as the vulnerable communities among Scheduled Castes and the people of these communities constitute 3.65 per cent of the total Scheduled Castes population in the State. The Government of Kerala is giving utmost priority for the development and well-being of these communities. A separate scheme in Scheduled Castes Sub Plan (SCSP) for these communities and allocation of sizable resources for the scheme underlines this commitment. Through the Scheme, Government is helping them to improve their socio-economic status. As per the revised guidelines (G.O.(Ms.)No.33/2024/SCSTD dated 19/10/2024) of the scheme 'Development of Vulnerable Communities', the Government of Kerala provides assistance of Rs 10 lakh for purchasing minimum 25 cents of agricultural land, Rs 5 lakh, Rs 6 lakh and Rs 7.5 lakh in Grama Panchayat, Municipality and Corporation respectively for purchasing land for house construction, Rs 6 lakh for house construction, Rs 2.5 lakh for house renovation, Rs 3 lakh for the construction of Padanamuri, Rs 40,000 for toilet construction, Rs 3 lakh for taking up self-employment initiatives on an individual basis and Rs 5 lakh for self-employment initiatives which are started as group initiatives. Apart from the individual assistances, the scheme also envisions implementation of 'Vulnerable Rehabilitation in Nagar levels' which will take up common works in the various Nagars similar to Ambedkar Village Development Scheme

Source: Scheduled Castes Development Department

grant. Year-wise details of beneficiaries received inter caste marriage assistance for the last five years are given in **Appendix 8.2.17**. As part of the strict implementation of the PoA Act, one legal councilor in each District, one legal advisor and three call centre assistants in State-level were appointed in order to hear atrocity complaints, find solutions for them, take steps for the timely provision of compensation assistance, give the victims necessary legal assistance and create awareness against atrocities.

### **Corpus Fund for SCSP (Critical Gap Filling)**

Scheduled Castes Development Department earmarks a portion of outlay as Corpus fund in the Budget annually to fill critical gaps identified in the Scheduled Caste Sub Plan schemes. Corpus fund is intended to provide funds for addressing any critical gap in the SCSP provision under various schemes, on project basis with emphasis on human resource development, improvement of basic amenities and economic development of the people of Scheduled Castes communities. One third of the total amount earmarked for the Corpus Fund scheme is allocated to the Districts for implementation. Administrative sanction for projects up to Rs 25 lakh can be accorded at the District-level by District-Level Committee for Scheduled Castes/Scheduled Tribes, and the projects above Rs 25 lakh is implemented with the approval of State-Level Working Group. In 2023-24, 57 projects were completed by using Corpus Fund for an amount of Rs 20.2 crore. Road works, drinking water schemes, cultural centres and side protections for Scheduled Castes houses are the major works undertaken under 'Corpus fund'. Outlay and expenditure under the scheme from 2019-20 to 2024-25 (as on August 31, 2024) is given in **Appendix 8.2.18**.

### **Box 8.2.4 HOME Survey**

Home Survey, a flagship initiative of the Scheduled Castes Development Department, is designed to conduct a comprehensive and accurate data collection of Scheduled Castes population in Kerala. The main objective of the survey is to gather reliable and accurate data on the demographic, socio economic and cultural profile of Scheduled Castes population as the planning and implementation of programmes for their development and welfare needs to be based on accurate data. The survey enabled through digital platform makes it possible to understand the real need of the people, to collect data on various aspects of their life and to update them in a very fast and time bound manner. The HOME Survey data collection was officially inaugurated by Hon'ble Minister for the Welfare of Scheduled Castes, Scheduled Tribes and Backward Classes on March 5, 2024. The survey is in its final stage and as on September 9, 2024, data collection of 4,30,457 Scheduled Castes households has been completed.

Source: Scheduled Castes Development Department, 2024

### **Central Assistance to Scheduled Castes Sub Plan in Kerala**

Government of India has provided Special Central Assistance to Scheduled Caste Sub Plan (SCA to SCSP) to the States for undertaking mainly economic development programmes for the people of Scheduled Castes. It has helped the State Governments to fill the gaps that are not met from the Central, State and Local Government Plans. In 2022-23, by merging SCA to SCSP with other two Centrally Sponsored Schemes such as Pradhan Mantri Adarsh Gram Yojana (PMAGY) and Babu Jagajivanram Chhatrawas Yojana (BJRCY), a new Central Scheme called Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PMAJAY) was formed. The new scheme aims to (a) reduce poverty of the Scheduled Castes communities by generating additional employment opportunities through skill development, income generating schemes and other initiatives, (b) improve socio-economic developmental indicators by ensuring adequate infrastructure and requisite services in the Scheduled Castes dominated villages and (c) increase literacy and encourage enrolment of Scheduled Castes in schools and higher educational institutions by providing adequate residential facilities in quality institutions, as well as residential schools where required, especially in the aspirational Districts/Scheduled Castes dominated blocks and elsewhere in India. The Central Government supports the State in the implementation of the Protection of Civil Rights Act, 1955 and The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989. The Centre also provides a portion of the share capital assistance to the Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes Ltd. However, in

recent years, Central Government is reducing its support for various scholarship schemes for Scheduled Castes by changing the funding pattern of major schemes such as 'Post Matric Scholarship for Scheduled Castes Students', 'Pre-Matric Scholarship for Scheduled Castes Students Studying in Classes IX and X' and 'Pre-Matric Scholarships to the Children of those Engaged in Occupations Involving Cleaning and Prone to Health Hazards' from 100 per cent Centrally Sponsored schemes to 60 per cent Centrally Sponsored schemes for which 40 per cent of the cost has to be borne by the State Government.

### **Scheduled Tribes**

The development of the people of Scheduled Tribes in Kerala remains a critical focus of the State's social and economic policies. The economic strategy for Scheduled Tribes development emphasises reducing inequalities by promoting access to education, healthcare, employment, and sustainable livelihoods. Through targeted interventions such as the Tribal Sub-Plan (TSP) and special provisions for the Particularly Vulnerable Tribal Groups (PVTGs), the State aims to empower the Scheduled Tribes while addressing their unique socio-economic challenges, ensuring their participation in the process of economic development. The Government's commitment to sustainable and inclusive development of the people of Scheduled Tribes is reflected in policies that harmonise traditional practices with modern aspirations, fostering social justice and economic equity.

Kerala has 37 Scheduled Tribes communities, constituting 1.45 per cent (Census, 2011) of the State's population. As per the latest Scheduled Tribes survey conducted by Scheduled Tribes Development Department, the total Scheduled Tribes population of 4,88,386 across 1,47,868 families lives in 6,578 unnathies<sup>1</sup>. The largest concentration of the tribal population is in Wayanad (34 per cent) and Kasargod (17 per cent) Districts. Among these 37 communities, five are identified as particularly vulnerable tribal groups (PVTGs): Kadar, Kurumba, Kattunaikan, Koraga, and Cholanaikan. The distribution of Particularly Vulnerable Tribal Groups (PVTGs) in the State is detailed in **Appendix 8.2.19**.

The State has consistently allocated funds to the Tribal Sub-Plan (TSP) at a rate higher than the Scheduled Tribes population proportion, which is

1.45 per cent. Since 2017, the TSP allocation has remained steady at 2.83 per cent of the State Plan.

The major sources of funds for Scheduled Tribes development are (i) State Plan allocation, (ii) Funds under TSP components of CSS (iii) Grants under Article 275 (1) of the Constitution. In the financial year 2023-24, an amount of Rs 859.50 crore was earmarked for the welfare of Scheduled Tribes. Out of this, Rs 657.95 crore was allocated to the Scheduled Tribes Development Department, and Rs 201.55 crore for LSGIs. The Scheduled Tribes Development Department spent Rs 387.97 crore while LSGIs spent Rs 140.1 crore from the budgeted outlay. The total State Plan provision for the development of Scheduled Tribes in 2024-25 was Rs 859.50 crore. Out of this, an amount of Rs 657.95 crore (76.55 per cent) is earmarked to the Scheduled Tribes Development Department, and Rs 201.55 crore (23.45 per cent) was provided as grant-in-aid to Local Self Government Institutions.

The outlay and Expenditure of State Plan and Central share from 2017-18 to 2024-25 is given in **Appendix 8.2.20**. Details of financial and physical achievements of schemes implemented by the Department in 2023-24 and 2024-25 (as on August 31, 2024) is given in **Appendix 8.2.21** and in **8.2.22**.

Major developmental programmes undertaken for the welfare of the people of Scheduled Tribes are given below

### **Land**

The Tribal Resettlement and Development Mission (TRDM), established in 2001, aims to provide land to landless tribal communities and promote the overall development of resettlement areas. The key activities include land distribution through the land bank scheme, allocation of vested forest land, and implementation of the Forest Rights Act. According to the latest TRDM data, 6,021 Scheduled Tribes families remain landless across the State and District-specific details is shown in **Appendix 8.2.23**.

Major achievements under the scheme in 2023-24 are outlined below.

- Under the Land Bank scheme, 6.45 acres of land was distributed to 43 beneficiaries of Thiruvananthapuram, Kollam, Kottayam, Palakkad, and Kasaragod Districts.

- Under Forest Rights Act, 1975.78 acres of land was distributed to 1,315 tribals. Of this, 929.92 acres of land was granted to 1049 beneficiaries in Thiruvanthapuram, 20.00 acres of land to 20 beneficiaries in Pathanamthitta, 157.35 acres of land to 30 beneficiaries in Idukki, 787.48 acres of land to 105 beneficiaries in Palakkad, 81.03 acres to 111 beneficiaries in Wayanad Districts.
- Altogether, 191.6 acres of vested forest land was distributed to 601 beneficiaries in Malappuram and Kasaragod Districts.
- An additional 20.98 acres of Revenue Land was distributed to 27 beneficiaries of Thrissur, Palakkad and Kasaragod Districts.

In 2023-24, TRDM distributed 2,194.81 acres of land to 1,986 tribals. As of August 31, 2024, an additional 5.81 acres has been allocated to 19 tribals under Land Bank scheme. Due to the Government's remarkable efforts, Thiruvananthapuram became the first District in the State with no landless tribal people.

Details of land distribution from 2018-19 to 2024-25 upto August is given in **Appendix 8.2.24**. District-wise details of land distribution to Scheduled Tribes under various schemes is given in **Appendix 8.2.25** and year-wise details of outlay and expenditure under TRDM is given in **Appendix 8.2.26**

#### Other Major Development Activities in Rehabilitated Areas

In 2023-24, an amount of Rs 13.76 crore has been spent for the purchase of land in Kollam, Idukki, Ernakulam, Palakkad, and Wayanad Districts under the Land Bank scheme. An amount of Rs 9.21 crore has been sanctioned for the house construction project implemented by the Tribal Resettlement and Development Mission in Tribal Resettlement Areas. As part of this project, construction of 94 houses has been completed, and construction work of 1025 houses is progressing in various stages. An amount of Rs 31.69 lakh has been sanctioned for land surveys across various Districts, while Rs 1.42 crore has been sanctioned for road construction in Wayanad and Kottayam District. Additionally an amount of Rs 1.51 crore has been sanctioned for electrification in Wayanad and Palakkad Districts and an amount of Rs 23.8 lakh has been sanctioned for drinking water

supply projects in Wayanad, Kannur, and Palakkad Districts. An additional amount of Rs 45.64 lakh has been sanctioned to the Public Works Department for the construction of an elephant-proof wall in Kannur District.

In 2024-25 (up to August 31, 2024), an amount of Rs 60.00 lakh has been spent for the purchase of land under the Land Bank scheme. Additionally, Rs 4.15 crore has been sanctioned for the house construction project implemented by the TRDM in tribal resettlement areas, Rs 38.67 lakh has been sanctioned for land survey in various Districts, Rs 5.70 lakh has been sanctioned for a drinking water project in Wayanad District, and Rs 3.21 lakh has been sanctioned for flower cultivation in the Aralam resettlement area in Kannur District.

#### Housing

The Government of Kerala has given top priority for providing housing for the people of Scheduled Tribes communities. According to the Scheduled Tribes Development Department, the number of landless homeless tribes in the State is 6021, and about 11002 tribal families with land are currently homeless. Since 2016-17, out of the 6998 houses sanctioned by the Scheduled Tribes Development Department under various housing schemes (HUDCO Housing Scheme, General Housing Scheme, Vanbandhu Kalyan Yojana Housing Scheme) 3,861 houses have been completed, as of August 31, 2024.

LIFE Mission has been instrumental in implementing housing programmes since 2017-18. Additional funds from Local Self-Governments and the Prime Minister's Awaas Yojana have been utilised to support housing initiatives for the people of Scheduled Tribes. In the first phase of LIFE Mission, which focused on completing unfinished houses, 18,182 unfinished houses have been identified of which 17,400 houses were completed. Under Phase II, which aimed at providing housing for homeless with land, 24,130 out of 51,046 identified houses (including additional list) have been completed. In Phase III, which aimed at housing for landless and homeless, 833 out of 16,613 identified houses (including additional list) have been completed.

<sup>1</sup>Through G.O (Ms) No.16/2024/SCSTD, dated 18/06/2024, Govt. of Kerala directed to use terms such as 'Nagar', 'Unnathi' and 'Prakrithi' instead of 'Colony', 'Settlement' and 'Ooru' for referring to the residing areas of the people of Scheduled Castes and Scheduled Tribes Communities.

The Department also aims to renovate dilapidated houses in Scheduled Tribes areas and complete the construction of unfinished houses under a programme called SAFE (Secure Accommodation and Facility Enhancement Programme). According to Government guidelines, beneficiaries of the SAFE programme include households whose houses were completed after April 1, 2006, but who have not received any Government assistance for renovation or completion of houses after April 1, 2018, and whose annual income is below 2.5 lakh rupees. Based on the estimate, an amount of 2.5 lakh rupees is allocated per house. Priority is given to families affected by floods, those identified in the 'Extreme Poverty Survey 2021-22,' and families identified through the e-survey for micro-plan preparation.

In the financial year 2022–23, the target was to renovate or complete 1,500 houses under the SAFE programme. Of the 1,406 beneficiaries who signed agreements, 628 houses have been successfully renovated. For the year 2023-24, the target was to renovate or complete 3,072 houses. In line with this, 3,043 beneficiaries signed agreements, and 113 houses have been renovated so far. For the financial year 2024-25, it is targeted to renovate or complete 3,826 houses and agreement execution procedures with beneficiaries are underway.

District-wise details of the house construction under LIFE Mission is given in **Appendix 8.2.27** and details of phase-wise house construction for the Scheduled Tribes beneficiaries under LIFE Mission are given in **Appendix 8.2.28**. The outlay and expenditure of the Department's housing scheme along with the year-wise number of beneficiaries from 2018-19 to 2024-25 (as on August 31, 2024), initiated prior to the inception of LIFE Mission, including the latest SAFE Scheme, is given in **Appendix 8.2.29**.

### **Electrification in Unnathies**

Regarding electrification, out of the total 6,578 unnathies, 6,523 unnathies are electrified. Currently, all unnathies in ten Districts achieved the status of full electrification. The District-wise details of electrified unnathies is given in **Appendix 8.2.30**.

### **Educational Programmes**

The Kerala Government's significant investment in education has led to notable progress in tribal education, particularly among girls. Residential

schools and hostels, coupled with extensive scholarship programmes, have improved access to quality education for Scheduled Tribes students, especially those residing in remote areas. These initiatives have reduced the financial burden of tribal families, on education and contributed significantly to the overall development and empowerment of the people of Scheduled tribes.

Major achievements in education sector in 2023-24 are given below.

- As part of 'Ayyankali Memorial Talent Search and Development Scheme' 788 talented tribal students received assistance in 2023-24, and in 2024-25, up to August 2024, 192 students received assistance.
- In 2023-24, 5,279 students availed pre-matric scholarships, and 26,478 students availed post-matric scholarships.
- A total of 1,915 brilliant students were awarded special incentives in 2023-24
- In 2023-24, 482 orphans were provided special assistance, and in 2024-25, up to August 2024, 433 orphans availed special assistance.
- Laptops were distributed to 669 students in 2023-24.
- Civil Service Coaching : The Scheduled Tribes Development Department offers scholarships to support civil service aspirants from the youths of Scheduled Tribes for coaching at any recognised centre in India. Eligible applicants must be under 30 years of age, having family income below Rs 2.5 lakh, and hold a degree with at least 50 per cent marks. The Department provides up to Rs 3.00 lakh per student. In 2023-24, 32 students benefited from this programme.
- Community Study centres in tribal hamlets (Samuhya Padanamuri) : To improve educational outcomes of tribal children, to offer tuition and e-learning facilities, addressing dropout rates, enhancing school retention, and improving the overall quality of education for tribal students 343 Community Study Centers (Samuhya Padanamuri) were established across various unnathies.
- Unnathi Overseas Education Scholarship: It is a merit-based scholarship for pursuing higher studies abroad. This scheme provides financial and logistical support to Scheduled Tribes students in collaboration with ODEPC. Under this scheme, Scheduled Tribes students can receive scholarships of up to Rs 25 lakh for pursuing postgraduate studies abroad. In 2023-24, the Department sanctioned scholarships for



### Box 8.2.5 Community Study Centres in Thiruvananthapuram District: A Status Study Report

Under the guidance of the District-level Committee for Scheduled Castes and Scheduled Tribes Development, the District Planning Office, Thiruvananthapuram conducted a comprehensive assessment of community study centres in the District. This report evaluated the basic infrastructure and physical facilities of 31 community study centres and assessed the adequacy of amenities needed for educational and extracurricular activities, and explored the feasibility to start community study centres. The major findings include inadequate infrastructure at the community study centres, low student attendance, challenges in student retention, non-functional parent committees, lack of training for facilitators and insufficient monitoring mechanism. Based on these findings and recommendations of this study, action plans are now being implemented with the cooperation of Local Governments and other institutions to address the identified gaps and to enhance these facilities.

Source: Community Study Centres in Thiruvananthapuram District: Status Study Report, 2024

### Box 8.2.6 Comprehensive Action Plan for improving School Education of Scheduled Tribes Children

To address the challenges faced by Scheduled Tribes students in school education, the State Planning Board, in collaboration with the Departments of Scheduled Tribes Development, General Education, and Local Self-Government, has created a comprehensive action plan. The objectives of this initiative include ensuring universal enrollment of Scheduled Tribes students, improving their retention in schools, increasing their pass percentage and enhancing both grades and the quality of education.

In 2024-25, the program is being piloted in selected schools of Wayanad, with plans to expand it State-wide after evaluating the outcomes. Currently, activities related to this program are being carried out in 22 schools in Wayanad District. The project is being implemented based on the action plan prepared by the State Planning Board and the Department of General Education.

To ensure the effective implementation of the Action Plan, four committees have been formed viz, the State-level Coordination Committee, District-level Coordination Committee, Local-level Coordination Committee, and Local-level Implementation Committee. The responsibilities and duties of each committee have also been defined.

Source: STDD and General Education Department, 2024

two students, of whom one is currently studying abroad. In 2024-25, the Department sanctioned scholarships for 14 students, of whom 8 are studying abroad.

- The Scheduled Tribes Development Department conducted a study tour for 296 Scheduled Tribes students, including PVTG students, under the 'Bharat Darshan – Study Tour' programme.
- Under the scheme of Self-employment Assistance and Skill Development Training for Scheduled Tribes Youth, entrance-oriented coaching assistance is being provided to Scheduled Tribes students seeking admission in professional courses like MBBS, BDS, BAMS, BHMS, and Veterinary Sciences etc. In 2023-2024, out of the 76 students who received coaching, 66 got admission in various streams, and remarkably, 23 students got admission in MBBS.

- Other notable initiatives to enhance Scheduled Tribes education include ensuring the efficient operation of all STDD educational institutions, modernising ITIs into comprehensive vocational training centres, and providing free library membership to Scheduled Tribes students through the State Library Council.
- To support digital learning facilities, in 2023-24 Scheduled Tribes Development Department provided internet facility in 20 tribal villages out of 164 villages that lacked connectivity.

Details of scholarships and assistance availed by students from 2018-19 to 2024-25 (as on August 31, 2024) is shown in **Appendix 8.2.31**. Details of lump-sum grant, stipend and pocket money provided to Scheduled Tribes students in 2023-24 and 2024-25 (as on as on August 31, 2024) are given in **Appendix 8.2.32**. Details of

Educational institutions run by the Scheduled Tribes Development Department is given in **Appendix 8.2.33**.

In 2023-24, Rs 160.77 crore (24.43 per cent of the total allocation for the Department) was earmarked for education. Year-wise details of outlay and expenditure under education sector are given in **Appendix 8.2.34**.

### **Health programmes**

The Scheduled Tribes Development Department has implemented various health programmes to improve healthcare for tribal communities. Key initiatives include the Comprehensive Tribal Health Programme, Financial assistance for sickle cell anemia patients, Janani Janmraksha (addressing nutritional needs of pregnant women and adolescents), financial aid to tribal healers, and running of Mobile Medical Clinics to provide healthcare in remote areas. The Kaithang Scheme supports orphaned tribal children, while KATADI (Kerala Accelerated Tribal Ability Development and Inclusion Initiative) provides assistive devices like wheelchairs and hearing aids to differently-abled Scheduled Tribes members.

Another important initiative, Oorinte Tharattu, aims to reduce infant mortality among Scheduled Tribes in Attappady. This project involves forming adolescent groups to educate them on lactation and pregnancy, providing neonatal kits to pregnant women, and offers training in childcare. The goal of Oorinte Tharattu is to enhance awareness in neonatal care and decrease infant mortality rates in tribal villages. The assistance provided in health sector in 2023-24 is detailed in **Box 8.2.7**.

In 2023-24, out of the budgeted amount of Rs 49.50 crore for health sector, an amount of Rs 36.48 crore was spent for health programmes. In 2024-25, Rs 20.27 crore was spent under the healthcare scheme, as on August 31, 2024. Details of outlay, expenditure and physical achievements under health sector is shown in **Appendix 8.2.35**. Major Health institutions run by the Scheduled Tribes Development Department are given in **Appendix 8.2.36**.

### **Skill development, Employment and Livelihood programme**

As part of the Government's efforts to address unemployment among the people of Scheduled Tribes youths, the Scheduled Tribes Development

Department has implemented several career guidance camps and skill training programmes. The Department's efforts have resulted in successful placements of trained Scheduled Tribes youths in both the Government and private sectors, including multinational companies abroad.

Key achievements and initiatives in Skill development, Employment and Livelihood programme for 2023-24 are listed below

- The Training for Career Excellence (TRACE) programme offers Scheduled Tribes youths a unique opportunity to enhance their employability through job training, skill development, and work experience within Government Departments for up to two years. It has successfully placed a number of individuals in various Government Departments. As part of the programme, 177 Scheduled Tribes Civil engineering graduates/diploma holders worked as accredited engineers and 140 youths worked as office management trainees in various offices, 1182 Scheduled Tribes youths worked as Scheduled Tribes Promoters and 54 worked as committed social workers. Also 343 Scheduled Tribes worked as facilitator in community study centres, 326 worked as Mentor teacher and 66 Nursing graduates worked as Tribal Paramedics. TRACE has not only provided valuable work experience but has also enhanced the employability of Scheduled Castes and Scheduled Tribes youth, contributing to their economic empowerment and social inclusion.
- The 'WINGS' programme offers scholarships for pilot training, enabling Scheduled Tribes students from Kerala to secure jobs at international airports and related sectors across the country. This programme has also successfully trained the State's first Scheduled Tribes cabin crew member. In 2023-24, 65 students completed aviation courses and achieved full placement. Currently, a new project is underway to train 70 more students in the aviation sector.
- The JWALA (Justice, Welfare and Legal Assistance) programme has been a crucial initiative in providing practical legal training to Scheduled Tribes law graduates, reflecting the Government's commitment to nurturing legal expertise within Scheduled Tribes communities. Under this program, 25 Scheduled Tribes Law graduates have been selected for three-year internships at renowned legal institutions, each receiving a monthly honorarium of Rs 18,000.

In 2023-24, 374 Scheduled Tribes youths participated in 7 skill training programmes. Among them 330 youths have successfully completed their training and they were placed in different capacities in various institutions. Details of skill trainings conducted and placement achieved are given in **Appendix 8.2.37**.

### **Food security and nutritional development programmes**

To combat malnutrition and poverty among Scheduled Tribes communities, the Government has implemented various food security programmes. These include food grain distribution during monsoons, community kitchens for vulnerable groups, and various agricultural projects. Additionally, specific initiatives like the millet village programme and nutrition sufficiency programme have been launched in Attappady to address nutritional concerns. To further improve the nutritional status of all tribals beyond 60 years of age, food kits containing essential items have been provided. The innovative 'Haritha Rashmi' project in Idukki and Wayanad aims to enhance food security and nutrition in these tribal areas.

### **Haritharashmi**

The Haritharashmi project, initiated by the Scheduled Tribes Development Department in association with the Centre for Management Development (CMD) aims to promote sustainable agriculture among Scheduled Tribes on underutilised land in Idukki and Wayanad. Benefiting 4,113 people across 376 tribal unnathies and 163 farmer groups, the project provides awareness programmes, experiential training,

and ongoing support, including seed distribution and market linkage. Implemented in Idukki and Wayanad, the project highlights include diverse crop cultivation, organic markets, harvest festivals, and community markets. Activities such as organic markets on Onam and Vishu and the cultivation of special crops like golden cucumber and Chendu malli, have boosted income for tribal communities, reducing dependency on intermediaries. The decentralised, need-based approach of the project has positively impacted the livelihoods and economic independence of its beneficiaries.

### **Millet Village Programme**

The Millet Village programme was initiated in 2017 to address the nutritional deficiencies among the tribal communities in Attappady by promoting the cultivation and consumption of millets, their traditional staple food. The project was initiated as a joint venture by the Department of Agriculture and the Department of Tribal Development, with an estimated budget of Rs 7.41 crore.

Historically, all tribal groups in Attappady cultivated and consumed millets. However, before the project began, millet cultivation was restricted to a few Kurumba unnathies. Since the project's inception, millet cultivation has been revived in 96 tribal unnathies, including the Iruula, Muduga, and Kurumba tribes, successfully reintroducing millets into the community's daily diet.

In 2019-2020, as the Millet Village project concluded, the Rebuild Kerala Initiative adopted it and launched the Attappady Tribal Comprehensive Sustainable Agricultural Development Project with a fund of Rs 7.99 crore. Currently, around

### **Box 8.2.7 Assistance provided in Health sector in 2023-24**

- A total of 1,25,866 people received medical assistance under the Comprehensive Tribal Health Care Scheme
- Under the distress relief Component of the Health Care Scheme, Rs 1.34 crore spent to assist 71 families who had lost their sole breadwinner.
- Monthly financial assistance of Rs 2,500 was provided to 905 sickle cell anemia patients.
- Monthly financial assistance of Rs 2,000 was provided to 10,015 pregnant women and lactating mothers under the Janani Janmaraksha scheme.
- Annual grant @ Rs 10,000 was given to 241 tribal healers under the scheme 'Financial Assistance to Traditional Tribal Healers'
- About 2,619 medical camps were arranged by mobile medical clinics for ensuring health Services to tribals at their door steps.

Source: *Scheduled Tribes Development Department, 2024*

1,000 hectares are dedicated to millet farming each season, and in 2023-24, 2,003 hectares across two seasons were cultivated. The project aims to expand this to 3,000 hectares annually.

Significant progress has been made towards organic certification, with 742 hectares of land belonging to 926 farmers from 40 unnathies have obtained organic certification. The remaining 153 hectares of land belonging to 369 farmers from 33 unnathies are undergoing certification processes. This is the first time in India that a tribal community has achieved such a large-scale organic certification for millet cultivation. The project also focuses on other locally cultivated crops. As a result, 'Attappady Avara' and 'Attakkompu Avara' have recently received Geographical Indication (GI) tags.

To process and market the millets produced by farmers, the Attappady Tribal Farmers Association for Millets (ATFARM) was formed. A mill with a daily processing capacity of 500 kilograms has been set up in Chirakkadavu, Puthur Panchayat. The high-quality products from this mill have received positive market response.

In connection with the International Year of Millets, the 'Attappadi Millet Village programme' led the State-level initiatives for seed bank training, technical knowledge sharing, and awareness activities relating to millet and its production. This project has helped the Scheduled Tribes communities of Attappady in attaining health, agricultural, and economic improvement through a farming practice well-suited to their needs.

#### **Namuth Vellame – Nutrition-sufficiency in food through Agroecology in Attapady**

The Namuth Vellame programme has helped 1,315 farmers in Attappady, who cultivate 1,887.3 acres across 41 unnathies. By reclaiming barren land and promoting sustainable farming practices, the programme has not only enhanced food security but also generated economic benefits. The shift towards millet-based diets has improved nutritional outcomes and reduced reliance on external food sources. Moreover, the revival of traditional agricultural practices has strengthened community resilience and preserved cultural heritage. The project has not only addressed food security and malnutrition but also contributed to rural economic development. The production and

marketing of millet-based products have generated additional income for the local community, empowering them economically.

Activities conducted in 2024

- An additional 475.5 acres of land has been brought under cultivation by bringing around 450 new farmers from 12 nagar under Namuth Vellame as part of the programme's expansion.
- Through the efforts of 892 farmers, approximately 900 acres of land has been cleared, tilled, and seeded.
- A total yield of 5473.5 kilograms was achieved through the cultivation of 17 different crops such as paddy, sesame, groundnut, and various vegetables.

#### **Kerala Tribal Plus under MGNREGS**

Kerala has introduced the Kerala Tribal Plus Scheme to provide additional employment opportunities to tribal households. This scheme offers an extra 100 days of work beyond the 100 days guaranteed under MGNREGA. Funded by the State Government, the scheme has been implemented since 2017-18.

Kerala stands out as a pioneering State in rural development, providing 200 days of wage employment to its tribal households, significantly exceeding the national average. The scheme focuses on infrastructure development in tribal areas, including road construction, livelihood asset creation, and land development.

To enhance the effectiveness of the scheme, the State Government has adopted an advance wage payment system for tribal workers in Attappady Block in Palakkad, Wayanad District, and Aralam farm in Kannur District. This innovative approach ensures timely wage payments and encourages participation in the scheme.

By offering a significant increase in wage employment days and prioritising the needs of marginalised Scheduled Tribes communities, Kerala has set a national benchmark in rural development and social welfare. This initiative demonstrates the State's commitment to inclusive growth and poverty reduction.

In the Financial Year 2023-24 Rs 35 crore has been released and a total of 15,51,466 Person

## Box 8.2.8 Sahyakiran and Marayoor Madhuram

### Sahyakiran

The Sahyakiran initiative, launched by the Centre for Management Development (CMD) with funding from Scheduled Tribes Development Department, aims to revitalise traditional tribal occupations in Kerala. Covering eight Districts, it supports occupations like Marayoor jaggery production, bamboo and cane handicrafts, mat and carpet weaving, forest honey processing, and the collection of medicinal plants and NTFPs (Non-timber forest products). CMD provides training and equipment for the scientific collection and processing of these products. Sahyakiran directly employs 700 tribal individuals and the programme indirectly benefits 2,100 people, fostering skill development and sustainable livelihoods in tribal communities.

### Marayoor Madhuram

As part of the revitalisation of traditional Marayoor Jaggery, a GI-tagged Product, the Marayoor Jaggery production plant was established in Dundi Kombu, Marayoor. The project started by organising 150 beneficiaries into a single Self-Help Group (SHG), which later led to the creation of the Marayoor Kanthalloor Tribal Farmers Producer Company, marking a pioneering initiative for empowering Kerala's tribal communities. The project was rolled out on August 30, 2024 under the brand 'Marayoor Madhuram'.

The project preserves the traditional method of jaggery production while incorporating modern techniques there by ensuring stable livelihoods and promoting economic autonomy among tribal communities. The involvement of beneficiaries as shareholders strengthens a sense of ownership, pride, and self-reliance among the Scheduled Tribes community.

Source: Centre for Management Development, 2024

days have been generated with the participation of 38,070 Scheduled Tribes families and an amount of Rs 39.23 crore have been spent.

The progress attained under the Kerala Tribal Plus Scheme from 2018-19 to 2023-24 (up to August 2024) is given in **Appendix 8.2.38** and the District-wise progress of the Tribal Plus scheme in the year 2023-24 is given in **Appendix 8.2.39**.

### Scheduled Tribes and Kudumbashree

Kudumbashree's tribal interventions have achieved an impressive inclusion rate of 96.8 per cent in its Neighbourhood group's membership. The implementation of various programmes in hamlets is facilitated by community resource persons known as animators. The primary objective of Kudumbashree's tribal intervention schemes is to establish a robust foundation for the execution of development activities within tribal communities. A significant focus area is the education sector, where the Bridge Course initiative provides educational assistance to those who need assistance in their studies or displaying inconsistency in attending school.

### Achievements of 2023-24 and 2024-25

- Identified 613 self-reliant neighbourhood groups

- (NHGs), and provided revolving funds to 89 NHGs, all of which are now capacitated through Panchasutra which is the five cardinal principles viz, regular meetings, regular savings, internal lending, regular repayment and book keeping.
- A total of 588 goat rearing units and 362 backyard poultry units have been established. Additionally, 160 new Joint Liability Groups consisting of tribal members have been formed to support farming activities.
- Tribal families have launched 67 group-based and 113 individual microenterprise units, with Kudumbashree Bazaar facilitating the marketing of tribal products.
- Support has been provided to 293 tribal JLGs through the distribution of a corpus fund of Rs 4,000 per JLG.
- The bridge course for tribal school-going students continues at 242 centres, benefiting 4,027 students with a regular tuition programme held in their hamlets.
- A corpus fund has been provided to 204 NHGs to support start-up activities.
- A total of 57 Tribal Youth Clubs have been established, with sports-related support provided to existing youth clubs.
- As of now, there are 6767 Kudumbashree neighbourhood groups operating in scheduled

tribe unnathies spread across 14 Districts. These neighbourhood groups, with a total membership of 1,17,932, are exclusively comprised of Scheduled Tribes women.

- Out of the 6,767 neighbourhood groups in 14 Districts, 1750 neighbourhood groups are currently bank linked, which accounts for 26.75 per cent of the total neighbourhood groups in the unnathies. Kudumbashree has been able to provide a total loan of Rs 51.90 crore to these groups.
- As part of implementing livelihood activities, Kudumbashree has established 2,348 producer units across 14 Districts and provided financial assistance of Rs 1.45 crore. The highest number of units is operational in Idukki, with 1000 units. The lowest number, 18 units, is in Alappuzha.

Detailed District-wise information regarding Kudumbashree neighbourhood groups operating in scheduled tribe areas is provided in the **Appendix 8.2.40** and the District-wise details of Kudumbashree neighbourhood groups linked to banks in Scheduled Tribes areas are given in **Appendix 8.2.41**. The District-wise details of Kudumbashree units promoting livelihood are given in **Appendix 8.2.42**.

### Social Development programmes

Social security programmes for the people of Scheduled Tribes address the unique challenges faced by these communities, offering marriage assistance, financial support, and tailored development packages for vulnerable groups like the Adiyas and Paniyas and other Primitive Tribal Groups. Key initiatives include family and unnathi-based micro-plans, and the Ambedkar Village Development Scheme work to enhance infrastructure, livelihoods, and overall quality of life in tribal areas.

Major physical achievements under social development schemes are given below.

- Marriage assistance was provided to 275 Scheduled Tribes girls at the rate of Rs 1.50 lakh.
- Under the Ambedkar Settlement Development Scheme, infrastructure development projects were completed in 74 of the 94 unnathies selected in 2017-18. In 2020-21, 63 unnathies were selected and works are progressing. Initial activities are currently underway to launch projects in 76 selected unnathies in 2022-23.
- Assistance was provided to 550 beneficiaries under the Plan scheme for the Special

Programme for Adiyas, Paniyas, PVTGs, and Tribes living in forests.

- Microplan – A community based empowerment strategy viz, Micro plan, is prepared as a road map for the development and maintenance of tribal unnathies. There are 6578 tribal unnathies in Kerala. Microplan is prepared for each unnathies, based on the needs of these unnathies. Data was collected from 54 nagars in 2023-24 as part of project implementation.
- Edamalakkudi special package – As part of the Edamalakkudi Special Package, Rs 13.70 crore was allocated for the construction of a 7.2 km Pettymudi-Idalipparakkudi road, of which construction of 3 kilometer has been completed. Currently, as part of the basic infrastructure development in Edamalakkudi, work is underway to provide drinking water, electricity, internet connectivity, additional roads and related facilities.

### Major Farms under Scheduled Tribes Development Department

#### Aralam Farm

Established in 1970 as a Central State Farm on 7,000 acres in Kannur, Aralam Farm has long supported tribal welfare and agriculture. Half of its land was allocated to 3,500 landless Scheduled Tribes families, while the rest is used for farming activities. Currently, the Scheduled Tribes Development Department is implementing a project to support 3,000 tribal families through various agricultural initiatives.

A sum of Rs 3.00 crore was sanctioned for the first phase of renovation works at the farm, and Rs 1.50 crore was sanctioned for the second phase and the nursery at Aralam Farm was renovated, enabling the supply of planting materials across Kannur and nearby Districts as per the orders placed by Agriculture Department and annual income of around Rs 2.00 crore is being generated through this.

In 2022–23, administrative approval was obtained for Rs 269.02 lakh for agricultural activities at Aralam Farm. Out of this, Rs 134.51 lakh has been sanctioned so far for the following activities,

- Turmeric cultivation of the Prathibha variety was carried out on 25 acres of the farm, and the harvest was successfully marketed.
- Mushroom cultivation was started with an investment of Rs 50,000, and the first-stage harvest yielded a revenue of Rs 57,512 from mushroom sales.

- A sum of Rs 3.91 lakh was allocated to start the cultivation of spices and oilseeds.
- An amount of Rs 37.27 lakh was allocated for ginger grass cultivation.
- A scientific beekeeping project was launched with an investment of Rs 175.45 lakh, yielding 3,300 kg of honey, which has been decided to be marketed through the TRIFED.
- A high-tech nursery, with 90 per cent of its construction completed, is being developed at a cost of Rs 45 lakh.
- A packaging unit was set up at a cost of Rs 2.98 lakh. Initial activities have been started to market the farm's products using this.
- In 2023-24, administrative approval was obtained for Rs 103.5 lakh for the Hybrid Seedling Production Programme. According to this, the funds received in the first phase have been used to establish a mother tree orchard for coconuts on 50 acres as the first step towards producing and marketing high-yielding coconut seedlings at the farm.
- In 2023-2024, administrative sanction of Rs 310 lakh was secured to support various agricultural activities.

#### **Attappady Co-operative Farming Society**

In 2020, Kerala Agricultural University developed a 10-year renovation plan for Attappadi Farm under the Scheduled Tribes Development Department, allocating funds to the Attappadi Co-operative Farming Society (ACFS) for sapling planting, crop management, fencing, and storage construction, which boosted tribal incomes. To support modernisation, new machinery was acquired with the collaboration of Department of Agriculture. Based on the University's recommendations, Rs 21.3 crore has been earmarked for ACFS agricultural projects over 10 years, with Rs 7.26 crore sanctioned so far.

The Attappadi Co-operative Farming Society manages several farms including Chindakki, Karuvara, Pottuppady, and Varadimala. The primary crops cultivated are Arabica and Robusta coffee, pepper, and cardamom along with intercrops like nutmeg, cloves, coconut, areca nut, turmeric, and ginger. The society employs both offline and online (e-auction) methods to sell their produce. Holding organic certifications (NPOP and NOP), their products fetch higher prices than the market rate. These products are marketed through the society's retail outlets, TRIFED

outlets, the Amazon platform, and various events like the India International Trade Fair (LITE), TRIFED fairs, and fairs organised by the State Government.

#### **Priyadarshini Tea Estate and Priyadarshini Tea Factory**

Mananthavady Tribal Plantation Co-operative Ltd., also known as Priyadarshini Tea Estate, was established in 1984 to support bonded tribes in Wayanad District. The society has been operating the estate for 38 years, with 402.10 acres of land devoted to tea cultivation and 593.13 acres for coffee, and fruit cultivation. To diversify, the estate has decided to market Priyadarshini Agro products. The Tribal Development Department has implemented two projects to provide employment and livelihood opportunities for the estate workers. The first involves infilling tea plants, expanding coffee plants, and cultivating fruit plants. The second project focuses on pepper planting and vegetable cultivation.

As part of various agricultural activities conducted on the farm in 2022-2023, a sum of Rs 36.22 lakh was allocated. Additionally, an initial instalment of Rs 11.22 lakh has been granted for agricultural activities for the year 2023-2024. Furthermore, administrative approval has been granted for an amount of Rs 317.90 lakh to carry out various activities for the year 2024-2025.

#### **Legal Protective Measures: Protection of Civil Rights and Enforcement of Prevention of Atrocities Act.**

In order to provide constitutional and legal protection to safeguard the interest and protect the marginalised sections of society from exploitations, the Protection of Civil Rights Act and Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 Act, was enacted. The provisions of the Act prevent offences against the Scheduled Castes and Scheduled Tribes. In 2023-24, about 106 victims of atrocities, and in 2024-25, 30 victims of atrocities were provided relief funds. In 2023-24, inter-caste marriage assistance was given to 38 couples. In 2024-25, inter-caste marriage assistance was given to 5 beneficiaries (as on August 2024). Details of number of beneficiaries received marriage assistance and inter-caste marriage assistance from 2018-19 to 2024-25 is given in **Appendix 8.2.43**.

### **Corpus Fund for TSP (Critical Gap Filling)**

Scheduled Tribes Development Department earmarks a portion of the Annual Budget for filling critical gaps identified in the Tribal Sub Plan schemes. In 2023-24, Rs 45.00 crore was earmarked for the scheme and Rs 34.06 crore was expended for various projects undertaken by the Scheduled Tribes Development Department. Outlay and expenditure under the scheme from 2018-19 to 2024-25 (as on August 31, 2024) is given in **Appendix 8.2.44**.

### **Kerala Institute for Research Training and Development Studies for Scheduled Castes and Scheduled Tribes (KIRTADS)**

The Kerala Institute for Research, Training, and Development Studies for Scheduled Castes and Scheduled Tribes (KIRTADS) is a Government research institute established in 1972. It focuses on research, training, and development initiatives for Scheduled Communities in Kerala. KIRTADS conducts ethnographic and socio-cultural studies,

evaluates development programmes, and organises capacity-building programmes for Scheduled Castes/Scheduled Tribes communities. It also houses an Ethnological Museum, showcasing the rich cultural heritage of Kerala's tribal communities. Additionally, KIRTADS is currently undertaking a project to establish a Tribal Freedom Fighters Museum in Wayanad, aiming to recognise and honor the contributions of tribal freedom fighters and preserve their indigenous knowledge and culture.

The scheme-wise outlay and expenditure of KIRTADS is given in **Appendix 8.2.45**. Number of anthropological investigation cases against Scheduled Castes and Scheduled Tribes in Kerala from 2017-18 to 2024-25 conducted by KIRTADS (as on August 31, 2024) is given in **Appendix 8.2.46**.

### **Box 8.2.9 Major studies and other activities conducted by KIRTADS in 2023-24.**

#### **Studies :**

- Feasibility of Implementing PESA ACT 1996 in Kerala
- Effectiveness of Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act 1989, amongst the Tribal Communities in Kerala
- Democratic Decentralisation : Representation, involvement and Empowerment of the Scheduled Tribes Women in Kerala
- Impact of Vana Samrakshana Samiti on the livelihood status of Scheduled Tribes in Kerala
- Language, Oral Literature and Traditional Knowledge System of Cholanaikkan of Malappuram District of Kerala.
- Traditional Agricultural Practices of Scheduled Tribes Communities of Idukki, Wayanad, Thiruvananthapuram Districts of Kerala

#### **Other activities:**

- Oral Literature, Language and Art forms of Kurumbar Community in Attappady (Through this project a learning material for promoting Kurumba language has prepared)
- Publication of –
  1. Oral Literature of Malavettuvan Community; and
  2. Language, Dialect Study and Analysis of Eravallan Scheduled Tribes community of Palakkad District
- Collection and Detailing of the Artefacts of the Ethnic Communities abode in Kasaragod and Kannur Districts of Kerala. (This helps to impart the tribal culture and knowledge to public through their material remains and the collected artifacts were displayed in KIRTADS Ethnological Museum)

Source: Directorate of KIRTADS, 2024



### **The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes Ltd**

The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes (KSDC for Scheduled Castes and Scheduled Tribes) Limited implements various income generating and other welfare programmes designed to meet the needs and aspirations of entrepreneurs from Scheduled Castes/Scheduled Tribes communities. Schemes being implemented by the Corporation can be broadly grouped as (i) Sole Lending Scheme (ii) Schemes implemented in association with the National Scheduled Castes Finance and Development Corporation (NSFDC) and (iii) Schemes implemented by National Scheduled Tribes Finance and Development Corporation (NSTFDC). Income generating and self-employment schemes of the Corporation includes Beneficiary Oriented Schemes, Multi-Purpose Unit Loan, Transport Scheme, Loan to Start up Entrepreneurs, Loan for Rehabilitation of Return Emigrants, Foreign Employment Loan, Micro Credit Finance System, Laghu Vyavasaya Yojana, Loan for Tribal Entrepreneurs, Women Empowerment Programme for SHGs, Mahilasamridhi Yojana, Professional Service Schemes, Land Purchase Scheme for Agricultural Labourers, Working Capital Loan to Petroleum Dealers etc. Education Loan, Foreign Education Loan, Marriage Assistance, Housing loan, Housing Renovation Loan etc. comes under the Social welfare schemes. In 2023-24, the Corporation disbursed an amount of Rs 101.73 crore through the schemes meant for assisting Scheduled Castes and benefited 5,092 people. Altogether, 701 Scheduled Tribes beneficiaries got the assistance through various schemes which disbursed Rs 15.92 crore. In 2024-25, assistance has been given to 1,886 Scheduled Castes and 239 Scheduled Tribes beneficiaries (as of August 31, 2024). Major initiatives of the Corporation in 2023-24 are given below.

#### **Income Generating/Self Employment Schemes**

Beneficiary Oriented Schemes for Scheduled Castes and Scheduled Tribes helps unemployed youth among Scheduled Castes, and Scheduled Tribes to start self-employment ventures with a maximum project cost of Rs 3 lakh. Through this scheme, 357 Scheduled Castes and 56 Scheduled Tribes individuals received assistance in 2023-24. The Multi-Purpose Unit Loan for Scheduled Castes and Scheduled Tribes finances small and

medium sized projects for Scheduled Castes and Scheduled Tribes entrepreneurs which are viable and require less gestation period. In 2023-24, 47 Scheduled Castes entrepreneurs and 8 Scheduled Tribes entrepreneurs availed assistance under this scheme. There is a loan scheme for start-up entrepreneurs which funds small and medium sized technology driven projects of young Scheduled Castes entrepreneurs and innovators with investment needs not exceeding Rs 50 lakh at 7 per cent rate of interest. Priority is given for newly graduated students from professional courses. Likewise, there is scheme called Loan for Tribal Entrepreneurs to help poor Scheduled Tribes youths for starting small projects, including in areas of agriculture, trade etc. This scheme created 117 entrepreneurs from Scheduled Tribes communities. Likewise, through Laghu Vyavasaya Yojana, 1,358 Scheduled Castes entrepreneurs received assistance in 2023-24. Through 'Loan for Rehabilitation of Return Emigrants', KSDC for Scheduled Castes and Scheduled Tribes, extends need based loan subject to a maximum of Rs 20 lakh to those Scheduled Castes-Scheduled Tribes applicants identified by NORKA ROOTS to start viable income generating ventures. NORKA releases 15 per cent of the project as capital subsidy.

KSDC for Scheduled Castes and Scheduled Tribes is implementing Women Empowerment Programme in association with Kudumbashree for the empowerment of rural women through social mobilisation and under this scheme; loan is given to groups of Scheduled Castes/Scheduled Tribes women entrepreneurs. In 2023-24, 483 Scheduled Castes and 30 Scheduled Tribes beneficiaries were assisted under this programme. Apart from this, KSDC have Mahila Samridhi Yojana which offers soft loan assistance to Scheduled Castes women entrepreneurs and Adivasi Mahila Sashakthikaran Yojana (NSTFDC) for Scheduled Tribes women. In 2023-24, through Mahila Samridhi Yojana and Adivasi Mahila Sashakthikaran Yojana, assistance has been given to 95 Scheduled Castes and 48 Scheduled Tribes women respectively for their self-employment initiatives.

#### **Social Welfare Schemes**

KSDC for Scheduled Castes and Scheduled Tribes also offers loans and assistances for various social welfare schemes/prospects of Scheduled Castes and Scheduled Tribes. Education Loan for professional courses, Foreign Education Loan up to Rs 10 lakh, Marriage Assistance up to

### Box 8.2.10 Tribal arts in Youth Festival

In a significant move to preserve and promote the rich cultural heritage of Kerala's tribal communities, the State Government has incorporated five tribal art forms into the annual school arts festival. Based on requests from tribal communities across the State and reports from the KIRTADS directorate, five tribal dance forms have been included in the arts festival. These include Mangalamkali of the Mavila and Malavettuvar communities, Kambalakkali Vattakkali (Paniya dance) of the Paniya community, Irula Nritham (Irula Nritham or Aattam Paattam) of the Irula community, Paliya Nritham of the Paliya community, and Aattam of the Malapulayar community. This inclusion aims to showcase the rich heritage of tribal communities and to foster awareness and appreciation of indigenous cultural practices among young students.

- Mangalamkali is a ritualistic dance by the Mavila and Malavettuvar tribes from Kasaragod and Kannur, performed on occasions like weddings. Both men and women participate, dancing to the rhythm of Thudi drums and folk songs, embodying Dravidian cultural influences.
- Paniya Dance features energetic footwork and vibrant music, performed by the Paniya tribe of northern Kerala during community gatherings and festivals.
- Malapulayattam, also called Chikk Aattam, is performed by the Malapulayan tribe of Idukki District, adding to their unique cultural expressions.
- The Irula Nritham by the Irula community in Attappady, Palakkad, is both celebratory and sacred, marking rituals dedicated to the deity Malleeswara and certain funerals.
- Paliya Nritham, rooted in the Kumali area of Idukki and associated with the deity Mutharamman, features dynamic rhythms and is an integral part of local cultural celebrations.

This inclusion reflects the Government's efforts to preserve and promote Kerala's diverse tribal heritage within the educational system.

Source: Directorate of KIRTADS

Rs 2.50 lakh, Housing loan, Housing Renovation Loan etc. are few such schemes that assist the people of Scheduled Castes and Scheduled Tribes.

The Scheme-wise details of physical and financial achievements of the Corporation in 2023-24 and 2024-25 (as of August 31, 2024) are given in **Appendix 8.2.47**.

### Welfare of Other Backward Classes

Even prior to achieving independence, concerted efforts were taken to uplift the socially backward sections of the society. After independence, multitude of initiatives were also taken for eradication of their backwardness. Articles 15(4) and 16(4) of the Indian Constitution ensure special provisions and reservation to the backward classes in the realms of education and employment. As per Article 340 of the Constitution of India and the recommendations of the Mandal Commission Report, the State Government formed a special Department in November 2011 to promote the welfare of socially and educationally backward classes of the society.

Kerala stands one of the first among Indian States to ensure reservation for OBCs in public

employment and education. This proactive approach has yielded notably greater social advancement for the backward class in Kerala, and they are far better than their counterparts in other States of India. In Kerala, 90 communities are included in the OBC list, and 93 communities are included in the Socially and Educationally Backward Classes (SEBC) list. The most prominent OBC groups in Kerala are Ezhava and Muslim. Other backward communities with sizable populations are Latin Catholics, Viswakarma, Scheduled Castes Converted to Christianity, Hindu Nadar, SIUC Nadar, and Dheevara. Majority of the OBC communities are engaged in various traditional occupations.

The vision of the Backward Classes Development Department is to promote inclusive and sustainable social development for backward classes in the State, particularly for the most vulnerable among them. The OBC Development Department implements various educational schemes such as the provision of scholarships to pre-matric and post-matric students, employment generation schemes, skill training and assistance to people involved in traditional occupations. The Department had initiated many schemes to

uplift the traditional working-class communities, especially the most vulnerable groups through focused interventions and programmes.

### **Educational Assistance**

The Backward Classes Development Department provides numerous educational scholarships to OBCs, including overseas scholarships to study at foreign universities. Pre-matric and post-matric scholarships are provided for OBC as well as OEC students. Currently, students from Other Eligible Communities (OEC) are provided with all the educational assistance as given to Scheduled Castes and Scheduled Tribes, without any income limit.

Major educational interventions to OBC and OEC students in 2023-24 are outlined below.

- Provided pre-matric assistance to 20,777 OEC students and post-matric assistance to 3,61,758 OEC students.
- Provided pre-matric scholarship to 20,036 OBC students and post-matric scholarship to 36,098 OBC students.
- Provided Overseas Scholarship to 48 OBC students for higher studies in rated foreign Universities. A maximum amount of Rs 10.00 lakh per student has been provided.

The Department has made significant efforts to ensure the timely disbursement of educational assistance to OBC and OEC students. For this, an amount of Rs 394.45 crore has been received by the Department through additional authorisation in 2023-24 for providing post matric and pre matric assistance. The Department has been providing scholarships to OBC students studying in national institutions and Central universities in other States. Furthermore, it provides overseas scholarships for students to pursue studies at rated universities around the world.

The Department has been providing financial assistance to female students from Other Backward Classes in medical and medical allied sectors of Government and Government-aided institutions through the scheme 'Special Scholarship for Girl Students of OBC who have lost a parent or both'.

### **Schemes for Employment Generation**

To enhance the employability of the backward classes, schemes such as 'Employability Enhancement Programme' and 'Career in

Automobile industry through public private participation' are implemented. Financial assistance is provided to students to support their preparation for medical/engineering entrance exams, civil service exams, as well as competitive exams like UGC/NET/JRF/GATE/MAT in esteemed educational institutions and also for starting self-employment ventures under the scheme 'Employability Enhancement Programme'. In 2023-24, 1112 beneficiaries availed assistance under the scheme. Placement-oriented training is imparted in areas such as automobile, logistics, travel and tourism, hotel management, total station survey and polymer technology through the scheme 'Career in automobile industry through public-private participation and 397 individuals benefited under the scheme in 2023-24.

Numerous OBC communities are involved in distinct traditional vocations such as pottery crafting, fishing, weaving, laundry, oil extraction, and hairdressing, among others. To encourage and support these traditional occupations among OBCs, financial assistance was extended to pottery artisans, barbers, and skilled artisans. In the financial year 2023-24, 104 pottery artisans and 193 traditional barbers received financial assistance. The Department also offered financial support to working-class communities with a tradition of craftsmanship, enabling them to procure toolkits to enhance the quality of their work. A total of 1965 individuals underwent skill development training and obtained assistance for toolkit procurement through the 'Skill Development Training and Toolkit Grant for Traditional Craftsmen' programme.

The "Kumbhara Colony Infrastructure Development Programme" is a comprehensive initiative aimed at uplifting densely populated Kumbhara colonies in Kerala, which are home to traditional pottery-making communities, including the Kumbharan, Kushavan, Kulalan, Odan, and Velaan groups among the Other Backward Classes (OBCs). These communities face considerable socio-economic challenges, and their living conditions lack even the most basic amenities such as work sheds, chimneys, and modern equipment.

In response to these pressing challenges, the programme was introduced to provide essential services, including access to clean drinking water, electricity, well-maintained roads, footpaths, community halls, libraries and other necessities. Additionally, it seeks to modernise the pottery

trade by providing work sheds, chimneys, and transportation facilities to market their products. For the financial year 2023-24, an outlay of Rs 50.00 lakh has been allocated for this initiative. In its initial phase, the programme has been implemented in the Kodakara Kumbhara Colony in Thrissur District. An amount of Rs 1.00 crore has been expended to provide basic amenities and pug mill and this initiative has significantly improved the living conditions of 85 disadvantaged families residing in the colony.

The Department is providing financial assistance to individuals among OBCs engaged in the auto taxi sector to switch over to new-generation electric and CNG vehicles. Under the scheme, a subsidy of 20 per cent of the loan amount is provided for vehicle loans, up to a maximum of Rs 1.00 lakh. A considerable number of people belonging to the backward classes in the State are engaged in various traditional occupations and face intense market competition. To address this, the Department introduced a scheme in 2023-24 to ensure fair prices for their products by addressing marketing issues.

In 2024-25, the Department launched the scheme 'Start-up Ventures for Engineering Professionals' to support unemployed engineering graduates among OBCs to start technology based start-up ventures. Distribution of mobile street vending carts' was also initiated in 2024-25 for street vendors among OBCs. The scheme provides aluminum four-wheeled push carts facilitating continuous business operations for street vendors.

To increase the representation of Other Backward Classes in the Indian judiciary, a targeted initiative was introduced to assist OBC advocates with financial grants for three years following their receipt of the sanad (license to practice).

A total amount of Rs 731.19 crore has been spent by the Department to provide assistance to 23,49,815 beneficiaries during the 13th Five-Year Plan period. An amount of Rs 127.14 crore was allocated by the State Government to the Backward Classes Development Department in 2023-24 and the expenditure incurred was Rs 538.56 crore. The excess expenditure over outlay in 2023-24 is attributed to the additional authorisation received by the Department for post-matric scholarships for OECs. An amount of Rs 248.82 crore was allocated by the State Government to the Backward Classes Development Department in

2024-25. The scheme-wise outlay, expenditure, and the physical achievements of the Department in 2023-24 and 2024-25 (as on August 31, 2024) are given in **Appendix 8.2.48** and **8.2.49**.

### **Kerala State Backward Classes Development Corporation (KSBCDC) Ltd**

Kerala State Backward Classes Development Corporation (KSBCDC) Ltd is a company fully owned by the Government of Kerala, registered under the Companies Act of 1956 on February 28, 1995 with its registered office in Thiruvananthapuram. Kerala State Backward Classes Development Corporation (KSBCDC) acts as the major State-level channelising agency of three national financial agencies, National Backward Classes Finance and Development Corporation (NBCFDC), National Minorities Development and Finance Corporation (NMDFC), National Safai Karamcharies Finance and Development Corporation (NSKFDC). The main objective of the Corporation is to eradicate poverty and backwardness from among the target groups – OBCs and Minorities by providing financial assistance at a lower rate of interest to the members of backward communities living below poverty line. KSBCDC also utilises the State Government assistance and its own fund reserves to implement various welfare schemes including loan assistance for self-employment, education loans and microfinance. KSBCDC also provides assistance such as marriage assistance, house building/maintenance and personal loans. The authorised share capital of the company is Rs 200 crore and the paid-up share capital is Rs 151.13 crore. Based on the overall parameters laid down in G.O.(Ms)18/2023/P&EA dated 20.09.2023, the corporation has been classified as a 'diamond' category company.

Over the years, awareness and pre-disbursement counseling camps have been conducted by the District offices and sub-offices of KSBCDC to popularise the schemes of national agencies and the corporation's own fund schemes. General guidance to beneficiaries on accounting and the importance of prompt repayment has been provided at these camps.

The corporation has been actively organising exhibition cum trade fairs and has also been providing marketing opportunities to its beneficiaries through exhibitions and trade fairs organised by State Government and National

**Box 8.2.11** Kedavilakku – Pre-matric Scholarship for OBCs from 1st to VIII<sup>th</sup> standard

From 2023-24 onwards, the Central Government has withdrawn assistance for pre-matric scholarship for OBC children from class 1st to VIII<sup>th</sup> and restricted scholarships to class IX<sup>th</sup> and X<sup>th</sup> only. In this context, the State Government formulated a new scheme namely, 'Kedavilakku-Pre-matric Scholarship for OBCs from class 1st to VIII<sup>th</sup> standard' with an allocation of Rs 2500.00 lakh to continue providing scholarship to OBC students from classes 1st to VIII<sup>th</sup> standard. In 2023-24, 1,15,211 students received scholarships under this scheme.

**Box 8.2.12** 'Self-employment scheme for Widows belonging to OBCs'

The scheme was introduced in the 2024-25 to support widows among OBCs. The objective is to provide assistance for starting self-employment ventures to promote the livelihoods of widows. The scheme provides a subsidy of up to 20 per cent of the loan amount, capped at Rs 1.00 lakh for self-employment ventures deemed feasible and potentially profitable. The Department will recommend eligible applicants to financial institutions such as Kerala State Backward Classes Development Corporation Limited, Kerala State Minority Development Finance Corporation Limited, Kerala State Development Corporation for Christian Converts from Scheduled Castes and Recommended Communities Limited and Kerala State Pottery Manufacturing Marketing and Welfare Development Corporation Limited which will disburse the loans.

Financial agencies. Additionally, KSBCDC has introduced a 'loaner's distress relief fund' (LDRF) to assist the beneficiary or his family in the event of the beneficiary's death, permanent disability, accident, or chronic illness. Under the 'New Swarnima' initiative, specifically targeting women from the OBC categories for starting individual ventures, the corporation has disbursed Rs 29.84 lakh to 20 women beneficiaries.

The corporation has devised an innovative scheme named 'Green Card Benefit' to encourage loanees to make prompt payments. Under this initiative, loanees who remit all installments on or before the due date without default will receive an amount equal to 5% of the total interest repaid. Some best practices of corporation are the Green Card Benefit and Loaner's Distress Relief Fund Scheme (LDRF). Subsidy-linked loan schemes are implemented in collaboration with various Departments and agencies. These include the Re-Turn Loan Scheme with the support of NORKA, the Startup Loan Scheme, the Green Wheel Self-Employment Loan Scheme, and the Punarjani Self-Employment Loan Scheme in assistance with the Backward Classes Development Department.

Until now, KSBCDC has disbursed an amount of Rs 6938.86 crore to more than 8 lakh beneficiaries belonging to OBC and minority communities. The Corporation has disbursed loans worth Rs 802.30 crore in 2023-24 benefiting 71,747 persons. In

2024-25, an amount of Rs 222.79 crore has already been disbursed among 12,091 persons (as on August 31). The source-wise expenditure and the physical achievements of the Corporation in 2023-24 and 2024-25 (as on August 31, 2024) are given in **Appendix 8.2.50** and component-wise Physical and Financial Achievement of the Corporation in 2023-24 and 2024-25 (as on August 31, 2024) are given in **Appendix 8.2.51**.

**Kerala State Development Corporation for Christian Converts from Scheduled Castes and the Recommended Communities Limited**

Kerala State Development Corporation for Christian Converts from Scheduled Castes and the Recommended Communities Limited was incorporated in 1980 under the Indian Companies Act 1956. The main objective of the Corporation is to promote the social, educational, cultural, and economic upliftment of the Christian converts from Scheduled Castes and the Recommended Communities in a comprehensive manner for ameliorating their living conditions. The source of finance for the Corporation is the share capital assistance and grants sanctioned by the Government of Kerala on an annual basis. Major programmes implemented by the corporation include loans for agricultural land purchase, self-employment loans, loans for construction and revamping of houses, marriage loans, agriculture and allied sector assistances, small business and educational loans. In addition to these loan

schemes, the corporation has been providing grants and scholarships to students among the target groups through various schemes such as incentive grants, spot the talent, career guidance programme, coaching assistance for competitive examinations such as Medical Engineering Entrance, Civil Service and PSC. The corporation started a foreign education loan scheme with a lower interest rate to support the disadvantaged students in this community. The corporation formulated an action plan for loan recovery to reduce the NPA status, which helped to recoup earlier losses arising from it. Corporation collected an amount of Rs 12.62 crore as loan recovery in the financial year 2023-24.

An amount of Rs 6.00 crore was allocated to the Corporation in 2023-24 for various programmes and expenditure was Rs 17.52 crore. The excess of expenditure over outlay in 2023-24 is due to the loans issued from loan repayments. Details of year-wise disbursement of State Government assisted loan schemes from 2019-20 to 2024-25 (as on August 31, 2024) are given in the **Appendix 8.2.52**. The scheme-wise details of physical and financial achievements of the Corporation are given in **Appendix 8.2.53**.

#### **Kerala State Pottery Manufacturing Marketing and Welfare Development Corporation Ltd**

Kerala State Pottery Manufacturing Marketing and Welfare Development Corporation was set up in 2016 with the objective of modernising the traditional pottery sector in the State, thereby increasing the living standards of the families engaged in the sector. The functioning of the Corporation started only in 2020-21. Major programmes implemented by the Corporation includes loans for manufacturing and marketing of pottery, marriage assistance loan, Self-help group loan and education loan. The corporation had stalls and mobile marketing units at different exhibitions and melas. On a pilot basis, the corporation has been distributing pottery products procured from various pottery units in the State to agricultural university, agro-bazaar, and other private institutions. In 2023-24, an amount of Rs 10.50 lakh was spent by the corporation for various activities.

#### **Welfare of Minorities**

The Indian Constitution has emphasised the importance of equality of citizens and the responsibility of the State to preserve, protect

and assure the rights of minorities in the matters of religion, language, culture and education. The UN declaration of 1992, on minority rights as per the Article (1) underscores that “States shall protect the existence and the national or ethnic, cultural, religious and linguistic identity’ of minorities within their respective territories and shall encourage conditions for the promotion of that identity. According to the 2011 census, 79.8 per cent population of India practices Hinduism, 14.2 per cent professes Islam, 2.3 per cent adheres to Christianity, 1.7 per cent practices Sikhism, 0.7 per cent follows Buddhism, 0.4 per cent adheres to Jainism and a microscopic minority 0.006 per cent follows Parsi religion. Not all religious communities and social groups have shared equally the benefits of development of the nation.

In Kerala, around 45 per cent (26.56 per cent Muslims, 18.38 per cent Christians, 0.014 per cent Buddhists, 0.013 per cent Jains, 0.011 per cent Sikh and Parsi) of total population are minorities. They are entitled to minority rights as envisaged in the Article 29 and 30 of Indian Constitution. Among them, Muslims, Latin Catholics, Converted Christians and Neo Buddhists are considered as backward communities in Kerala. The Directorate of Minority Welfare was formed under Government in 2008, for the overall welfare and advancement of notified minority communities, namely, Muslims, Christians, Buddhists, Sikhs, Jains and Parsis. The Minority Welfare Department prepares and implements projects, focusing on education, health, housing and employment of minorities. Major schemes implemented by the Minorities Welfare Department are educational assistance, housing scheme for divorcees, widows and abandoned women from the minority communities, PMJVK (Pradhan Mantri Jan Vikas Karyakram-60 per cent CSS), pre-marital counselling, Self Employment scheme for widows belonging to minorities and Minority Research wing at universities for the welfare of the minorities. The physical achievements of various schemes are given below:

- During the 13th Five-Year Plan, 97 projects were approved for an amount of Rs 216.55 crore under the scheme Pradhan Mantri Jan Vikas Karyakram (PMJVK). Projects worth Rs 425.00 crore has been submitted to the Ministry of Minority Affairs for approval. In 2023-24, a total of Rs 40.00 crore was allocated to the scheme.
- Department has been providing free coaching to students of minority communities for

**Table 8.2.3** Release and Expenditure of Pradhan Mantri Jan Vikas Karyakram –PMJVK (2009 to 2022) (Rs in lakh)

Year	Total No of Projects	Approved Cost	Amount Released	Expenditure	No of Projects Completed
2009-10	10	180	180	138.67	10
2010-11	43	1,804.98	1,878.28	1,878.28	43
2012-13	1	1,000	1,218.72	1,218.72	1
2013-14	52	2,679.98	2,680	2,592.25	50
2014-15	15	805.31	773.12	635.72	15
2015-16	27	1,766.07	2,039.18	2,036.38	27
2017-18	27	1,822.1	1,291.12	1,414.40	23
2018-19	12	2,985.42	1,757.46	1,045.70	3
2019-20	22	3,853.64	1,647.05	445.83	8
2021-22	19	12,993.5	6,441.77	1,188.86	4
<b>Total</b>	<b>228</b>	<b>29,891</b>	<b>19,906.7</b>	<b>12,594.81</b>	<b>184</b>

Source: Minority Welfare Department

PSC/UPSC/SSC/Railway Recruitment/Banking sector competitive examinations through various coaching centres across the State. A total of 37,470 students were given coaching during the 13th Five-Year Plan period and among them, 2,837 students got permanent employment in State and Central Governments. In 2022-23, about 11,294 students were given coaching and among them, 581 students got employment in State and Central Governments.

- Under the Imbichi Bawa Housing/Renovation Scheme for widows, divorcees, and abandoned women, an amount of Rs 500.00 lakh was provided for the completion of houses. A total of 561 incomplete houses has been completed, and 506 are in progress.

#### Major educational assistance provided in 2023-24

- Scholarships were provided to 1866 minority students for pursuing CA/CMA/CS,UGC, CSIR, NET, NTSE coaching and PG Diploma in GST.
- Prof. Joseph Mundassery scholarship award for talented minority students was provided to 4,315 students and civil service coaching fee reimbursement was provided to 63 minority students.
- Reimbursement of interest on educational loan for studying in selected foreign Universities was provided to 30 minority students.
- Fee reimbursement was provided to 3,779

students pursuing technical courses or trades in recognised ITCs in order to promote skill training among minority students.

- Scholarships were provided to 1,164 students pursuing three year Diploma courses in Government/Government-Aided poly-technic colleges.
- Scholarships were provided to 445 students pursuing Nursing Diploma/Para medical courses.
- Pre-marital counselling and soft skill development has been provided to 9,500 adults.

As per the recommendations of the Paloli Committee Report, the Government of Kerala started coaching centres for minority youth in 2010 in various Districts. Till now, there are 24 coaching centres with 32 sub-centres across Kerala for minority youth, working under the Directorate of Minority Welfare in every District. The objective of the minority coaching centres is to ensure free coaching and allied programs for the candidates belonging to minority communities. The programme aims to empower minority communities in improving their skills and capabilities for employability. The centres which cater to Muslim, Christian and other minority communities provide free coaching classes for the competitive examinations conducted by the Union Public Service Commission, Kerala Public Service Commission, Banking Service Recruitment Boards and other agencies.

**Table 8.2.4** Year-wise loan disbursement details of Kerala State Minorities Development Finance Corporation Limited

Year	Amount (Rs in crore)	No of Beneficiaries
2014-15	21.45	919
2015-16	23.79	870
2016-17	13.21	581
2017-18	21.07	766
2018-19	27.77	766
2019-20	17.78	454
2020-21	9.84	201
2021-22	25.51	628
2022-23	53.17	875
2023-24	28.96	281
<b>Total</b>	<b>242.5</b>	<b>6,341</b>

Source: Kerala State Minorities Development Finance Corporation Limited

In the financial year 2023-24, a total of Rs 4.2 lakh has been allocated for the skill development project. Skill development training in marine structural fitting, EV power train courses, game development, drone piloting, hands-on training in biomedical equipment, and basic proficiency in English through ASAP (Additional Skill Acquisition Programme) is provided to minority youth.

#### **Pradhan Mantri Jan Vikas Karyakram-PMJVK**

The Pradhan Mantri Jan Vikas Karyakram-PMJVK is a Centrally Sponsored Scheme with the objective of developing infrastructure, especially community assets in identified areas with development deficits for the socioeconomic development within minority populated areas. In 2018-19, the Ministry of Minority Affairs restructured and renamed the erstwhile Multi Sectoral Development Programme as Pradhan Mantri Jan Vikas Karyakram (PMJVK) with a funding pattern of 60:40 between Centre and the State. The revised PMJVK will now be implemented in the identified areas where the concentration of minority population is more than 25 per cent within a 15 km radius. The projects to be taken up under PMJVK would be related to creation of infrastructure mainly in the sectors of education, health and skill development, besides innovative schemes for improving the socio-economic and living conditions of minority communities and other communities residing in the designated area. Major achievements are construction of school buildings, additional class

rooms and toilet facilities within schools. Details of works completed under this scheme are given in **Appendix 8.2.54**.

The details of the scheme from 2009 to 2022 is given in the **Table 8.2.3** below.

An amount of Rs 76.01 crore was allocated by the State Government for the welfare of minorities in 2023-24 of which Rs 19.95 crore (26 per cent) was spent. An amount of Rs 97.63 crore was allocated by the Government in 2024-25. Scheme-wise outlay and expenditure and the physical achievements of the Department in 2023-24 and 2024-25 (as on August 31, 2024) are given in **Appendix 8.2.55** and **8.2.56**.

#### **Kerala State Minorities Development Finance Corporation Limited**

The Kerala State Minorities Development Finance Corporation is a fully owned Government company started on March 22, 2013, with an intention of looking after the welfare of minority communities including Muslims, Christians, Buddhists, Jains, Sikhs and Parsis. The Kerala State Minorities Development Finance Corporation has been implementing loan schemes utilising funds from the National Minorities Development and Finance Corporation (NMDFC) as well as its own schemes using the share capital provided by the Government of Kerala. The main schemes implemented by the Corporation



are self-employment loan, business development loan, education loan, visa loan, pravasi loan, employee's multi-purpose loan and housing loan for Madrassa teachers and others. The Corporation's multipurpose loan scheme namely 'Sumithram' includes marriage loan, treatment loan and critical illness related loan. Until now, KSMDFC has disbursed loans amounting to Rs 242.58 crore to 6,341 beneficiaries belonging to minority communities. The year-wise details of loan disbursement are given in the following **Table. 8.2.4**

In the initial years of the 14th Five Year Plan, KSMDFC has disbursed loans worth Rs 86.98 crore to 1,168 beneficiaries. KSMDFC has disbursed loans amounting to Rs 28.96 crore to 281 beneficiaries belonging to minority communities for the year 2023-24. In 2024-25 (as on August 31, 2024), an amount of Rs 6.09 crore has been disbursed among 19 beneficiaries. The State Government has increased the guarantee cover from Rs 50 crore to Rs 100 crore for KSMDFC to avail financial assistance from the National Minorities Development and Finance Corporation. The financial and physical achievements of the Corporation are given in **Appendix 8.2.57**.

### **Welfare of Forward Communities**

Forward communities of Kerala include 164 communities, of which 17 communities are Christians, which are out of the ambit of any form of caste based reservation. The Government of Kerala constituted the Kerala State Welfare Corporation for Forward Communities Limited branded as Samunnathi on November 8, 2012. KSWCFC was established for promoting comprehensive development and welfare of economically backward sections of the Forward Communities in Kerala through rendering assistance to their members for improving their educational status, living conditions and all-round development.

By utilising the fund availed as Grant-in Aid from Government of Kerala, the Corporation undertakes various activities which include Vidyasamunnathi merit scholarships, Vidyasamunnathi coaching assistance for competitive examinations, Samrambha Samunnathi term loan assistance, Naipunya Samunnathi skill and entrepreneurship development, renovation of dilapidated aghararas and Mangalya Samunnathi

marriage assistance. KSWCFC's 'Samunnathi Thoosani Mini Café programme which is intended to prepare and serve quality food at reasonable rates to the general public through women joint liability groups among economically weaker sections among Forward communities. There are 52 thoosani mini cafes functioning in various places of Kerala under this programme. The Corporation has been providing interest subsidies to loans (at 3 per cent interest on term loans) availed by self-help/joint liability groups of unemployed members from Forward Communities in Kerala in order to promote self-employment and entrepreneurial activities. The physical achievements of various components in the year 2023-24 are given below:

- Merit scholarships were provided to 6,938 students for pre-matric and post-matric studies.
- Coaching assistance has been provided to 460 students for competitive examinations, such as medical and engineering entrance examinations, bank tests, and civil service examinations.
- Interest subsidies to loans were provided to 1,892 groups.
- 165 Joint Liability Groups, 30 individuals and 28 thoosani mini cafes were assisted under 'Skill and Entrepreneurial Development Programme'.
- Financial assistance for marriage has been provided to 40 girls.
- Financial assistance was provided to 160 beneficiaries through the scheme 'renovation of dilapidated aghararas'.

The corporation initiated two new schemes, namely Ksheera Samunnathi Capital Subsidy for dairy farming and Samunnathi e-Yathra to provide capital subsidy for the purchase of electric autos for women in 2024-25.

An amount of Rs 38.05 crore was allocated to the Corporation in 2023-24 for various programmes of which, Rs 14.51 crore was expended (38 per cent). An amount of Rs 35.00 crore was allocated to the Corporation in 2024-25. The Scheme-wise outlay and expenditure and the physical achievements of the Corporation in 2023-24 and 2024-25 (as on August 31, 2024) are given in **Appendix 8.2.58**.

## 8.3 SOCIAL SECURITY MEASURES

Social security and citizen welfare are significant features of the development agenda of the Government of Kerala. The Government implements a comprehensive range of programmes to provide financial and social support to its citizens, particularly the vulnerable and marginalised. The State's strategic interventions across sectors such as health, nutrition, palliative care, education, training, employment, and livelihood development have empowered its citizens, and contributed to improve the overall quality of life. Social security pensions provide a crucial safety net for the elderly, persons with disabilities, widows, and other marginalised sections of society.

The Social Justice Department (SJD), the Women and Child Development Department (WCD), and the agencies under these departments, are at the forefront of implementing a range of social security and welfare programmes. A detailed overview of these agencies' activities can be found in **Appendix 8.3.1**. Kerala's social security programmes can be broadly categorised into two main types: institutional care and social assistance programmes. These programmes offer financial assistance, subsidies, and other benefits to eligible individuals and families, aiming to alleviate poverty, disability, and other socioeconomic challenges.

### **Institutional Care**

Government institutions, along with Non-Governmental Organizations (NGOs), play a crucial role in providing institutional care to the marginalised sections of society. Under the Social Justice Department, there are 17 old age homes, 5 homes for persons with disabilities, 8 homes for persons with intellectual disabilities, and 3 other homes. The Women and Child Development Department operates 47 children's homes, 14 women's homes, and 4 specialised homes. The number of institutions under the Social Justice Department and Women and Child Department is given in **Table 8.3.1**. Additional details on the category of Government institutions are given in **Appendix 8.3.2**.

The District-wise number of residents in welfare institutions of the SJD and WCD in 2023-24 is given in **Appendix 8.3.3**. The total sanctioned strength of these institutions is 3,648 and total occupancy in 2023-24 was 2,338. The number of occupants is greater than the sanctioned strength of inmates in Day Care Centers & Old Age Homes, After Care Homes, Pratheeksha Bhavan, Prathyasa Bhavan, Entry Home, and SOS Model Homes. The number of occupants is less than the sanctioned strength of inmates for certain categories of institutions. The changes in the

**Table 8.3.1** Category of Government Welfare Institutions

Department	Category	No. of Homes
Social Justice Department	Old Age Homes*	17
	Homes for the Disabled	5
	Homes for intellectually disabled persons	8
	Other Homes	3
Women and Child Development Department	Children's Homes	47
	Women's Homes	14
	Specialized Homes	4

Source: Social Justice Department and Women and Child Development Department

\* Includes one home for bed-ridden elderly

number of inmates are due to death, returning with relatives, and new admission.

The Institutions registered under these Departments also run care homes. The District-wise number of residents in all registered welfare institutions under SJD and WCD in 2023-24 is given in **Appendix 8.3.4**. The total number of residents in these institutions in 2023-24 was 61,785. The highest occupancy was in old age homes, with 32,032 residents, and the next occupied institution was for persons with disabilities, with 14,131 residents. The sanctioned strength of institutions for individuals with intellectual disability is 2,597, but the current number of inmates stands higher, at 2,779.

**Table 8.3.2** provides District-wise distribution of residents in the institutions directly under departments, and welfare institutions registered under departments. Ernakulam has the highest number of registered inmates (10,476), while Kasaragod records the lowest (1,282). Across the State, there are 2,338 inmates in institutions directly under SJD and WCD and 61,785 in registered institutions.

### Social Assistance Programmes

#### Social security pension

Pension schemes for agricultural workers, the elderly, people with disabilities, unmarried women above 50 years of age, and widows, are the major pension schemes of the State Government. Welfare pensions have increased from Rs 600 per beneficiary per month in 2016 to Rs 1,600 per beneficiary per month in 2021. The number of social security pensioners, which was 34 lakh in 2015-16, increased to 46.8 lakh on November 2023, and is 50.4 lakh as on October 2024. The

welfare board pensions that are not included in the above total number. From April 2015, the amount has been disbursed as Direct Benefit Transfer (DBT) and 53.1 per cent of beneficiaries receive pensions as bank transfers. The rest receive their pensions through the Direct to Home method, successfully implemented through a large network of primary cooperative societies. The beneficiaries select the mode of transfer according to their condition and convenience.

As on October 2024, of the 50.4 lakh pensioners, 31.6 lakh (63 per cent) are women. Fifty seven per cent of beneficiaries fall under the category of old age pension, 26.9 per cent widow category, 8 per cent for people with disabilities, and around 6.4 per cent for agriculture worker pension. Pensions for unmarried women are given to 83,892 beneficiaries. District-wise, Malappuram has the highest number of beneficiaries and Wayanad the least. The District-wise coverage is given in **Appendix 8.3.5**.

#### Care for Persons with Disabilities

As per the World Health Organisation, disability is the impairment in a person's body structure, physical or mental functioning, and activity limitation or participation restrictions in normal daily activities. It counts visible or invisible, congenital or acquired impairment under disability. The Rights of Persons with Disabilities (RPwD) Act, 2016, stipulates an umbrella of 22 types of disabilities, against the earlier seven types under the Persons with Disabilities Act 1995. In Kerala, a disability census was conducted by the Social Justice Department through the Kerala Social Security Mission (KSSM) in 2015. The categories of disabilities, as per the above census, are given in **Appendix 8.3.6**. As per the disability census, the

**Table 8.3.2** District wise number of residents in Welfare Institutions in the State

Sl No	District	Number of Inmates in all Welfare Institutions under SJD and WCD	Number of Inmates in all Welfare Institutions Registered under SJD and WCD
1	Thiruvananthapuram	372	4777
2	Kollam	221	4309
3	Pathanamthitta	77	3741
4	Alappuzha	103	3047
5	Kottayam	81	8790
6	Idukki	62	3460
7	Ernakulum	219	10476
8	Thrissur	246	9413
9	Palakkad	111	3603
10	Malappuram	209	1442
11	Kozhikode	318	2166
12	Wayanad	54	1327
13	Kannur	167	3952
14	Kasargod	98	1282
<b>Total Inmates</b>		<b>2338</b>	<b>61785</b>

Source: Social Justice Department and Women and Child Development Department

final number of PwD is 7,93,937. This is 2.4 per cent of the total population of the State (3.3 crore). The census found that 8.7 percent of the houses in Kerala have PwDs. Among the 22 Categories of disabilities, the highest number is for locomotor disability i.e., 2,61,087, which is 32.9 per cent. The prevalence of this disability is 78 among the 10,000 population. Multiple disabilities stand second in number (1,37,441), the percentage is 17.3 per cent. The prevalence of multiple disabilities is 41 among the 10,000 population. The least prevalent disability among the 22 categories is Multiple Sclerosis, of which there are 515 patients in the State.

The enactment of the Rights of Persons with Disabilities Act, of 2016 gave effect to the optional protocol of the United Nations Convention on the Rights of Persons with Disabilities (PwDs). It upholds a rights-based approach to the needs of persons with disability. Following the enactment of the RPwD Act, 2016, the State Government introduced new schemes to fill the gaps and to mainstream persons with disabilities into society. Schemes include the Barrier Free Kerala project, Individual Care Plan, State Initiatives on Disabilities, etc. The Government also supports the efforts of NGOs in providing quality care

and support to PwDs. Another landmark in this sector was the identification of suitable posts in State Government Services, and the reservation of 4 per cent of vacancies for PwDs. The global commitment to the Sustainable Development Agenda 2030 recognises and requisites the promotion of rights, perspectives, and well-being of persons with disabilities, in line with UN protocols.

#### **Organisations and Agencies in Disability Sector under State Government**

The Directorate of Social Justice is the nodal agency responsible for overseeing the implementation of social welfare schemes of the State and Union Government. The Kerala Social Security Mission (KSSM) is a dedicated agency implementing specific social security programmes. The Kerala State Handicapped Person's Welfare Corporation (KSHPWC) is tasked with implementing welfare schemes for individuals with disabilities. The State Commissionerate for Persons with Disabilities (SCPwD), a quasi-judicial body, plays a crucial role in monitoring, advocating, and supporting the rights of persons with disabilities. It conducts awareness campaigns, legal aid, and research to promote inclusion and empowerment.

## **National Institute of Speech and Hearing (NISH)**

NISH is an institution of national repute, working in the areas of disability and rehabilitation, including early intervention, education of persons with disabilities, disability and rehabilitation services, and capacity creation. It also provides an excellent environment for the pursuit of higher studies for persons with disabilities. NISH conducts degree courses in various streams such as BSc. Computer Science (Hearing Impairment - HI), Bachelors in Fine Arts (HI), BCom (HI), MSc Audiology, MSc Speech Language Pathology exclusively for the deaf and hard of hearing. Besides the above courses, the Higher Education Foundation Programme (HEFP) and RCI approved Diploma courses viz. DISLI, DECSE and DTISL and Diploma in Indian sign language and Interpretation are conducted in NISH. In 2020, the institution launched the Bachelor of Occupational Therapy (BOT) programme, affiliating with Kerala University of Health Sciences (KUHS). In 2023-24 NISH organised various programmes in which 10,656 pupils participated in early intervention programmes, 17,011 cases were attended through audiology, and 5,378 cases were attended by speech-language pathology divisions, while 7,732 cases were attended under medical, psychology, and allied services. Various academic programmes were conducted in 2023-24, benefitting 847 students.

## **Kerala State Handicapped Person's Welfare Corporation (KSHPWC)**

The Kerala State Handicapped Person's Welfare Corporation is a Public Sector Undertaking under the State Government aimed at formulating, promoting, and implementing various welfare schemes for rehabilitating and improving the living conditions of the people with visual disabilities, deaf and hard of hearing, people with locomotor or intellectual disabilities, and also to provide financial and technical assistance to such categories.

The services offered through the Corporation in 2023-24 are the following:

- Supply of various disabled- friendly equipment to 733 persons.
- Distribution of self-employment loans to 20 persons with disabilities.
- Financial assistance of Rs 20,000 as a fixed deposit to 72 children with disabilities through the Hastadanam scheme.
- Financial assistance of Rs 25,000 to 132 persons

with disabilities for self-employment, to those who have no security to offer for obtaining a loan.

- Financial assistance of Rs 5,000 for starting lottery ticket sales to 202 persons.
- A subsidy of Rs 15,000 for motorised scooter was given to 33 persons with disabilities.
- A cash award of Rs 5,000 given to 731 SSLC and higher secondary students with disabilities.

## **State Commissionerate for Persons with Disabilities.**

The Commissionerate for Persons with Disabilities functions at the State-level and is a semi-judicial body that can exercise the power of a Civil Court under Section 63 of Persons with Disabilities Act. The Commissionerate monitors various programmes and schemes designed for the benefit of the people with disabilities, conducts awareness camps, and adalats, provides free legal aid for the disabled persons, and undertakes research and development for their rehabilitation.

## **National Institute of Physical Medicine and Rehabilitation (NIPMR)**

The National Institute of Physical Medicine and Rehabilitation (NIPMR) is a Centre of Excellence in disability management and rehabilitation. The Institute, along with its routine activities including early intervention, therapy and academic programmes, also runs numerous projects with other stakeholders including LSGs, KSSM, SJD, and the Department of Education. The academic programmes conducted by NIPMR are Bachelor of Occupational Therapy (BOT), Diplomas in Special Education, and Certificate Course in Caregiving. The organisation has various therapeutic departments and units to provide medical and therapeutic services. Special Training and Empowerment Programme for Parents (STEPS), a programme under the Department of Developmental and Behavioural Paediatrics, aims at early intervention and also to empower parents of children with disability. Rehab on Wheels is a mobile outreach programme run by NIPMR which aims to provide assessment, health care, and assistive solutions at the field level using specially designed low-floor buses. A project for the transportation of people with disabilities, Wheel Trans, is also run by the institution. The Centre for Mobility and Assistive Technology (C-MAT), a wing under NIPMR, manufactures and distributes mobility assistive solutions to people with disabilities. Another major initiative

**Table 8.3.3.** Major programmes of Social Justice Department 2023-24

Scheme	Category/criteria	Total Amount (In Rs)
Parinayam	Marriage assistance to girls with disabilities and daughters of people with disabilities	82,50,000
Scholarship	Disabled students with disabilities (40 per cent) having annual family income below Rs 36,000	14,895
Mathrujyothi	Mothers with disabilities for taking care of their child	16,54,368
Vidyakiranam	Educational assistance to children of People with disabilities and an annual income limit of Rs1 lakh	2,34,04,158
Vidya Jyothi	Uniform assistance to students with disabilities	13,09,078
Swasraya	Single mothers of children with disabilities for their self-employment	10,15,000
Vijayamrutham	Students with disabilities who have achieved high marks in degree/equivalent courses, PG/professional courses	3,63,661
Niramaya Insurance Scheme	Insurance scheme for persons with Autism, Cerebral Palsy, intellectual disability and Multiple Disabilities	35,16,000
Imprest Money	Rehabilitation of orphans abandoned in public places	45,090
Pariraksha	Financial Assistance to PwDs for emergency treatments and in case of natural calamities	12,59,853
Prathyasa	Repatriation of inmates of Rehabilitation centres to their own States. Rehabilitation of Other State inmates in the MHCs and other Rehabilitation centres	10,46,396
Sahachari	Assistance to students with disabilities in studies as well as other extra-curricular activities	43,211
Psycho Social Grant in Aid	Institutions that rehabilitated people which have Govt. approval under Psycho Social Scheme	4,33,62,488
Athijivanam	People with disabilities with NGO collaboration to ensure rehabilitation of the marginalized	1,37,20,922
Barrier-free Kerala	Converting physical infrastructure, public places, transportation facilities, IT related facilities etc. accessible to PwDS	6,14,35,000

Source: Social Justice Department

is the spinal cord injury rehabilitation unit which has proven to be very effective in rehabilitating persons with spinal cord injury, and bringing them to mainstream society. During 2023-24, NIPMR provided a total of 86,457 consultancy services. A significant portion of these services, amounting to over half, were provided in the areas of Audiology and Speech Language Pathology (ASLP), Physiotherapy (PT), and Occupational Therapy (OT), with 16,400, 16,021, and 14,610 services respectively.

### Directorate of Social Justice

Several welfare schemes are being implemented through the Department of Social Justice to ensure the rehabilitation of the marginalised. Major programmes are listed in **Table 8.3.3**. SJD ensures protection in terms of financial assistance for the education, health, and livelihood of persons with disabilities.

### **Kerala Social Security Mission (KSSM)**

The Kerala Social Security Mission is an initiative under the Department of Social Justice, Government of Kerala, dedicated to implementing various welfare schemes for vulnerable groups, including elderly, and persons with disabilities. Its programmes aim to enhance social security, improve quality of life, and ensure holistic support for the marginalised sections of society. KSSM is the nodal agency for the issuance of the Universal Disability Identity (UDID) Card. It organises disability certification camps across the State to ensure that the PwD population receives the disability certificate and UDID card, KSSM issued 77,254 UDID cards in 2023-24.

KSSM provides monthly assistance of Rs 600 to the caregivers of patients who need full-time care, such as people with 100 percent visual disability, bedridden patients with cancer, cerebral palsy, autism, mental illness, intellectual disabilities, and also the bed-ridden elderly, under the Aswasakiranam scheme. Financial assistance of Rs 1500 lakh was provided to 19,229 beneficiaries under this scheme. Specific schemes like Snehaswanthwanam, Special Aswasakiranam, and educational assistance for children from endosulfan-affected families have been implemented to support victims in Kasaragod.

The Snehapoorvam scheme provides financial assistance to children who lost either one or both parents and are deprived of money to develop in the best possible way. The scheme supports orphans living in a family of relatives, friends, the community members. Under Snehapoorvam scheme financial assistance of Rs 1700 lakh was provided to 57,187 beneficiaries in 2023-24.

State Initiative on Disabilities (Anuyatra) is an umbrella programme that encompasses a strategic framework, interventional approach, and convergence plan for establishing an organised network of systems and institutions for prevention, early intervention, and management of disabilities. Anuyatra includes District Early Intervention Centres (DEIC) to ensure early screening of disabilities and provide appropriate services and Regional Early Intervention Centres (REICs) established in five Medical Colleges.

*Kathoram* is a programme with life cycle approach in hearing disability management.

Details with regard to various disability initiatives under Kerala Social Security Mission are listed in the **Table 8.3.4**.

### **General Education Department - Activities for Inclusive Education**

School education in Kerala is known for its inclusivity in supporting students with disabilities. There are resource centres in schools, along with a resource teacher and staff for various therapies. Also, under Block Resource Centres (BRC)s, one resource centre functions in each sub-district. The Department also implements the model inclusive school programme which envisages the strengthening of certain general schools to function as model centres of inclusive education in specific disabilities. The Department also provides financial assistance to accredited institutions that offer care for children with intellectual disabilities, to meet their infrastructural needs, water supply, medical aid facilities, and so on. Assistance is also provided by the Department to enhance the capacity of teachers in special schools. Autism Park has been established to mainstream children with autism by helping them manage behavioural symptoms, encouraging social participation and enhancing communication levels.

### **CH Mohammed Koya Memorial State Institute for the Mentally Challenged**

Under the General Education Department, the CH Mohammed Koya Memorial State Institute for the Mentally Challenged imparts special education, training, and rehabilitation services to people with intellectual disabilities. The Institute offers various services in the field of intellectual disability, such as special schools for children with intellectual disabilities, clinical services, physiotherapy centres, early intervention centres, vocational training centres, and diploma courses on special education. Under the Augmentation and Documentation scheme, the institute developed an academic center and equipped the library with audio-visual and other facilities, benefiting 150 students.

### **Department of Labour and Employment**

A rehabilitation package (Kaivalya) is provided by the Department of Labour and Employment for the welfare of people with disabilities registered with employment exchanges, by way of loans, up to a maximum of Rs 50,000 for commencing self-employment ventures, vocational career guidance, soft skill training, and so on. By disbursing Rs 1.1 crore in 2023-24, the Kaivalya scheme benefitted 221 people with disabilities.

**Table 8.3.4:** No. of Beneficiaries of Various activities of State Initiative on Disabilities under Kerala Social Security Mission

Sl.No	Various activities of State Initiative on Disabilities under Kerala Social Security Mission	No. of Beneficiary
1	Hearing Screening for Neonates in Govt Maternity Hospitals	88,730
2	BERA Tests Conducted for Children Suspected of Hearing Disability	1,199
3	Persons Supported at Auditory Verbal Therapy Centres	1,298
4	Children Supported Through Special Anganwadis	1,198
5	Children with Special Needs Enrolled in General Schools	402
6	Children Supported Through Regional Early Intervention Centres	35,133
7	Children Suspected of Autism Supported Through Autism Centres	16,991
8	Children Supported Through Mobile Intervention Units	134,151
9	Persons with Disabilities Supported Through Call Centre	19,325
10	Persons with Intellectual Disabilities Supported Through Horticultural Therapy programme	441
11	Provided Medicines to Persons with Ankylosing Spondylitis	51
12	Provided Medicines to Persons with Multiple Sclerosis	77
<b>Total</b>		<b>298,996</b>

Source: Kerala Social Security Mission

### Care For Elderly

Kerala, with its high levels of social development, has undergone a significant demographic transition, leading to a rapidly aging population. This demographic shift, characterised by declining fertility rates, decreasing mortality rates, and increasing life expectancy, is a testament to the state's achievements in public health and social welfare. However, this ageing population presents a unique set of challenges, including declining social support, health issues, elder abuse, accessibility barriers, the digital divide, limited employment opportunities, inadequate social security, and loneliness. To address these challenges, Kerala needs to formulate and implement proactive policies and measures to ensure the well-being and social protection of its elderly population.

The State is very particular about the protection of the rights of the elderly and the effective implementation of the Maintenance and Welfare of Parents and Senior Citizens Act, 2007. This includes strengthening Maintenance Tribunals and improving the quality and reach of community-level services including doorstep delivery of services and day care facilities 'Sayamprabha Homes' in collaboration with LSGs, Kudumbasree,

and NGOs. During 2023-24 an amount of Rs 48,03,716 has been expended for 71-day care centres.

However, the State Government stands for a change in the outlook of society and the elderly towards aging as 'Active Aging'. The policy framework of the World Health Organisation in 2002 defined "active ageing as the process of optimising opportunities for health, participation, and security to enhance the quality of life as people age". This calls for a collaborative effort from the Social Justice Department as the nodal department for the activities for the elderly and multiple other departments and agencies involved in the care of the elderly, including the LSGs, NGOs, and the local communities.

The Government of Kerala provides an old age pension to 28.8 lakh senior citizens in the low income group and supports health care and palliative and home care facilities that focus on the care of senior citizens. The Government has also strengthened community-based support programmes in collaboration with Local Governments. The Department of Social Justice and the Kerala Social Security Mission implement several programmes such as the Vayomithram



Scheme, which is being implemented in 6 municipal corporations, 85 municipalities, and 4 block Panchayats in the State. The scheme provides the elderly people with periodic medical check-ups. It had 2,90,030 beneficiaries during 2023-24.

The Vayoraksha scheme supports elderly individuals facing hardships, violence, and abuse by ensuring their protection and providing stable, happy living conditions. It offers services like emergency first aid, surgeries, ambulance services, rehabilitation, assistance, and essential equipment. In total, Rs 6,72,574 was provided as assistance to 124 beneficiaries under the scheme. The Government has also instituted an award for promoting the elder support programmes of LSGs and NGOs.

The Department has been preparing a standard operating procedure (SOP) for the registration, operation, and monitoring of elderly care homes, especially for homes operated by different agencies. Programmes are also being prepared to engage seniors in the community through social events to help them maintain a sense of identity and self-worth, and also to harness the wealth of knowledge and experience they have. More details of programmes for elderly care are included in the section Human Development- Impact of Changing Demographic Profile.

### **Transgender Welfare**

Kerala is a pioneer in recognising the rights of transgender individuals, becoming the first Indian State to introduce a Transgender Policy in 2015. Under the umbrella scheme Mazhavillu, the State government has implemented various programmes to mainstream the transgender community. These programmes include financial assistance for vocational training, sex reassignment surgery, post-surgery care, marriage assistance, scholarships, pensions, and insurance. Additionally, the Government has issued ID cards to transgender individuals, established a dedicated TG cell and crisis management centre, and launched a 24/7 helpline. To foster a more inclusive society, the Government has also supported NGOs and CBOs in conducting skill development and rehabilitation programmes. Furthermore, sensitisation programmes and workshops have been organised for the public, family members, teachers, and government officials to promote understanding and acceptance of transgender individuals. To

support economic empowerment, the Government has facilitated loans for self-employment, and has established shelter homes and short-stay homes. By implementing these comprehensive initiatives, Kerala aims to create a more inclusive and equitable society for transgender individuals.

Major schemes for TG s in 2023-24 were the following;

- Educational assistance in the form of scholarships of Rs 1000 per month for school students, and Rs 2000 for college students. An amount of Rs 4,36,000 was expended to 22 beneficiaries across the State.
- TG students in Government/ Aided/ Unaided/ Self finance institutions can avail hostel facility. Eligible students will get Rs 4,000 per month, and a total amount of Rs 8,20,000 was expended for 23 beneficiaries.
- Marriage assistance of Rs 30,000 was given to legally married TG couples who have undergone Sex Reassignment Surgery. Rs 2,40,000 was expended for 8 beneficiaries in 2023-24.
- Under Saphalam scheme, TG students who are pursuing degree, diploma and professional courses are given financial assistance of Rs 1 lakh per year. Rs 3,13,000 was expended to 4 beneficiaries in 2023-24.
- Karuthal scheme gives assistance to needy TGs who require immediate support when facing crises like atrocities and violence. An amount of Rs 3,43,134 was expended to 14 beneficiaries.
- Another major initiative for TGs is Sex Re-assignment Surgery and aftercare. The department provides Rs 2.5 lakh for transwomen and Rs 5 lakh for transmen each for this surgery. An additional fixed amount of Rs 3,000 per month is given up to 12 months for aftercare support. In 2023 -24 an amount of Rs 7.9 lakh was expended for SRS after care for 61 beneficiaries, and 117.0 lakh expended for SRS surgery for 168 beneficiaries through the scheme.
- TGs preparing for competitive examinations get financial support under the Yathnam scheme.

### **Empowerment and Social Welfare of Women**

Kerala, over the years, has seen several interventions that have ensured the enhancement of participation of women in social, political, and public affairs. The State Government has also taken considerable efforts through several policy measures to ensure equal opportunities for women in all spheres of public employment, and to

facilitate their equal access to public spaces in the State. This is reflected in the much lower gender gap in basic capabilities, such as education and health, its favourable sex ratio of 1,084 women per 1,000 men (Census 2011), and several other indices.

The Women and Child Development Department launched an anti-dowry campaign in 2019-20, formulated a five-year action plan, amended the Kerala Dowry Prohibition Act, 2004, appointed officers, constituted a District Advisory Board, launched a dowry complaints portal, and provided counselling, legal aid, and police assistance to address domestic violence and dowry-related issues.

The Government has constituted Aswasanidhi – a corpus fund of Rs 300 lakh for providing interim relief to victims of sex crimes, domestic violence, acid attacks, and gender-based violence, over and above any other statutory provisions for them. Besides this, the Government started One Stop Centres in all Districts for victims of violence in private and public spaces, within the family, community, or at the workplace. The One Stop Centres provide 24 hours specialised services including medical assistance, assistance in lodging FIR/NCR/DIR, psycho-social support and counselling, legal aid, shelter, and referral services.

It is a global phenomenon that women live longer than men and in Kerala, life expectancy for women, as per the population projections for 2021-25, is 79.15 years as against 73.49 years for men (National Commission on Population, MoHFW, 2020). The increase in life expectancy coupled with a favourable sex ratio may explain the jump in the widowed population in Kerala. It is in this context, the Government of Kerala has formulated various schemes for widows. These include one-time financial assistance of Rs 30,000 for self-employment through the scheme Sahayahastham, educational assistance for their children enrolled in professional courses through the scheme Padavukal, and monthly financial assistance of Rs1,000 to close relatives of destitute widows through the scheme Abhayakiranam. In addition, a scheme called Mangalya has been envisaged to encourage widow remarriage by providing a financial incentive for widows/divorcees to remarry.

Saranya is a self-employment scheme implemented by the Employment Department to support vulnerable women. It provides financial assistance to unemployed widows, deserted, divorced, unmarried women, women with disabilities and wives of bedridden persons. 2,917 women benefited from Saranya in 2023-24. Additionally, 69 women in 2023 and 5 women in 2024 (up to July 2024) received financial assistance through Kaivalya, a rehabilitation and welfare scheme for disabled job seekers, also implemented by the Employment Department.

The WCD Department has implemented a few popular initiatives such as Ponvakk and Thejomaya After Care Home. The former stands for the eradication of child marriages through community participation, by incentivising informants. Thejomaya After Care Home is another progressive step of the Department to ease the process of transition of inmates of Women and Children Homes to society, after completing studies.

### **Kerala State Women's Development Corporation (KSWDC)**

The Women's Development Corporation empowers women by providing financial support, training, and awareness programmes. KSWDC helps women overcome obstacles to economic independence through loans, skill development, and entrepreneurship programmes. In 2023-24, KSWDC provided loans to over 36,000 beneficiaries, trained thousands of women, and implemented various initiatives to promote women's empowerment. For more details see the section on Gender and Development.

### **Kerala Women's Commission**

The Kerala Women's Commission, established under the Kerala Women's Commission Act of 1990, works to improve the status of women by addressing unfair practices, safeguarding rights, promoting gender equality, conducting awareness programs, legal workshops, and public hearings, and engaging with women through initiatives like 'Face to Face' with Commission. For more details see the section on Gender and Development.

### **Gender Park**

The Gender Park serves as a hub for gender equality, driving research, dialogue, policy interventions, and awareness while fostering

women's economic empowerment through facilities like the Gender Library, Heritage Museum, and International Convention Centre. For more details see the section on Gender and Development.

### **Welfare of Children**

Child welfare is concerned with the physical, social, and psychological well-being of children, particularly children suffering from the effects of poverty or lacking normal parental care and supervision. It is a continuum of services designed to ensure that children are safe and that families receive the support they need to care for their children. The United Nations Convention on the Rights of the Child, 1989, recognizes that humankind owes the child the best it has to offer and declares it a duty above all considerations of race, nationality, or creed.

The child care programmes support or coordinate services to prevent child abuse and neglect, receive and investigate reports of possible abuse and neglect, provide services to families who need help to protect and care for their children, assess the needs, strengths, and resources of the child, and ensure the well-being of children with families, relatives, or foster families. This includes ensuring children's access to health care and education, developing their personality, growing up in a happy environment, and information about their rights.

As per the NFHS-5 report, the infant mortality rate (IMR) in Kerala is 4.4 deaths per 1,000 live births as against IMR of 5.6 deaths reported in NFHS-4. Under-5 Mortality Rate (U5MR) also shows an improvement with 5.2 deaths per 1000 live births against 7.1 deaths as per NFHS-4. However, anemia rates reveal a decrease in health status among children. NFHS-5 data shows an increase in the rate of anaemia among children aged 6-59 months, from 35.7 per cent (NFHS-4) to 39.4 per cent (NFHS-5). Data on the nutritional status of children is also disturbing, as per NFHS-5 data. Data reveals that the percentage of children under 5 years who are underweight has risen to 19.7 per cent as compared to the NFHS-4 figure of 16.1. Similarly, children under 5 years who are stunted account for 23.4 per cent (NFHS-5) against 19.7 per cent (NFHS-4).

The holistic development of children up to 18 years includes physical, mental, emotional, and social development. In Kerala, free education and health facilities are provided to all children in

Government institutions. Child marriage violates the rights of children and adversely affects their health and well-being. It is essential to create a safe and caring environment for all children, free from neglect, violence, abuse, and exploitation. The Kerala State Commission for Protection of Child Rights has continued to review existing laws for the protection of child rights, inquire into cases of violation of child rights, look into factors inhibiting the enjoyment of those rights, and suggest remedial measures.

The State Adoption Resource Agency and 14 specialised adoption agencies are functioning in Kerala. As on 2023-24, a total of 1,397 adoptions have been facilitated in-country and 145 inter-country. In 2023-24, 114 children were adopted in Kerala (99 in-country and 15 inter-country adoptions). The number of children adopted is given in **Appendix 8.3.7**.

The Government of Kerala's Our Responsibility to Children programme implemented in schools aims at scientifically identifying and addressing the behavioural, emotional, learning, and psychological challenges faced by children, in collaboration with teachers, parents, and the general public. The project is currently operational in schools across the State. *Kaaval Plus* focuses on community-based rehabilitation and re-integration, through a psychosocial approach, for children who need care and protection and also for POCSO survivors.

The Protection of Children from Sexual Offences Act, 2012: The POCSO Act was enacted to protect children from offences of sexual assault, sexual harassment and pornography, and to provide a child-friendly system for the trial of these offences.

*Nirbhaya Policy*: The Government of Kerala formulated the *Nirbhaya Policy* for combatting sexual violence against women and children, and to safeguard them against trafficking for exploitation. The policy is aimed at the prevention of sexual violence against women and children, protection of sexual violence victims, prosecution of sexual violence perpetrators, rehabilitation of sexual violence survivors, and re-integration of sexual violence survivors. To co-ordinate the *Nirbhaya* Programme, a separate *Nirbhaya Cell* has been created under the Directorate of Women and Child, headed by an officer of the rank of Joint Director.

Early childhood is the most significant phase of development of a person. Recognising the criticality of 1000 days from a woman's pregnancy (270 days) to her child's 2nd birthday (730 days), the Government launched the 1,000 days programme. The programme includes regular medical camps for pregnant and lactating women, the supply of therapeutic food, and awareness classes for reducing the child mortality rate. The project was initiated in Attappadi on a pilot basis and has been extended to 42 ICDS Projects in coastal and hilly areas in 2022-23.

Integrated Child Development Services (ICDS) is a major Government of India programme that addresses the needs of children under the age of six. The Department owns and operates 33,115 Anganwadi Centres (AWC) in the State (as on March 2024). District-wise coverage of ICDS beneficiaries is given in **Appendix 8.3.8**.

Among the 5.1 lakh beneficiaries are children in the age group 0-3 years and 34 lakh beneficiaries are children in the age group 3-6 years. The WCD Department, in collaboration with the World Food Programme (WFP), has initiated the fortification of rice which is served in hot cooked meals to children of 3 to 6 years in Anganwadies. Under this project, rice is fortified with 8 micronutrients (Iron, Folic Acid, Zinc, Vit.A, Vit.B12, Niacin, Vit.B6, and Thiamine). Raw rice is blended with fortified rice kernels in a ratio of 100:1. In addition to this, a micronutrient fortification of *Amrutham Nutrimix* is given as Take Home Ration to children in the age group of six months to three years. This was started in Wayanad, and later extended to all districts. In addition to this, the State Government has initiated a new programme providing egg in two days per week and milk in two days per week in all *Anganwadi* Centres, in 2022-23.

The Department initiated Nutrition Clinics to improve the health of women, children, and adolescents through nutritional counselling, guidance, referrals, and other social support with the help of a nutritionist. The project aims to look at an individual's overall dietary health and identify the risk of malnutrition in the initial stages and intervene before the person gets malnourished. Nutrition Clinics have been set up in 152 Blocks and six Corporations.

The Department has been modifying *Anganwadi* Buildings into Smart *Anganwadies* with sufficient space for classrooms, dining halls, kitchen, store rooms, creative zones, and indoor and outdoor play areas. The first one has been constructed in Thiruvananthapuram district, and now 189 Smart *Anganwadi* Centres are functioning. The Department also developed theme-based preschool activity posters and distributed them to children.

#### **Social security of children through healthcare**

Social Support Scheme for Children Affected with Juvenile Diabetes (Mittayi) provides comprehensive care to children/adolescents with Type-1 diabetes through Mittayi clinics established in five Government Medical Colleges in the State.

Specific schemes have been implemented for the rehabilitation of endosulfan victims in Kasaragod district. Under the *Snehaswanthwanam* scheme, bed-ridden victims receive financial assistance of Rs 2,200 per month, while those receiving a disability pension get Rs 1,700. In 2023-24, 5,304 individuals benefited from this scheme. Additionally, the special *Aswasakiranam* scheme provides Rs 700 per month to caregivers of endosulfan victims who are fully bedridden or have intellectual disabilities, supporting 776 beneficiaries. Children from Endosulfan-affected families in classes I to XII are given educational assistance- Rs 2000, Rs 3000 and Rs 4000. This scheme supported 440 children in 2023-24.

#### **The Way Ahead**

To ensure the effective implementation of social security measures in Kerala, it is crucial to prioritise a rights-based approach that focuses on the needs of the most vulnerable. This requires a comprehensive and scientific approach to managing institutional mechanisms. By expanding social security coverage, addressing the specific needs of the marginalised and disadvantaged population, focusing on inclusive development and strengthening institutional capacity and promoting inter-departmental collaboration, Kerala can enhance the efficiency and effectiveness of its social security system. By adopting these strategies, Kerala can strengthen its social security system and create a more equitable and inclusive society.



CHAPTER

09

ART, CULTURE AND SPORTS



# ART, CULTURE AND SPORTS

## 9.1 ART AND CULTURE

Kerala has a rich history of diverse art forms and cultural practices shaped by its geographic location, historical trade connections, and other diverse aspects of its history and environment. Kerala is distinguished by its harmonious blending of diverse influences. Kerala's cultural past demonstrates its flexibility, receptivity, and inventiveness. Its long-standing cultural traits have been blended with the contemporary age of secular and humanistic ideals and progressivism, fostering a lively and dynamic cultural environment.

The Government of Kerala has conceived and implemented various programmes to promote and preserve this rich art and culture. The government's efforts focus on nurturing traditional art forms, supporting artists, creating platforms for cultural exchange, funding various cultural institutions, art galleries and museums, conducting festivals and cultural events and ensuring inclusivity of women and marginalised sections. The initiatives reflect the Government's commitment to preserving cultural heritage while fostering progressivism, innovation, and inclusion in the arts. The following briefly describes the institutions and their activities in the art and culture sectors.

### **Directorate of Culture**

The Directorate of Culture was formed to coordinate and regulate the activities of all the art, literary, and cultural institutions functioning effectively under the Department of Cultural Affairs.

The Directorate primarily facilitates and coordinates the activities of autonomous institutions and academies viz; Kalamandalam Deemed University, Sangeetha Nataka Academy, Sahitya Academy, Lalitha Kala Academy, Folklore Academy, Mahakavi Moyin Kutty Vaidyar Mappila Kala Academy, Kerala State Film Development Corporation, Chalachithra Academy, Vylloppilli Samskrithi Bhavan, Centre for Heritage Studies, Thunchan Memorial trust, Kadhakali Institute – Margi, Vasthu Vidya Gurukulam, Bharath Bhavan, Kerala Book Marketing Society, Sree Narayana International Study Centre, Children's institutions such as Jawahar Balabhavan and State Institute of Children's Literature, Language promotion institutions such as State Language Institute, State Institute of Encyclopaedic Publications and Malayalam Mission.

The Directorate also coordinates the distribution of annual grants to all the cultural institutions that do not have plan assistance. Other important responsibilities of the Directorate include the promotion of creative activities in the memorials of distinguished artistic, literary and cultural doyens; distribution of assistance to artists and litterateurs who are suffering from financial hardships; distribution of monthly pensions to the dependents of prominent artists and writers and coordination of the activities of the South Zone Cultural Centre in Kerala.

The Directorate is implementing various schemes



to preserve and nurture the rich cultural heritage of the State. The Directorate also has the responsibility to aid financially disadvantaged artists. Accordingly, artists and dependents of deceased artists and writers of eminence are provided with monthly pensions. In addition to the above, the Directorate of Culture distributes annual grants to all cultural institutions in the state to promote their functions.

### **Achievements of the Directorate of Culture**

The following are the major achievements of the Directorate of Culture

#### **Diamond Jubilee Fellowship**

The Department of Culture implements the Diamond Jubilee Fellowship Project in collaboration with the Local Self-Government Institutions to train general public and students in classical and folk ritual art forms to encourage young artists for a short period after studying various art forms until they find their place in their field and to preserve Kerala's unique artistic and cultural heritage.

The training is standardised and uniform as it is based on well-structured syllabi in more than 45 arts subjects, prepared with the help of experts. It has been stipulated that one artist should handle at least four classes of two and a half hours each.

Currently, 813 Diamond Jubilee artists have been appointed on a cluster basis and are providing art training to about ten thousand students. In the previous year, encouragement and financial assistance were given to these artists for local art performances and district-level competitions. The institution of this fellowship has been widely acclaimed as an innovative programme to effectively assist artists across the state. Details of the Diamond Jubilee Fellowship are provided in **Appendix 9.1.1**.

#### ***Samam***

*Samam* is a project conceived by the Department of Culture to promote the concept of gender equality in all spheres in response to violence against women and children. It also aims to promote the cultural upliftment of the public through cultural education programmes. This programme also addresses the issues of superstitions and drug addiction and reaches out to people to make them conscious of its perils.

#### **Rural Art Hub**

Though Kerala has a rich cultural heritage of folk arts and craftsmen, the lives of traditional artisans are not financially secure, which may eventually lead to the abandonment of such traditional art forms. To improve the living conditions of these artists and craftsmen, this project in collaboration with organisations with national and international institutions is implemented. This project helps folk artists and craftsmen enhance their skills and enable them to reach out to the global market and strengthen their livelihood. Capacity building and direct market linkage would be given priority. The details of the Rural Art Hub are provided in **Appendix 9.1.2**.

#### **Non-recurring grants to cultural institutions**

The government provides financial assistance to cultural organisations and associations to strengthen their activities and encourage them to undertake creative initiatives. As per the norms, an organisation will be offered financial aid three times in five years. The list of institutions which received grants during 2023-24 is given in **Box 9.1.1**.

#### **Major Institutions under the Directorate of Culture and their contributions**

There are 23 institutions working under this department that utilise plan funds. These include various academies, institutes, memorial buildings, and institutions, which perform their activities with the Government's financial aid through the Department of Culture. The important institutions under the Department of Cultural Affairs are given in **Appendix 9.1.3**.

Besides these institutions, the Department of Archaeology, the Department of Museums and Zoos and the Department of Archives also work under the Cultural Affairs Department.

#### **The Kerala State Film Development Corporation (KSFDC)**

The Kerala State Film Development Corporation (KSFDC) was established on 23 July 1975 with the prime objective of facilitating the production and promotion of Malayalam cinema and developing a culture of recognising and appreciating quality and excellence. KSFDC owns and runs 17 state-of-the-art theatres with global standards in different parts of Kerala. The Chitranjali Studio at Thiruvallam, Thiruvananthapuram, was established

### Box 9.1.1. Non-recurring grants to cultural institutions

As part of the scheme, viz., non-recurring grants to cultural institutions, Rs. 50,00,000/- have been sanctioned for the following 18 institutions and cultural activities during the last financial year.

1. M.G Soman Foundation, Pathanamthitta
2. Bharanikkavu Fest, Alappuzha
3. Nireeksha Sthree Nataka Vedhi, Thiruvananthapuram
4. Pallana Kumaranashan Smarakam, Alappuzha
5. O.V Vijayan Smaraka Samithi, Thasrak, Palakkad
6. Ambalappuzha Fest
7. Sadhujana Paripalana Samgham, (Villu Vandi Samara Varshikam)
8. Cheemeni Fest
9. Kalanjali Foundation
10. Neelakanda Sivan samgeetha sabha Trust, Thiruvananthapuram
11. Samraj World of Magic, Mavelikkara
12. Chengannur Peruma Sargolsavam
13. Kallada Jalolsavam, Kallada
14. Chengannur Smaraka Samithi, Chengannur
15. Kalabharathi Guru Chengannur Kdhakali Academy, Pakalkkuri, Thiruvananthapuram
16. Mazhavillu Vanitha Film Society
17. Pookkad Kalalayam, Kozhikkod
18. Sambasivan Foundation, Kollam

Source: Directorate of Culture, 2024

by KSFDC to bring the Malayalam cinema production industry from erstwhile Madras to our state. KSFDC runs a non-plan scheme providing subsidies for feature films and children's films produced under the Chitranjali package scheme to promote the domestic film industry. Around 40 - 45 films are produced yearly utilising the subsidy the Government of Kerala provides. With the headquarters at Kalabhavan, Vazhuthacad, Thiruvananthapuram, KSFDC theatres are the main venues of the well-acclaimed International Film Festival of Kerala (IFFK).

#### *OTT Platform and E-Ticketing App*

Kerala has launched a government-owned OTT platform called 'C Space', which promotes quality films with artistic and cultural value. 'C Space' intends to promote Malayalam cinema and culture by helping spread Malayalam creations globally. Notably, it is the first Government-owned OTT platform in India.

To reduce exploitative tendencies and evasion of taxes, an E-ticketing system in theatres is also in the process of implementation, for which an amount of Rs. 2.99 crore has been sanctioned in 2024-25.

#### *Films by women directors and directors belonging to the SC/ST category:*

The Government of Kerala launched a scheme, namely 'the Assistance to Women-directed Film', in the financial year 2019-20 to enhance women's representation in film direction. Kerala State Film Development Corporation is entrusted with the production of these films. As a part of the scheme, the film 'Nishiddho', directed by Tara Ramanujan, was released across Kerala on 11th November 2022. 'Nishiddho' won the Best Debut Director Award at the 26th International Film Festival of Kerala and was selected as the second-best film at the Kerala State Film Awards. 'Nishiddho' is being screened in various national and international film festivals. 'Divorce', directed by Mini I G, was released across Kerala on 24th February 2023. During the financial year 2020-21, two films: 'B32 to 44', directed by Shruthy Sharanyam and 'Nila', directed by Indu Lakshmi, were funded. They were released on 6th April 2023 and 4th August 2023, respectively.

'B32 to 44', directed by Shruthy Sharanyam, bagged the Kerala State Film Award 2022 for the Best Women/ Transgender Film under a special category. These films are being screened across India and abroad at various film festivals and garnered much appreciation. In 2021-22, two

directors, Sivaranjini and Farzana, were selected under this scheme. Production of 'Vicotria' by Sivaranjini has been completed, and post-production is progressing at Chitranjali Studio. Farzana's film 'Mumta' is under pre-production. Women directors selected for the financial year 2022-23 are Athira T. N. (Cafe Unlimited) and Ms Mini Poongattu (Koothu).

The Government has also launched the initiative to support the aspiring directors belonging to the SC/ST category since 2020-21. In the financial year 2020-21, 'Ariku', directed by V S Sanoj, was completed, and 'Churul', directed by Arun J Mohan, was released across Kerala on 30th August 2024. During 2021-22, the 'Pralayashesham oru Jalakanyaka' by Manoj Kumar and 'Kaadu' by Sunnesh Vadakumpadan were selected under this scheme. Production of 'Pralayashesham oru Jalakanyaka' and 'Kaadu' have been completed, and post-production is progressing in Chitranjali Studio. Directors belonging to the SC/ST category selected for the FY 2022-23 are Ajith V. (Attumali) and Sumesh C. S. (Break Sukumaran).

### **Kerala State Chalachitra Academy**

Kerala State Chalachitra Academy is an autonomous, non-profit institution functioning under the Department of Cultural Affairs, Government of Kerala. It was founded in August 1998 to promote cinema in the State. It is governed by the motto: Films should support people's growth as individuals and as a society. The activities of the Chalachitra Academy during 2023-24 and till date are as follows:

#### *Children's Film Appreciation Camp*

Kerala State Chalachithra Academy organised a four-day camp from May 16 to 19, 2024, at Sree Narayanaguru Cultural Complex, Kollam, in collaboration with the Directorate of Culture and Child Welfare Committee to inculcate the habit of appreciating great films among children. Sixty-seven children selected from different parts of the State participated in the camp. The participants and the public highly appreciated this event. Preethika Balakrishnan of GVHS Iriyanni, Kasaragod, received the cash award of Rs. 2000 given to the best-performing student in the camp.

The Kerala State Chalachithra Academy organised a three-day classic cinema study camp in collaboration with the Thiruvananthapuram Press Club from 27th to 29th May 2024 to expose media

students to the history of the development and evolution of cinema as a mass medium. Twenty-six students of the Thiruvananthapuram Institute of Journalism participated in the study on the classic cinema 'Timeless Tales: A Journey through the Evolutionary History of Cinema' as part of this event.

#### *Honouring the stars of the Cannes Festival*

Chief Minister Shri. Pinarayi Vijayan felicitated Kani Kusuruthi, Divya Prabha, Aziz Nedumangad and Hrudu Harun, who played the lead roles in the film 'All We Imagine as Light' which won the Grand Prix at the Cannes Film Festival.

### **16th International Documentary and Short Film Festival of Kerala**

The 16th IDSFFK, organised by the Kerala State Chalachithra Academy from July 26 to 31, 2024, at Thiruvananthapuram, which screened 325 films from 54 countries, was quite successful. Glimpses of survival problems and crises faced by people in different parts of the world were the themes of the films. The event was organised at Kairali, Sree and Nila theatres in Thiruvananthapuram.

#### *International Film Festival of Kerala*

The International Film Festival of Kerala is a remarkable event known worldwide. The festival upholds and promotes the art of cinema and its rich culture. The International Film Festival of Kerala (IFFK), one of India's prominent film festivals, is hosted by the Kerala State Chalachithra Academy on behalf of the Department of Cultural Affairs, Government of Kerala. Over the years, the IFFK has come to be known as Asia's best-managed and probably the world's most people-centred film festival. The festival charms the best films, renowned directors, technicians, and spectators from across the globe, and it is acknowledged as one of the leading cultural events in India. In the 28th IFFK, 175 movies from 81 countries were screened, out of which 14 films from Asia, Africa, or Latin America were screened in the competition segment.

Yoshio Kitagawa, Director of Photography of 'Evil Does Not Exist' received the *Suvarna Chakoram* for Best Film on behalf of director Ryusuke Hamaguchi and producer Satoshi Takata from KSFDC Chairman and filmmaker Shaji N Karun. Shokir Kholikov, Director of 'Sunday', received the Rajata Chakoram for Best Director, and Fazil Razak, director of 'The Sentence/ Thadavu,

received the Rajata Chakoram for Best Debut Director.

### ***Margi***

*Margi* continued its activities to promote and nurture the temple arts of Kathakali, Koodiyattam, Chakyarkoothu, Nangyarkoothu and Pathakam. *Margi* stages its activities at two places in Thiruvananthapuram. Koodiyattam and Nangiarkoothu are performed at the *Margi* Centre, Valiyassala. The other one near East Fort is devoted exclusively to Kathakali. At both centres, students are trained in their chosen fields of performing art forms. *Margi* also provides training in musical instruments such as chenda, maddalam, idakka and thimila.

### **Kerala Sahitya Academy**

The Kerala Sahitya Academy was established on 15th August 1956 by the Government of Tiru-Kochi. In 1958, the headquarters of the Academy was shifted to Thrissur. The main objective of Kerala Sahitya Academy is to facilitate the development and growth of Malayalam language and literature. The major activities during the financial year 2023-24 were book publishing, Malayalam literary survey, memorials to various Malayalam writers, and digitisation and commemoration programmes of various Malayalam writers.

#### *International Literary Festival 2023-24*

The International Literary Festival (ILFK) 2023-24 organised for the first time by the Department of Culture, Government of Kerala and Kerala Sahitya Academy was held from January 28 to February 3, 2024 at Thrissur. Hon'ble Chief Minister of Kerala Pinarayi Vijayan inaugurated the event through online. The Literary Festival has been designed by bringing together talented writers and artists from within and outside India and deploying them on aesthetic and contemporary themes.

A discussion of prominent writers was held over six days. Literary and cultural programmes were organised by many prominent writers and thinkers at the international and national levels, and the art festival included dance, drama and music for the art lovers.

### **Kerala Lalithakala Academy**

Kerala Lalithakala Academy, established in 1962 to conserve and promote visual arts, is

an autonomous cultural organisation under the Government of Kerala. Kerala Lalithakala Academy has art galleries at Thiruvananthapuram, Kilimanoor, Kayamkulam, Kottayam, Alappuzha, Ernakulam, Thrissur, Kaladi, Malampuzha, Malappuram, Kozhikode, Thalassery, Payyannur, Mananthavady and Kanhangad. The Lalithakala Academy has undertaken and initiated several programmes during this period, as briefly explained below:

#### *A retrospective exhibition of renowned artist T.V. Santosh 'History Lab and the Elegy of Visceral Incantations.'*

In collaboration with Kerala Lalithakala Academy and Guild Gallery Mumbai, an exhibition of works in various media by Shri T.V. Santosh a Mumbai-based renowned artist from Kerala, was organised at the Academy's Durbar Hall Kala Kendra from May 1 to 20, 2024.

#### *One-day art camp*

Kerala Lalitha Kala Academy, in association with Desabhimani, organised a one-day art camp on the occasion of the M. Mukundan festival on May 05, 2024, at Pallikunn Krishna Menon Women's College, Kannur. Deshabhimani Award 2023 was presented to writer M. Mukundan by Hon'ble Chief Minister Sri. Pinarayi Vijayan on 07th May 2023.

#### *National Symposium - 'Revisualizing art education in Kerala'*

Kerala Lalithakala Academy organised a symposium on 'Revisualizing art education in Kerala' for the teachers of Fine Arts College on 9th, 10th and 11th August 2024 at KILA, Thrissur.

#### *Abu Dhabi Art Exhibition - 'Notes from another Shore'*

In collaboration with Abu Dhabi-based arts and cultural organisation Risk Art Initiative, Kerala Lalitha Kala Academy launched an international art exhibition by Abu Dhabi artists at the Academy's Durbar Hall Art Center in Kochi on 26th July 2024. Titled 'Notes from Another Shore', the exhibition features a solo exhibition by Hashel Al Lamki and a group exhibition by artists including Almaha Jarallah, Latifah Saeed and Samo Shalabi.

#### *Academy Educational Outreach Initiatives*

The Academy Educational Outreach Initiative aims to bring artistic values and endless possibilities to the student body and the general public and create outstanding commitment and a sense of identity

among people for timely educational endeavours. As part of this, art training camps were organised in various districts of Kerala.

#### *Art Exhibition*

'Closed Body' Group Art Exhibition (New Media) by Sudhir. C, K.Jayanandan and Nirmala Neema were organised from 22nd August 2024 at the Academy's Durbar Hall Kala Kendra at Ernakulam.

#### **Kerala Folklore Academy**

Kerala Folklore Academy, an independent centre under the Department of Cultural Affairs, was established on 28th June 1995. The main objective of the Academy is to promote and project the traditional art forms of Kerala. Kerala Folklore Academy is located in Kannur, Kerala.

The newly constructed Rangavedi at the sub-centre of the Academy at Kottayam Vellavur (Travancore Folk Village) is ready for the inauguration.

Awards were presented to 157 artists who have made their mark in various folk arts on July 4, 2024, at Nishagandhi Auditorium by the Hon'ble Chief Minister at Thiruvananthapuram. Then, fifteen folk art performances were organised.

#### **Vasthu Vidya Gurukulam**

Vastu Vidya Gurukulam, Aranmula, that works under the Department of Culture, performs various activities as listed below:

1. Architectural Consultancy
2. Green Building Technology Consultancy
3. Mural composition section
4. Academic Centre
5. Research Unit on Sustainable Construction
6. Digital documentation of heritage buildings, and
7. Rural Art Hub Project

Vastu Vidya Gurukulam has been working for three decades to preserve and nurture Kerala's vast sculpture and handicraft traditions, mural art heritage, and Daru Shila sculpture, as well as propagate artistic and nature-friendly construction techniques.

The 2D graphical documentation project of 15 protected monuments under the Department of Archeology was completed during 2023-24. Tribal school students were trained in mural painting. The conservation work of the unique ancient

wall paintings of the Ettumanur temple has been undertaken.

Conservation work has been completed on the Ezhunnallat mural of Sreechithira Thirunal Maharaja, painted by renowned painter late Mammiyoor Ashan and his disciples, at the Sreechitra Enclave located in the museum compound, Thiruvananthapuram.

#### **Kerala Kalamandalam**

Kerala Kalamandalam is the country's premier public institution for preserving and promoting Kerala's traditional performing arts. Since its inception, it has been a beehive of activities attracting artists, art scholars, historians, theatre artists/directors, choreographers and art lovers worldwide.

Kerala Kalamandalam was declared a Deemed University for art and culture by the Ministry of HRD, Govt. of India, on the advice of the University Grants Commission, on 14 March 2006, and the Government of Kerala approved its Memorandum of Association and Rules on 15th May 2007.

#### *Construction of Manakulam Mukundaraja Memorial Academic Block*

The construction works of the academic block built in memory of *Manakulam* Mukundaraja, who was the founder secretary of Kalamandalam, have been completed. On 25 February 2024, the Hon'ble Chief Minister inaugurated this building.

#### *Construction of Vallathol Memorial Park*

Based on the decision to beautify the Nila campus of Kalamandalam, which is also the samadhi place of the founder of Kalamandalam, Mahakavi Vallathol Narayana Menon, and turn it into a garden suitable for tourism opportunities, Hon'ble Minister for Culture inaugurated the event.

On October 1, 2024, the Hon'ble Minister for Culture inaugurated the visitor's lounge in the existing art gallery building in Kerala Kalamandalam by renovating it to international standards. A home theatre for watching video documentaries where foreign tourists can learn about Kalamandalam and a cafeteria and bookstall with modern facilities were also constructed.

### **Centre for Heritage Studies**

The Centre for Heritage Studies was established in 2000 by the Cultural Affairs Department, Govt. of Kerala at Hill Palace Museum premises, Thripunithura, Ernakulam, to develop an advanced research centre to undertake various projects of cultural resource management, to bring out research publications and to offer regular one-year P.G. Diploma courses in Archaeology, Archival Studies, Museology and Conservation. The institution is registered as a society under the Travancore-Cochin Charitable Societies Act of 1955. It also maintains and preserves the 52 acres of Hill Palace Archaeological Museum campus, including the royal garden, children's park and a deer park with more than 100 deer.

### **Vyloppilli Samskrithi Bhavan**

*Vyloppilli Samskrithi Bhavan*, located at the heart of Thiruvananthapuram, is a Multi-Purpose Cultural Complex (MPCC) functioning as a cultural institution under the Department of Culture, Government of Kerala.

The updated website 'swathithirunal.in', about Maharaja Swathirunal, developed in collaboration with Vailloppilly Sanskriti Bhavan and C-DIT, was released by Hon. Minister for Culture.

The institution has tried to enhance its revenue considerably by introducing various certificate courses in library science, colour training, etc., and renting out the venues to various agencies, individuals, government bodies, and other institutions for cultural events, various functions, and filming.

On 20 April 2024, Vailloppilly Sanskriti Bhavan and La Gallery 360 jointly organised a dance drama called Bhumiputri. Directed by Lathakuryan Rajeev, Bhumiputri's dance performance, which combines the Kalaripayattu and the flamingo dance, attracted much attention.

### **Guru Gopinath Natanagramam**

The Guru Gopinath Natanagramam conducted seminars on Keralam Natanam and workshops on sculpture at the institution; initiated publication of books book publication, and maintenance of the dance museum and setting up of 270-degree 'Mohanam' digital theatre dance gallery is in progress.

### **Malayalam Mission**

The Malayalam Mission is a scheme launched by the Kerala government in 2005 to provide an opportunity for non-resident Malayalis to study Malayalam. Malayalam Mission has more than 30 thousand students in 30 countries and its activities are based on study centres established in the respective locations. 'Bhoomi Malayalam News Paper, Pookkalam web magazine, Radio Malayalam, Souvenir Shop are the main activities of Malayalam Mission.

The main objective of the Malayalam Mission is to establish, supervise and coordinate Malayalam language learning centres at various locations in India and abroad, with the cooperation of Malayalam diaspora all over the world.

### **Directorate of Museums and Zoos**

The Department of Museums and Zoos is functioning under the administrative control of the Cultural Affairs Department. Thiruvananthapuram Museum and Zoo, Art Gallery, Thrissur Zoo, and Krishna Menon Museum at Kozhikode are the major attractions for tourists. The Department of Museums and Zoos also provides opportunities for education and research on wildlife. It also focused on developing, preserving and exhibiting a significant collection of natural, art and historical objects. The institution has a mobile application, 'Trivandrum Zoo', shares information about Thiruvananthapuram Zoological Garden. The list of essential museums in Kerala under the Museum Department is given in **Appendix 9.1.4**.

The following are the major activities carried out under the Museum and Zoo Department during the last financial year.

- The website of Raja Ravivarma Art Gallery, Thiruvananthapuram and Kunkichira Heritage Museum, Wayanad, was completed on 14.08.2024.
- Ninety-nine per cent of the first phase of civil works of AKG Smruthi Museum, which is to be established at Peralassery in Dharmadam constituency of Kannur district, has been completed.
- The restoration of Krishna Menon Art Gallery Museum, Kozhikode, has been completed.

### **Kerala State Archaeology Department**

The Kerala State Archaeology Department was formed in 1962, integrating the Travancore

### Box 9.1.2 Important Museums under the Archaeology Department

Many museums in Kerala are under the Department of Archaeology, including the Padmanabhapuram Palace in Thakkala, Tamil Nadu. Among them, important museums are given below.

- Pazhassi Tomb Museum, Mananthavady, Wayanad
- Kunhali marakkar Memorial Museum, Kottakal, Vada-kara.
- Pazhassi Raja Museum, East Hill, Kozhikode
- Gandhi Smriti Museum, Payyannur, Kannur
- Regional History Museum, Kandonthar, Kannur.
- Palakkad District Heritage Museum, Kalpathi, Palakkad
- Thrissur District Heritage Museum, Thrissur.
- Archaeological Museum, Shaktan Tampuran Palace, Thrissur.
- Ernakulam District Heritage Museum, Bastion Bungalow, Fort Kochi.
- Hill Palace Archaeological Museum, Tripunithura, Ernakulam
- Idukki District Heritage Museum, Painav, Idukki.
- Archaeological Museum, Krishnapuram Palace, Kayamkulam.
- Kottarakkara Thampuram Memorial Classical Arts Museum, Kottarakkara, Kollam
- Veluthampi Dalawa Memorial Museum, Mannadi, Pathanamthitta
- Koyikkal Palace Museum, Nedumangad, Thiruvananthapuram
- Padmanabhapuram Palace Museum, Thakala, Kanyakumari, Tamil Nadu

Source: Department of Archaeology, Government of Kerala

Archaeology Department and the Archaeological Research Centre of erstwhile Kochi. The department's primary functions include publishing volumes on stone inscriptions discovered from various places, copying writings on copper plates, conducting excavations and explorations and taking measures to protect ancient historical monuments dating back to 200 BC scattered in different parts of the State. The important museums under this department are listed in **Box 9.1.2**.

Details of museums and monuments under the Department of Archeology, which are open to the public, are given in **Appendix 9.1.5**. A list of protected monuments under the Archaeological Survey of India and Archaeology Department of Kerala are provided in **Appendix 9.1.6** and **Appendix 9.1.7**, respectively.

Major excavations and conservations in 2023-24 are the scientific conservation of Mahashila remains found during soil removal near Edakkal in Wayanad district, which has been completed.

Remains of the British Police Outpost (Transit jail) building at Mudikode Pantallur in Malappuram district have been recovered through scientific examination.

The conservation works of the Pundarikapuram temple in Kottayam district, a protected monument of the Department of Archeology, have been completed.

The preliminary phase of 2D documentation of 15 protected monuments has been completed.

#### Kerala State Archives Department

The State Archives Department was formed in 1962. The Archives Department is the custodian of all non-current records of permanent value belonging to the State Government and its various departments, institutions and individuals. The department also works as the custodian of records of historical value, such as government records, palm leaf manuscripts, etc. The department conserves such documents and protects them scientifically to preserve them for reference.

An MoU has been signed between the Department and Kerala University to establish an International Archives and Research Centre at the Karyavattom University Campus, with initial work already underway.

Digital Archives is an innovative initiative of the State Archives Department. It aims to help researchers from any corner of the world to conduct research and obtain digital copies online. For this, the major record holdings should be

scanned into the digital format, and with the help of retrieving software, the beneficiary can easily access them. This may enhance the research process delivered to people in need. This would reduce the damage to the original documents by physical contact.

Investment in digitisation is key to making Kerala's cultural heritage more accessible globally, allowing local art forms to find a wider audience. Promoting cultural tourism, fostering international exchanges and encouraging cross-disciplinary projects also help position Kerala as a global cultural hub. Equally important is including marginalised voices in cultural dialogue, ensuring a diverse and representative cultural ecosystem that resonates with all sections of society. Kerala's cultural sector will continue to thrive and evolve, maintaining its identity while engaging with global trends.





## 9.2 SPORTS AND YOUTH AFFAIRS

The Government of Kerala recognises the importance of sports and its vital role in the overall development of individuals and societies. The State Government emphasises the importance of sports in youth empowerment. This emphasis on sports is not only a reflection of its historical traditions, but also recognition of the manifold benefits they bring to the State.

Since the 1970s, Kerala has witnessed significant growth in its sports infrastructure, marked by the establishment of stadiums and sports schools. In the last decades of the 20th century, the Kerala State Sports Council expanded its activities by organising a large number of sports academies and clubs, enabling participation in national-level competitions. The Kerala Government has played a significant role in promoting sports and youth welfare through financial support, infrastructure development, and initiatives to identify and nurture young talents.

Football is one of the most popular sports in Kerala. The Kerala Football Association was formed in 1948 to directly oversee the development of football. Kerala's glorious run in Santosh trophy football in 1985-1995 popularised football to the point that FIFA released a film, "*Maitthanam-the Story of Football in Kerala*". Kerala also has clubs such as Kerala Blasters and Gokulam Kerala that have won some premier football tournaments of the country in recent years. The Government of Kerala has developed

cricket infrastructure and talent in the State. It has sharpened its focus on sports education and scholarships. Kerala continues to produce successful athletes in various sports, including badminton and athletics. Kerala is also focusing on awareness of fitness and wellness among youth, and promoting traditional sports through events and festivals.

### **Sports Institutions under the Government of Kerala**

The Government of Kerala promotes various sports institutions to foster athletic talent and encourage a healthy lifestyle. Key sports institutions under Sports and Youth Affairs in Kerala are as follows.

1. Directorate of Sports and Youth Affairs
2. Kerala State Sports Council
3. Kerala State Youth Welfare Board
4. Kerala State Youth Commission

### **Directorate of Sports and Youth Affairs**

The Directorate of Sports and Youth Affairs (DSYA) was established in 1987. Its activities include the promotion and development of sports and games in the State through the development of appropriate and high quality infrastructure, imparting awareness among the public on the importance of sports, providing facilities for proper training and grooming of sports persons to achieve international standards, and programmes related to youth welfare. Besides this, DSYA takes up activities to bring in the latest technology

and innovations in sports in order to provide the winning edge to the sportspersons of Kerala. The main objective of the policy is to develop a new sports culture by emphasising the policy of ‘Sports for all’ and ‘Sports for Health’ by raising awareness on fitness and exercise.

### **Participation in Khelo India Youth Games**

Khelo India Youth Games (KIYG), formerly known as Khelo India School Games (KISG), held annually in January or February, are the national-level multidisciplinary grassroots games in India. It is held for two age group categories, namely, “under-17 school students” and “under-21 college students”. Every year, the best 1,000 children are given Rs 5 lakh each as an annual scholarship to participate in international sports events. The fifth Khelo India Youth Games was held between January 19 and 30, 2024, in four cities in Tamil Nadu including Chennai, Madurai, Trichy, and Coimbatore. Among the 23 disciplines of the event, Kerala won 35 medals (11 Gold, 9 Silver and 15 Bronze), and came in the 9th position overall.

### **Sports Development Fund**

The Sports Development Fund (SDF) was launched as a new scheme in the Budget 2011-12. The fund was proposed for sports development programmes in a project-mode to encourage, promote and support talented sports persons, and to initiate activities to enhance the overall performance of sports persons, or in order to equip them to achieve excellence at higher levels. In the field of sports, sportspersons who win prestigious achievements at the national and international levels are honoured by the Government with incentives and meritorious awards.

### **International Sports Summit Kerala 2024**

The Department of Sports and Youth Affairs organised the ‘International Sports Summit Kerala 2024’ (ISSK 2024) from January 23 to 26, 2024, in Thiruvananthapuram. The Summit was a stepping stone towards the imminent integration of sports into Kerala’s Gross State Domestic Product. The event comprised of seminars, exhibitions, and investor and start-up meets. A significant achievement of ISSK 2024 was the generation of investment offers totalling Rs 5025 crores. These offers encompassed a spectrum of projects including infrastructure development, sports academies, and technology driven initiatives. The

influx of investments signalled confidence in the potential of Kerala’s sports economy.

### **Special Projects**

#### **Judoka**

This project aims at molding international-level judo players, and is currently implemented at 10 centres across the State (Thiruvananthapuram, Ernakulam, Idukki, Thrissur, Kozhikode, Wayanad, Palakkad, Alappuzha, Malappuram and Kannur). The training program is conducted for children in the age group of 8 to 11 years, and 40 children per school are trained.

#### **Punch**

A grassroots training program named PUNCH is being conducted at 5 centres across Kerala to introduce the sport of boxing to the students of Kerala, enable them to win medals at State, national and international-levels and strengthen the talent development structure at the grassroots-level. This project has also been conceived to help spread the knowledge and values of boxing throughout Kerala. Twenty-five school students were selected and trained through open selection at selected centres in Kollam, Ernakulam, Kannur, Kozhikode, and Kottayam districts.

#### **Hoops**

Hoops is a programme aimed at offering basketball training to school students, with the goal of developing world-class players. The initiative targets students from classes 4 to 8, selected through an open selection process. Currently, the programme is being conducted at 10 centres across the State. The next phase will be carried out in collaboration with KSSC.

#### **Sprint**

The Sprint project aims to identify world-class athletes from a young age and revive Kerala’s international sports reputation. Currently, the project is active in centres across Kasaragod, Kannur, Idukki, Kottayam, Palakkad, and Pathanamthitta districts. A total of 298 children were selected through open school selections who will undergo the first phase of training with skilled coaches at these six centres.

#### **Healthy Kids**

To enhance the sports and intellectual capabilities of children in Kerala, the Department of Sports

and Youth Affairs, in partnership with the Department of Education and SCERT, has launched the 'Healthy Kids' project. Currently, the training and installation of equipment at 30 selected institutions in the State is almost complete.

### Goal

The Goal Project, a unique football training initiative for school students, is set to be launched across all 140 constituencies of the State, aiming to train 4,200 children initially. A total of 5,00,000 children will be trained under this project, with the top performers receiving advanced training to develop into national and international players.

### Rural Play grounds

#### One Panchayat, One Playground

“One Panchayat, One Playground” is an ambitious programme to develop amateur sports by developing at least one playground in each rural village. The scheme is envisaged with the primary objective of “Health, Fitness and Happiness for all”. In the first phase, it is planned to construct 124 play spaces in selected locations.

#### Sports Life Fitness Centres

Sports and fitness are integral to the holistic development of individuals as it helps in building not only physical well-being, but also helps in

instilling necessary lifestyles such as teamwork, strategic thinking, leadership, goal-setting, and assessing risks. Keeping this in view, international standard air-conditioned Sports Life Fitness Centres have been established in nine locations across the State, and will be extended to all districts. These Centres are purposed to instil a sporting culture, promote healthy living, and ensure broader community involvement in various forms of physical activities. This initiative is expected to improve the overall fitness levels of the population while building a foundation for future athletes, creating opportunities for both competitive and recreational participation in sports.

### Stadiums

Stadiums are very important for budding sport prodigies, laying emphasis on high performance and helping to build and improve the confidence levels of children and youth. There are 36 stadiums in Kerala. The list of 10 major stadiums in Kerala, with their use and capacity, is given in **Table 9.2.1** and the complete list is given in **Appendix 9.2.1**.

#### Sports Kerala Foundation

For the construction, operations, and routine maintenance of Stadium and associated infrastructure in the State, a Public Sector Enterprise (PSE), Sports Kerala Foundation, has been formed by the Government of Kerala in 2021-22. It functions as a Special Purpose

**Table 9.2.1.** Ten Major Stadiums in Kerala, by use and seating capacity

Sl No	Name of Stadium	Use	Seating Capacity (Appx. Nos)
1	Karyavattom Stadium	Greenfield Stadium (Cricket /Football)	50,000
2	Malappuram District Sports Complex Stadium	Outdoor - Football	10,000
3	Hockey Stadium, Kollam	Outdoor Stadium (Hockey)	5,000
4	Indoor Stadium, Kannur	Indoor Stadium (Multi sports)	5,000
5	Indoor Stadium, Kozhikode	Indoor Stadium (Multi sports)	3,500
6	Swimming Pool, Pirappancode, Thiruvananthapuram	Swimming Pool	3,000
7	GHSS Kunnamkulam Ground, Thrissur	Outdoor Stadium (Football Turf with pop up sprinkler system)	3000
8	Jimmy George Indoor Stadium, Thiruvananthapuram	Indoor Stadium (Multi sports)	2,000
9	Indoor Stadium, Thrissur	Indoor Stadium (Boxing / Multi sports)	2,000
10	Thrissur Aquatic Complex	Swimming	1,800

Source: Directorate of Sports and Youth Affairs

Vehicle with the twin objectives of being an asset construction and management company that focuses on developing self-sustaining, revenue-generating sports assets, and conducting various grassroots-level programmes and projects for the development of sports in Kerala. It also functions as the nodal agency for the construction and maintenance of sports infrastructure in the State.

### **Kerala State Sports Council**

The Kerala Sports Council was established in 1954 under the Charitable Societies Registration Act, and reconstituted in 1974. It was dissolved, and Kerala State Sports Council came into existence in the year 2000, and is at present a statutory body functioning as per the Kerala Sports Act, 2000 (Act 2 of 2001), and Kerala Sports Rules 2008.

### **Sports Academics**

Under the direct control of the Kerala State Sports Council, 31 District Sports Academies function in different districts, with different sports, with the aim of selecting the best athletes and offering high-level training. In addition, there are 51 and 23 sports academies at the college and school-levels, respectively, functioning with the aid of the Council. Promising sports persons are selected on merit after selection trials. Athletes in the academies are given boarding and lodging. In addition, their medical expenses, and travel and daily expenses for participating in competitions are met by the Council. They are trained under the expert guidance of the Council. The Council also provides sports equipment and sports kits for training in the academies.

### **Rural Coaching Centres and Day Boarding Centres**

There are nine rural sports coaching centres functioning in the State under the control of Kerala State Sports Council. The Kerala State Sports Council gives remuneration to the trainers of these centres and a grant of Rs 25 per day is given to each student, under the scheme. There are 61 day boarding centres in various sports in 14 districts. The Council provides essential sports equipment and refreshment for the trainers. Funding for the day boarding scheme is provided through the District Sports Councils.

### **Centre of Excellence (Elite Training Centre -Athletics, Volleyball, Basketball)**

The Kerala State Sports Council has implemented

the Elite Scheme in various disciplines such as athletics, volleyball and basketball in order to nourish skills of young, talented sportspersons, and to make them capable of securing medals in Asian, Common-wealth, and Olympic Games. Promising sports persons are selected on merit after selection trials and they are provided with monthly boarding and lodging expenses, training under expert coaches, medical treatment, study facilities and conditioning facilities.

### **Various Awards**

The various types of awards given by the Kerala State Sports Council are given in **Table 9.2.2**.

#### **Dr. APJ Abdul Kalam Scholarship Scheme**

The Kerala State Sports Council implements the Dr APJ Abdul Kalam Scholarship Scheme to encourage eminent sports players. Under this scheme, 11 sports persons in the age group of 14 to 20 years are granted scholarships of Rs 10,000 per annum. Scholarships are awarded to deserving athletes based on their performance in the respective year. The athlete will receive a scholarship till the completion of 24 years of age, or up to a maximum of five years, on the basis of performance each year.

#### **Women Football Academy**

Kerala has the best Football tradition in the country. However, there are only limited projects for the development of womens' football in the State. The aim is to have a unique academy of national standards in a location suitable for accommodation and training. The training period is for 5 year from 8th std to 12th std. After three years (8 ,9,10), those showing high-level skills will be promoted to the next the years (+1,+2 class). Twenty-five girls will be selected for the academy. The academy was established on November 19, 2021, at Panampilly Nagar, Ernakulam. Fifteen children are being trained, and have represented Kerala in the last Subroto Cup Football Championship.

### **Kerala's performance in National and International events**

#### **Kerala State School Sports and Games**

The Director of General Education conducts sports and games events for school children every year. School-level competitions are conducted in all high school and higher secondary Schools. The events conducted so far are Seniors (below

**Table 9.2.2** Various Sports Awards by Kerala State Sports Council

Sl. no.	Awards	Description
1	GV Raja Award	The GV Raja Award is the highest honour presented to sportspersons. It is instituted by the Council, and given in the name of Lt. Colonel Godavarma Raja for the best male and female athlete in Kerala. A cash prize of Rs 3 lakh, a plaque, and a certificate of appreciation are given to the awardee.
2	Olympian Suresh Babu Memorial Lifetime Achievement Award	The award is instituted in the memory of Olympian Suresh Babu and given to individuals who have made comprehensive contributions in the field of national and international sports. A cash prize of Rs 1 lakh, a plaque, and a certificate of appreciation are given to the awardee.
3	Best sports coach	A cash prize of Rs 1 lakh, a plaque, and a certificate of appreciation are given to the best sports coach in Kerala.
4	Other sports awards	Best Sports Teacher (School-level) Best Sports Teacher (College-level) College with outstanding athletic achievements School with the best athletic achievements Best Sports Academy - School-level (Boys and Girls) Best Sports Academy - College-level (Men and Women) A cash prize of Rs 50,000, a plaque, and a certificate of appreciation are given to the awardee.
5	Kerala State Sports Council Media Awards	Best Sports Photographer Excellent Visual Media Feature Best Sports Book Best Sports Journalist A cash prize of Rs 50,000, a plaque, and a certificate of appreciation are given to the awardee.

Source: Kerala State Sports Council

19 years), Juniors (below 17 years), Sub-juniors (below 14 years), Kiddies (below 12 years), LP kiddies (below 10 years), LP mini (below 8 years) for aquatics, athletics, and 17 other categories. Regular school-going students are eligible for grace marks. Sports and games are conducted at the sub-district, district, and State-levels. The performance details of aquatics and athletics are given in **Appendix 9.2.2** and **Appendix 9.2.3**.

### Kerala State Youth Welfare Board

The Kerala State Youth Welfare Board was established in 1985. The Board provides assistance to youth clubs and other organisations to conduct training programmes and self-employment initiatives for the unemployed youth of the State. The following are the major initiatives undertaken by the Board in 2023-24.

- **Online Delivery System:** The Online Delivery System scheme is envisaged by the Kerala State Youth Welfare Board to help retailers in small towns by enabling them to access online market places, specifically through the online delivery system, which in turn creates employment opportunities for the youth.

- **Youth Forum:** The Youth Forum undertakes activities such as science quizzes, literary camps, and arts competitions at various levels including high school, district, and State. A State-level science quiz, 'BRAIN BATTLE-24', was conducted with a total cash prize of Rs 2,10,000. The forum also conducted folk song competitions at the 14 District youth centres of the State. The District-State level competition *Maninadam* is held every year in remembrance of the legendary folk singer Kalabhavan Mani. In addition, the forum conducts literary camps with an objective to improve the literary skills of the youth. Two literary camps, 'UYIR' and 'VAGADDE', were conducted in 2023-24.
- **Team Kerala-Kerala Youth Force** The Kerala State Youth Welfare Board launched the Kerala Youth Force, popularly known as Team Kerala, with an aim to foster a culture of volunteerism among the youth by encouraging their active involvement at the grassroots-level. This initiative aims not only to mobilise youth volunteers for disaster relief and pandemic response, but also to engage them in the State's efforts to combat substance abuse among young

people. The programme seeks to empower the youth to play a crucial role in advancing the State's developmental agenda. In addition to the commendable efforts of Team Kerala during the Covid-19 pandemic, the team also undertakes many activities including cleanliness campaign to revive lakes and rivers, beach cleaning, cleaning hospital premises, de-addiction campaigns etc.

- **Clubs:** The Kerala State Youth Welfare Board aims to empower the youth of the State through various awareness programmes and activities through various clubs associated with the Board, and also directly managed by the Board. The programmes include awareness programmes, training for competitive exams, environmental activities, and the distribution of sports kits. The details of various registered clubs under the Kerala State Youth Welfare Board are given in **Table 9.2.3**.
- **Keralotsavam:** *Keralotsavam* is a flagship programme of the Kerala State Youth Welfare Board that attracts a large number of people. The programme intends to provide a platform for both urban and rural youth to exhibit their artistic talents. The competitions are conducted at the Panchayat, Block, Municipality, Corporation, District, and State-level. The

State-level programme had more than 2,000 participants from 14 Districts for 58 events for arts, and more than 3,000 participants for 118 events for sports.

**Other Youth Development Programmes:** The Kerala State Youth Welfare Board, in association with clubs, cultural organisations, government and quasi-government agencies undertakes many activities such as training for competitive exams, seminars on contemporary issues, film festivals, etc. A State-level workshop on film was also conducted in 2023-24 with 35 participants from 14 districts.

- **Yuvashakti:** The *Yuvashakti* programme is co-ordinated by district co-ordinators posted on a monthly honorarium basis. The main responsibilities of the youth coordinators are to organise youth clubs, and conduct social development activities, volunteer activities, organise other activities for social growth, strive to increase youth participation in *Keralotsavam*, increase youth participation in gram sabhas, organise various job-oriented activities including labour bank, and bring the activities of the Youth Welfare Board to the grass-root-level.

**Table 9.2.3:** Various Clubs

Sl. No.	Name of the clubs	Number of clubs/ beneficiaries	Objectives	Activities
1	Agriculture clubs ( <i>Kathir</i> )	140 / 7,000	To inspire and help young people interested in agriculture, thereby helping ensure food security and providing opportunities for youth groups.	Training programmes, exhibitions of agricultural products, meetings with farmers are conducted and agricultural competitions are organised.
2	Women clubs ( <i>Avalidam</i> )	1,040 / 52,000	As a part of women's empowerment, mainstream young women to make them self-sufficient and aware of the violence against women.	Conducting awareness activities against dowry, violence against women, programmes on women safety laws, training for women self-employment, health frontline services, etc.
3	Differently abled clubs( <i>YES</i> )	14 / 1,400	To reduce the social isolation of persons with intellectual disabilities and to encourage their various talents.	Conducting trips, interactions with eminent persons, and organising training camps.
4	Transgender clubs ( <i>Marivillu</i> )	14 / 1,400	Mainstream transgender people in society, making them self-sufficient, and encourage the talents in them.	Conducting seminars, art programmes, camps, etc, to bring transgender people into the mainstream of society.
5	Youth clubs( <i>Yuva</i> )	290 / 50,000	To encourage the youth through activities that are useful to society, and to make them actively involved in the field of social work.	Conducting various activities benefitted to the youth.

Source: Kerala State Youth Welfare Board

### **Kerala State Youth Commission**

The Kerala State Youth Commission is a quasi-judicial body constituted under the KSYC Act, 2014. It is a Grant-In-Aid institution functioning under the Government of Kerala and acts as an agency with a view to protect the rights of the youth in Kerala, and enable them to be self-reliant in all walks of life. The main activities of the Kerala State Youth Commission in 2023-24 are:

- **Awareness Programmes and Surveys:** The commission has implemented various awareness programmes in all the districts of the State. The State Youth Commission implements various schemes with the aim of ensuring the mental health and physical fitness of the youth, protecting the youth from drug addiction, and in drafting action plans on issues affecting the youth. The Commission also prepared a report with the aim of strengthening the mental health of the youth with the help of an expert team. A study on more than 800 suicides of youth between 18-40 years of age, spanning over five years, was conducted.
- **Adalats:** The Commission plays a pivotal role in safeguarding the interests and rights of the youth of the State. *Adalats*/hearings/visits were conducted at the district-level to consider the petitions and suggestions received by the Commission. In 2023-24 the Commission received 252 complaints, out of which 60 have been solved and settled.
- **National Seminars:** The Youth Commission conducted a National Seminar on ‘Youth Empowerment, Mental Resilience, Happiness: Challenges and Possibilities’, with the aim to create awareness among the youth on issues such as rights of the youth and gender equality, and thereby empower the youth of the country in general, and the State in particular.
- **Youth Icon Programme:** The Commission awards the ‘Youth Icon Award’ to young women and men who have made a decisive impact among the people of the State and have outstanding achievements in the fields of art, culture, literature, sports, agriculture, social service, industry, or technology.
- **Empowering Marginalised Youth:** The Commission, in collaboration with Departments of Social Justice and Tribal Welfare, conducted health camps and martial arts training for young women to provide awareness regarding health and defence.

- **Facilitation Programmes:** Green youth programme, waste disposal and virtual employment exchange, are the facilitation programmes conducted by the Commission. The green youth programme aims to develop social, civic, demographic, and environmental consciousness among the youth through a collective endeavour, and to ensure a healthy life. In association with ‘Suchitwa Mission’, rivers, streams and springs are being cleaned for effective public use, and the youth are being organised against environmental pollution and to ensure the rejuvenation of water resources.

The Kerala State Youth Welfare Board and the Kerala State Youth Commission have an important role in empowering the youth by translating their ideas into action. These departments, through proper counselling and guidance, ensure that the youth are economically productive, socially responsible citizens. They facilitate the acquisition of new skills, relearning of conventional skills, and developing soft skills to meet the changing needs of an evolving job market.

Along with the development of skills, both the organisations also focus on ensuring physical and psychological well-being among the youth, encouraging all-round development through various programmes and activities.

In conclusion, the State of Kerala has made commendable progress in promoting sports and youth welfare. The investment in infrastructure, grassroots development programmes, and the nurturing of local talent has aided the emergence of Kerala as a hub for sports enthusiasts and aspiring athletes. In recent years, sports tourism in the State has witnessed significant growth and a rising trajectory, amply supported by the State’s investment in world-class infrastructure and hosting major sports events.

Recognising sports as a key driver for sustainable development, as well as for the health and well-being of its citizens, the State has taken significant strides to promote sports. The State Government has come up with innovative ideas like the Kerala School Sports, a first-of-its-kind school sports meet, the largest school sports meet in Asia. With the enthusiasm for sports and a healthy lifestyle among its citizens, and the vision of the Government, the State is set to reach new heights in the domain of sports in the years to come.





CHAPTER

10

KERALA DIASPORA



# KERALA DIASPORA

Migrants are a part of Kerala’s social life. They participate actively in multiple spheres of Kerala’s economy, society, and culture. New technologies have further strengthened the ties between non-residents and the State. Remittances constitute a significant part of the Gross State Domestic Product, and are a crucial factor in Kerala’s economic growth. Incomes from remittances have deepened the market and created demand for a range of material and cultural goods produced in Kerala.

The present Government of Kerala is one in which the diaspora has a new level of confidence. Its willingness to work and cooperate with the Government has been manifest over many events in the 13th Five-Year Plan period. During the 13th Five-Year Plan period, the creation of a unique forum, *Loka Kerala Sabha*, gave the members of the diaspora an opportunity to participate in debates

and social processes in the State and discuss problems and issues of the migrants and migration. The 14th Five-Year Plan continues to support this institution.

The World Migration Reports of 2020 and 2024 show that major changes have occurred in all segments related to migration. The total increase in migration in a period of two decades is 87 per cent. Similarly, it can be seen that there has been a huge increase in international remittances. There has been an increase of 549 per cent in 2024 compared to 2000 (**Table 10.1.1**).

## International Remittances

Remittances are financial or in-kind transfers made by migrants directly to families or communities in their countries of origin<sup>1</sup>. As per WMR of 2024, international remittances have recovered from

**Table 10.1.1** Key facts and figures from World Migration Reports 2000 and 2024

	2000 Report	2024 Report
Estimated number of international migrants	150 million	281 million
Estimated proportion of world population who are migrants	2.8 per cent	3.6 per cent
Estimated proportion of female international migrants	47.5 per cent	48.0 per cent
Estimated proportion of international migrants who are children	16.0 per cent	10.1 per cent
Country with the highest proportion of international migrants	UAE	UAE
Global international remittances (USD)	128 billion	831 billion
Number of refugees	14 million	35.4 million

Source: World Migration Report 2024

<sup>1</sup> WORLD MIGRATION REPORT 2024

the dip in 2020 due to the COVID-19 pandemic. There was an estimated USD 831 billion as international remittances globally in 2022, an increase from USD 791 billion in 2021 and significantly more than USD 717 billion in 2020. In 2022, India, Mexico, China, Philippines and France were (in descending order) the top five remittance recipient countries.

### Remittances in India and Kerala

Remittances are the second major source of external financing for low and middle-income countries after foreign direct investment. Its effect on household income and contribution to financial asset building to improve people's quality of life is well recognised in the literature on migration.

The Reserve Bank of India conducted the fifth round of the Survey on Remittances for the year 2020-21 based on a census of all Authorized Dealer (AD) banks and major Money Transfer Operators (MTOs) engaged in cross border transfer of funds. The survey estimated that, from the GCC region in India's inward remittances is estimated to have declined from more than 50 per cent in 2016-17 (last surveyed period) to about 30 per cent in 2020-21.

The share of the traditional remittance recipient states of Kerala, Tamil Nadu and Karnataka, which had strong dominance in the GCC region, have almost halved in 2020-21, accounting for only 25 per cent of total remittances since 2016-17, while Maharashtra has emerged as the top recipient state surpassing Kerala. State wise share of inward

remittances during the year 2020-21 is given in the following table.

**Table 10.1.3** State-wise Share in Inward Remittances, 2020-21 (10 states)

SI No	Destination State	Share in total remittances (Per cent)
1	Maharashtra	35.2
2	Kerala	10.2
3	Tamil Nadu	9.7
4	Delhi	9.3
5	Karnataka	5.2
6	Andhra Pradesh	4.4
7	Uttar Pradesh	3.7
8	Gujarat	3.2
9	Punjab	3
10	Jharkhand	1.9

Source: RBI Remittances Survey, 2021

Apart from host country dynamics, narrowing of wage differentials, increase in white-collar migrant workers to the GCC region, influx of low-wage semi-skilled workers from other states and Asian countries, and changes in employment patterns in these states might have lead to this structural change.

### The realm of migration - India and Kerala

“Migrants are those whose last usual place of residence is different from the present place of enumeration. Usual place of residence is the place (village/town) where the person stayed

**Table 10.1.2** Top 10 countries receiving international remittances (2010–2022) (current USD billion)

2010		2015		2020		2022	
India	53.48	India	68.91	India	83.15	India	111.22
China	52.46	China	63.94	China	59.51	Mexico	61.10
Mexico	22.08	Philippines	29.80	Mexico	42.88	China	51.00
Philippines	21.56	Mexico	26.23	Philippines	34.91	Philippines	38.05
France	19.90	France	24.07	Egypt	29.60	France	30.04
Nigeria	19.74	Nigeria	20.63	Pakistan	26.11	Pakistan	29.87
Germany	12.79	Pakistan	19.31	France	24.48	Egypt	28.33
Egypt	12.45	Egypt	18.33	Bangladesh	21.75	Bangladesh	21.50
Belgium	10.99	Germany	15.58	Germany	17.90	Nigeria	20.13
Bangladesh	10.85	Bangladesh	15.30	Nigeria	17.21	Germany	19.29

Source: World Migration Report 2024

continuously for a period of 6 months or more or intends to stay for 6 months or more” (Migration in India 2020-21, Periodic Labour Force Survey).

According to World Migration Report 2024, with nearly 18 million people living abroad, India has the largest emigrant population in the world, making it the top origin country globally. Our large Diasporas are living in countries such as UAE, USA and Saudi Arabia. Mexico is the second most significant origin country at around 11 million.

The influence of expatriates on the World economy is invaluable. We can understand this by looking at the number of expatriates since the 1970s. The number of international migrants has increased over the past five decades.

After the last round of Kerala Migration Survey in 2018, Kerala experienced unprecedented floods causing severe destruction. This was followed by the global lockdown, due to the COVID-19 pandemic in 2020 and 2021. This led to large-scale return migration, job losses, compulsory repatriations, expired visas, increasing fear of deportations, economic disruptions and wage theft. According to Kerala Migration Survey 2023, the number of migrants from Kerala is estimated at 2.2 million, which closely matches the 2.1 million recorded in Kerala Migration Survey 2018.

Given the overall decline observed over the past decade in previous rounds of the KMS, this stability in international migration over the past five years is interesting. Despite a slight increase of 32,388 migrants in 2023, 9 of Kerala’s 14 districts saw a significant decline in the number of expatriates compared to 2018, indicating saturation of international migration.

The proportion of women emigrants has increased from 15.8 per cent in 2018 to 19.1 per cent in 2023. Female migration has further seen a shift from GCC countries to Europe and other Western nations as destination countries, accounting for 40.5 per cent. However, for men, this figure stands at 14.6 per cent. In terms of education, 71.5 per cent of female migrants were found to have completed degree-level education as opposed to only 34.7 per cent of male emigrants. Male migrants continue to dominate emigration from Kerala, but the gap between male and female migrants narrowest in Kottayam and widest in Malappuram districts.

The most important figure in migration is student migration. A significant increase in student emigration contributed to maintaining emigration levels in 2023. From 129,763 student migrants in 2018, this number has doubled to nearly 250,000 in 2023.

The KMS 2023 has revealed that students constitute 11.3 per cent of total emigrants from Kerala, indicating that a growing number of younger individuals are choosing to migrate, particularly for educational opportunities abroad.

As predicted in 2013, the Kerala Migration Survey (KMS) shows a decline in emigration. The total number of emigrants in 2013 was 24 lakh and it reduced to 21 lakh in 2018. There has been a slight increase (1.5 per cent) in emigration as per KMS in 2023 compared to 2018. However, compared to 2013, it is very less. The overall trend indicates an increase in Return Emigrants (REM) in Kerala, rising from 739,245 in 1998 to 1,790,758 in 2023. The number of return migrants in 2023 has increased from 2018 in all the districts except in Kollam, Alappuzha, Pathanamthitta and Kasaragod. Details of Return Emigrants are shown in **Appendix 10.1.3**.

### **Emigrants from Kerala**

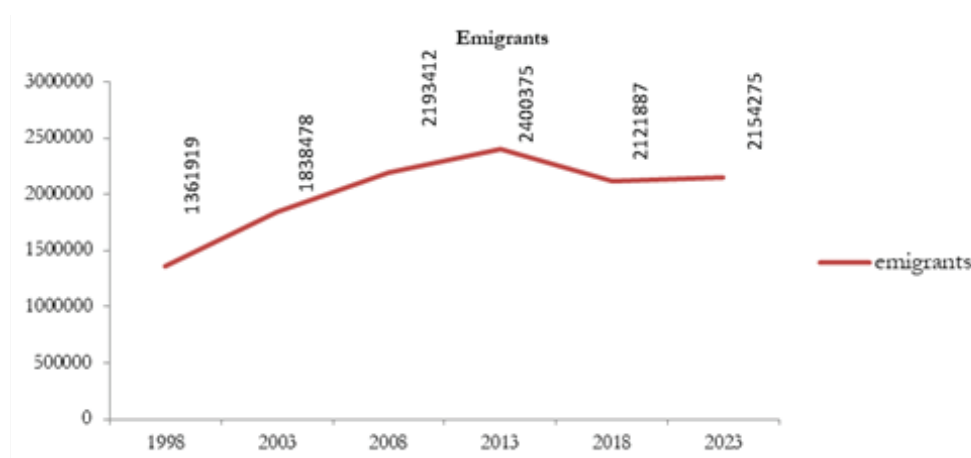
In 1998, there were 14 lakh migrants from Kerala. By 2003, the number of emigrants had increased to 18 lakh, which shows an increase of more than 28 per cent compared to 1998. A continuous increase in migration from Kerala from 1998 to 2023 is shown in **Figure 10.1.1**. But a decline is seen during the period from 2013 to 2018. But after 2018, it is good to see an increase again, albeit at a very low level.

Compared to 2018, it can be seen that the migration from Kerala increased slightly in 2023 (1.53%). This increase or decrease has been recorded for all the 14 districts of Kerala but the rate of change varies. Malappuram district has seen an increase of 17 per cent in migration but from Idukki and Wayanad districts the migration is less at 1.17 and 1.50 respectively. Details regarding the district wise migration from 1998 and 2023 are shown in **Appendix 10.1.1** and **Appendix 10.1.2**.

### **International student migration**

According to KMS 2023, International student migration from India is in a growing trend and Kerala will become one of the leading states in terms of students pursuing education abroad,

**Figure 10.1.1** Emigrants from Kerala, 1998-2023



Source: Kerala Migration Survey 2023

reflecting the desire of students in Kerala for higher income and better career opportunities. The KMS 2023 estimates 2.5 lakh student emigrants from Kerala with Ernakulam having the highest number of emigrant students at 43,990, followed by Thrissur and Kottayam with 35,873 and 35,382 students respectively. Wayanad had the lowest number of student emigrants from Kerala at 3750. The **Table 10.1.4** shows the international student migration status from Kerala.

**Table 10.1.4** International student migration status

District	Emigrant Students	Per cent
Thiruvananthapuram	4887	2.0
Kollam	21607	8.9
Pathanamthitta	10466	4.3
Alappuzha	14217	5.8
Kottayam	35382	14.5
Idukki	6946	2.9
Ernakulam	43990	18.1
Thrissur	35873	14.7
Palakkad	13692	5.6
Malappuram	15310	6.3
Kozhikode	15980	6.6
Wayanad	3750	1.5
Kannur	23512	9.7
Kasaragod	4391	1.8
<b>Total</b>	<b>250002</b>	<b>100.0</b>

Source: Kerala Migration Survey 2023

Among the destinations in this regard, the United Kingdom was ranked the first, followed by Canada and other European Union countries.

A significant increase in student migration contributed to maintaining emigration levels in 2023. From 129,763 student migrants in 2018, this will almost double to 250,000 in 2023. This remarkable increase in student emigration underlines a significant change in the demographics of migrants from Kerala.

### International Return Migration

The number of Returned Emigrants (REM) showed a steady year by year increase from 1998 to 2023. It increased by 20.9 per cent in 2003 and 29.4 per cent in 2008, followed by a decline in percentage increase in the number of REM in 2013 and 2018. However, the largest increase in REM was observed between 2018 and 2023, with an increase of 495,962 individuals. This

**Table 10.1.5** Trends in Return Emigration, 1998- 2023

Year	Estimate	Increase	Percentage increase
1998	739245	--	--
2003	893942	154697	20.9
2008	1157127	263185	29.4
2013	1252471	95344	8.2
2018	1294796	42325	3.4
2023	1790758	495962	38.3

Source: Kerala Migration Survey 2023

could be due to the COVID-19 pandemic, where people lost their jobs and were forced to return to Kerala. Trends in Return Emigration is shown in **Table 10.1.5**.

### **Return emigrants by Districts**

The number of Returned Emigrants (REM) showed a steady year-on-year increase from 1998 to 2023. It increased by 20.9 per cent in 2003 and 29.4 per cent in 2008. During the period 2013 and 2018 recorded a percentage decline in the number of REM.

The increase in returns was expected over the past few years due to economic disruptions caused by the global health crisis, stricter immigration policies and a reduction in available employment opportunities. A significant number of migrants were forced to return to their home countries due to job loss, forced resignations and other challenges related to the pandemic.

However, REM recorded the largest increase between 2018 and 2023, with an increase of 495,962 persons, an increase of 38.3 per cent the highest increase in the history of Kerala Migration Surveys.

**Appendix 10.1.3** provides data on the number of Return emigrants in various districts of Kerala from 2018 to 2023. The overall trend indicates an increase of return emigrants in Kerala, from 739,245 in 1998 to 1,790,758 in 2023. Districts such as Thiruvananthapuram, Ernakulam and Malappuram have shown steady growth in the number of Return Emigrants over the years.

### **Interventions of Government**

In Kerala, various schemes for emigrants are implemented by Government through various agencies, mainly NORKA Roots, Pravasi Welfare Board etc. Major interventions of these agencies are described below.

#### **NORKA Roots**

NORKA Roots, earlier known as Non Resident Keralites Welfare Agency (NORKWA), is a field agency, working under NORKA department since 2002. Key objectives of the agency are to ensure NRK welfare and to serve as a single kiosk for all information pertaining to them.

### **Major Schemes of NORKA Roots**

#### **Santhwana**

It is purely a onetime assistance scheme. The NRK who applies for the Santhwana scheme should have worked abroad for not less than two years. The annual family income of the applicant/beneficiary should not exceed 1.5 lakh rupees. The scheme can be availed for medical treatments (up to 50,000), death assistance (up to 1,00,000/-) marriage assistance (up to 15,000), and purchase of physical aids to combat disability (up to 10,000).

Under the Santhwana scheme, an amount of Rs 26.1 crore has been sanctioned to 4124 beneficiaries in the financial year 2023-24.

#### **Rehabilitation of Returnee Migrants (NDPREM)**

As part of rehabilitation of returned migrants, Government has formulated a scheme namely 'Norka Department Project for Return Emigrants (NDPREM)' with a view to providing sustainable livelihood for return emigrants by promoting self-employment ventures. As part of initiating the project, applications are invited from prospective entrepreneurs among return migrants who wish to start their own ventures in the fields of agri-business, trading, services and manufacturing. Under the scheme, capital subsidy of 15 per cent would be sanctioned for projects having capital outlay up to 30 lakh per individual applicant. There is provision for giving interest subsidy at the rate of 3 per cent for the first 4 years provided the unit is in operation.

NDPREM scheme has 1200 beneficiaries in financial year 2023-24 and an amount of Rs 18 crore has been expended through this scheme during the year 2023-24. More than 6600 enterprises were started through this scheme.

#### **Rehabilitation, Re integration and coordination of NRKs**

This is designed to rehabilitate, re-integrate and co-ordinate NRKs into a new and successful life. One of the most important objectives of the government is to provide them new jobs or opportunities for those who want to re-migrate to other countries so that they can earn a regular income. The following are the rehabilitation proposals envisaged under the scheme.



*Pravasi Bhadrata* is a scheme launched in the financial year 2021-2022 for those who have returned home after losing their jobs due to Covid-19 and who are willing to be self-employed. Funding is provided through three sub-schemes namely PEARL, MICRO and MEGA.

During the financial year 2023-24 a total of 13906 ventures have been started through this initiative and an amount of Rs 32.5 crore has been spent for the scheme.

### Pravasi Legal Aid Cell

The Pravasi Legal Aid Cell (PLAC) was established to provide legal assistance and advice to distressed NRKs facing issues related to passports, visas, employment, social matters, and legal cases, especially for those imprisoned in Gulf Cooperation Council (GCC) countries without willful default. The cell conducts legal awareness programmes, offers translation help, and collaborates with Malayalee Cultural Organizations to support distressed NRKs. Currently, seven legal consultants have been appointed in Saudi Arabia, UAE, and Kuwait under the PLAC scheme.

A total number of 216 applications were received under this scheme and 104 cases were successfully settled up to 31.08.2024.

### NORKA Recruitment

Since 2015 Norka has successfully placed above 3,500 healthcare professionals including consultants, nurses, care givers, technicians and housemaids in various countries, including the GCC nations, the United Kingdom, Germany, and Canada. Norka Roots has the mandate to recruit candidates from any province within India.

At present various job recruitments to Gulf countries like Saudi Arabia, UAE, Kuwait, United Kingdom (UK), Germany and Canada are being

successfully conducted through Norka Roots. UK, Germany and Canada recruitments are completely free for candidates.

### Kerala Non Resident Keralites Welfare Board (KNRKWB)

Kerala Non Resident Keralites' Welfare Board is a statutory Board of Government of Kerala constituted under the Non Resident Keralites' Welfare Act, 2008 for the purpose of carrying out activities for the welfare of the Non Resident Keralites' (NRKs). The Board is implementing the schemes envisaged under the Non Resident Keralites' Welfare Scheme, 2009 notified as per the provisions of the Act. A Welfare Fund is established as per the provisions of the Act and the Scheme for implementing the welfare activities.

The Board provides various assistance such as pension, family pension, invalid pension, death assistance, treatment assistance, marriage assistance, educational assistance and maternity assistance to its members of welfare boards.

The pension details provided by NORKA Welfare Board are described in the table given below.

The **Table 10.1.6** shows that, the total number of registrants and pensioners from the year 2021-22 to 2024-25 (up to October 2024). It is evident from the table that, during the financial year 2021-22, more than Rs 52 crore has been spent for 23117 members and in the year 2023-24 more than Rs 191 crore has been spent for 49765 members through NORKA Welfare Board in the form of pension. As of October 2024-25, more than Rs 133 crore has been spent on pension for 61404 members.

There is a transparent and secure online facility to enrol and pay dues in Pravasi Welfare Fund from anywhere in the world.

**Table 10.1.6** KNRKWB - Details of pension sanctioned for the year 2021-22 to 2024-25 (up to October 2023)

Year	Total number of registrants	Number of pensioners	Amount (Rs) in crore
2021-22	64210	23117	52.60
2022-23	90550	35112	124.39
2023-24	71771	49765	191.74
2024-25 (14.10.2024)	18974	61404	133.19

Source: KNRKWB, Government of Kerala

### **Pravasi Dividend Scheme**

Kerala Non Resident Keralites' Welfare Board in collaboration with KIIFB is implementing Pravasi Dividend Scheme which is a long-term investment scheme to effectively utilize NRK investments for the development of the native land.

Pravasi Dividend Scheme offers lifetime financial and social security for NRKs and their spouses. This income guarantee scheme is well received by the NRK communities. Under this scheme, so far more than Rs 330 crore have been collected and transferred to KIIFB.

Contributions made by non-residents for the development of Kerala cannot be measured in financial terms alone. The Kerala government has introduced and implemented many schemes for the welfare of Non Resident Keralites. Considering the special features of this sector, it is necessary to pay even more attention to it. Returning NRKs look forward to the creation of a knowledge economy in Kerala. Likewise, this Government is ensuring various investment opportunities for non-residents to accelerate economic growth in Kerala.



CHAPTER

11

INFRASTRUCTURE



# INFRASTRUCTURE

## 11.1 TRANSPORT

Road transport is one of the best and most effective methods of transportation. The roadways network in India is the second-largest in the world, spanning a total of 6.4 million kilometers. Road Transport is considered to be one of the most convenient and preferred mode of transportation, both for freight and passengers, keeping in view of its level of penetration into populated areas and last mile connectivity. Thus, it is vital for economic development and social integration of the country. Road transport also acts as a feeder service to railway, shipping and air traffic.

### Road Network in India

Road network has been growing over the years with improvement in connectivity between cities, towns and villages in the country. India's road network comprises of National Highways, Expressways, State Highways, District Roads, Rural and Urban roads and Other District Roads. The total length of road network in India is given in **Table 11.1.1**.

**Table 11.1.1** Road Network in India

Sl. No	Particulars	Length of Road (in km)
1	National Highways/ Expressway	1,46,145
2	State Highways	1,79,535
3	Other Roads	60,19,723
<b>Total</b>		<b>63,45,403</b>

Source: Annual Report 2023-24, MoRTH

The National Highways have a total length

of 1,46,145 km, which in totality serve as the arterial network of the country. The development of National Highways is the mandate of the Government of India. National Highway's (NH) network increased by 60 per cent from 91,287 km in 2014 to 1,46,145 km in 2024. Length of operational High-Speed Corridors of NHs network has increased from 93 km in 2014 to 2,138 km in 2024.

The State Highways (SHs) are intended to carry the traffic along major centers within the State. Major District Roads provide the secondary function of linkage between main roads and rural roads.

### Roads in Kerala

The State has a total road length of 1, 91, 292.39 km. This includes classified and non-classified roads as stipulated by Indian Road Congress. The National Highways, State Highways and Major District Roads (MDRs) together handle about 80 per cent of the total road traffic. The major development indicators of transport and communication sector in Kerala since 2013 are given in **Appendix 11.1.1**.

There are 11 National Highways (NHs) in the State with a total length of 1,781 km. Out of this, the NH wing of State PWD upkeep 548 km (31 per cent) of the National Highways and the remaining 1233 km is maintained by the National Highway Authority of India (NHAI) under Ministry of Road Transport and Highways (MoRTH). The District-wise status of roads maintained by PWD (NH)

wing is given in **Appendix 11.1.2** and the length of National Highways in the State is provided in **Appendix 11.1.3**.

The major roads in the State are developed and maintained by the State Public Works Department. The total length of roads maintained by Public Works Department (PWD Roads) is 29,573 km in 2023-24. This comprises of 4,128 km (13.95 per cent) State Highways and 25,445 km (86.04 per cent) of Major District Roads (MDRs). Out of the total length of the State Highways, 898 km is four lanes, 3,193 km is two lanes and remaining 35 km single lane roads. The Major District Roads cover 25,445 km, of which, 52 km of roads are four lanes, 10,593 km two lanes and 14,748 km single lane roads. Local Self Government own and operates 79.7 per cent of the total road network in Kerala whereas the PWD (Roads) maintains 15.5 per cent of roads. The PWD (NH) wing upkeep 0.3 per cent of the total road length and 3.9 per cent of roads are called “other roads” which are constructed and maintained by Railways, Irrigation, KSEB, Forest and Devaswom departments.

Apart from construction of roads, the Roads wing of Public Works Department focuses on road improvements, repair and maintenance of existing roads, relaying and up gradation of roads and junction improving for bettering the riding quality and road safety. The State has made arrangements for running contracts for maintaining existing

roads. In Year 2023-24, a total length of 1,163 km has been maintained by Road wing using Bitumen Macadam (BM) and Bitumen Concrete (BC).

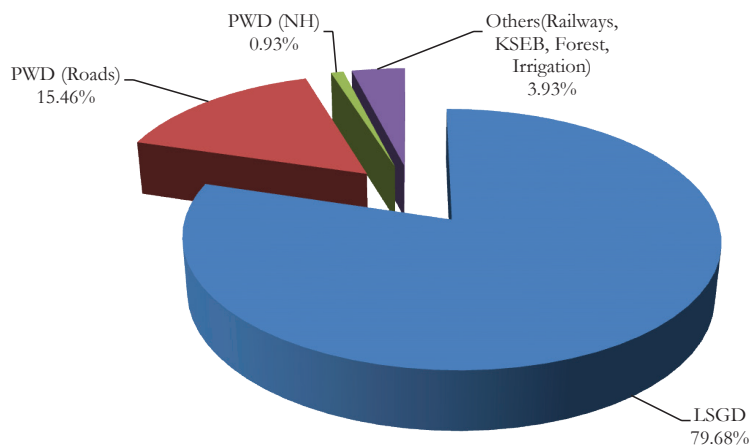
Kottayam District has highest share of PWD roads with 3,040 km (10.3 per cent). Wayanad District is at the bottom with 914 km (3.1 per cent). Details of District-wise category and surface -wise length of roads maintained by PWD (Roads) are given in **Appendix 11.1.4** and **Appendix 11.1.5**. Agency wise details of roads developed and maintained in the State is depicted in the **Figure 11.1.1**.

The total length of roads maintained by different local bodies in 2023-24 is 1,52,422 km., of which 1,28,048 km (84 per cent) is maintained by District and Grama Panchayats, 16,560 km (10.9 per cent) by Municipalities and 7,813 km (5.1 per cent) is maintained by the Corporations. Roads maintained by various local bodies according to the GIS based road asset mapping prepared by Kerala Remote Sensing and Environment (KRSEC) is given in the **Table 11.1.2**.

The PWD (Bridges) wing maintains a total of 2,837 bridges along State Highways (546 Bridges), Major District Roads (2,141) and Other District Roads Village Roads and Railway over Bridges (ROB) (150 Bridges).

The wing focus on the construction of aesthetic bridges using modern technology such as bow

**Figure 11.1.1** Length of Roads Maintained by Different Agencies, in per cent



Source: Various Departments

**Table 11.1.2** Roads maintained by various Local Bodies, in km

Sl.No	Local Body	Black Topped	Concrete / cement road	Earthen road	Total
1	Corporations	5,082	2,172	559	7,813
2	Municipality	10,142	3,815	2,602	16,560
3	District Panchayat	129	6	5	140
4	Block Panchayat	Block Panchayat does not have any road assets.			
5	Grama Panchayat	65,372	28,927	33,609	1,27,908
<b>Total</b>		<b>80,726</b>	<b>34,920</b>	<b>36,775</b>	<b>1,52,422#</b>

Source: Local Self Government Department

# Note: The total road length submitted in previous years, based on manual entries in the asset register, was inaccurate due to duplications from changes in road surfacing. To solve the issue and provide accurate information, KSREC developed GIS mapping software.

string arch bridges, extradosed bridges, integral and semi-integral bridges. In 2023-24, the bridges wing had completed the construction of 42 bridges at a cost of Rs.256.68 crore. The notable achievement of the Wing is the completion and opening of the Valiyazheekkal Bridge of 981-meter-long, which has bow string arch of 110-meter span and 12-meter height to facilitate water transport.

The Department envisions to provide connectivity to inaccessible habitats like tribal settlements, islands and to reconstruct damaged bridges. The department's innovative projects include converting out-dated bridges into rest areas and tourist attractions, and constructing illuminating bridges of international-standard across Kerala. Details of bridges and culverts constructed by PWD (Bridges) wing as on August 31, 2024 is given in **Appendix 11.1.6**.

### Road Improvements

The State PWD is primarily responsible for policy, planning, design, construction and maintenance of the National Highways on behalf of the National Highway Authority of India (NHAI), State Highways, and MDRs. Kerala State Transport Project (KSTP), Kerala Road Fund Board (KRFB), Roads and Bridges Development Corporation of Kerala Ltd (RBDCK) and Road Infrastructure Company Kerala Limited (RICK) are also involved in implementation of road projects in the State. The main source of funding for NH maintenance is Government of India assistance.

**City Road Improvements:** Kerala Road Fund Board (KRFB) is a statutory body under the State Government established in 2002 by the enactment of Kerala Road Fund Act of 2001. The agency plays a pivotal role in the overall infrastructure

development of the State. It primarily oversees and manages non-budgetary funds and organises such funds for developing and maintaining roads and other allied infrastructure.

**Coastal Highway and Hill Highway:** The coastal highway from Thiruvananthapuram to Kasaragod is a prestigious project envisaged by the Government of Kerala along the coastal belt of the State. The coastal highway will serve as an alternative to the National Highway 66 and will serve as an evacuation route in the event of any emergency. The Coastal Highway will connect Vallarpadam, Kollam and Vizhinjam apart from other small ports and harbours. Kerala Road Fund Board (KRFB) is the Special Purpose vehicle for the implementation of the project.

Government of Kerala declared State Highway 59 (SH 59) which is the longest State highway in Kerala as Hill Highway or *Malayora* highway connecting all Districts in Kerala except Alappuzha. The highway starts from Nandarapadavu in Kasaragod to end at Parassala in Thiruvananthapuram. The proposed Hill Highway is also called "Kerala Spices Route" as the same connects almost all the areas engaged in trade and cultivation of spices and other high range products in Kerala. The objective of forming such a Highway is to augment the trade and transport of spices and agricultural products of high ranges as well as to reduce the traffic intensity in the main central road of Kerala. Kerala Road Fund Board (KRFB) is designated as Special Purpose Vehicle for Hill highway also. Works have been completed in 4 stretches and works are in progress in other stretches.



### Research and Development in Road Sector:

Research and development activities play an anchoring role in developing innovative models and techniques to address the challenges in modernising the road system in general and technology up gradation with cost effective infrastructure measures in particular. Design, Research, Investigations and Quality Control Board (DRIQ Board), Kerala Highway Research Institute (KHRI) and National Transportation Planning and Research Centre (NATPAC) are the research organisation currently engaged in research and development of the road transport sector.

### Road Traffic

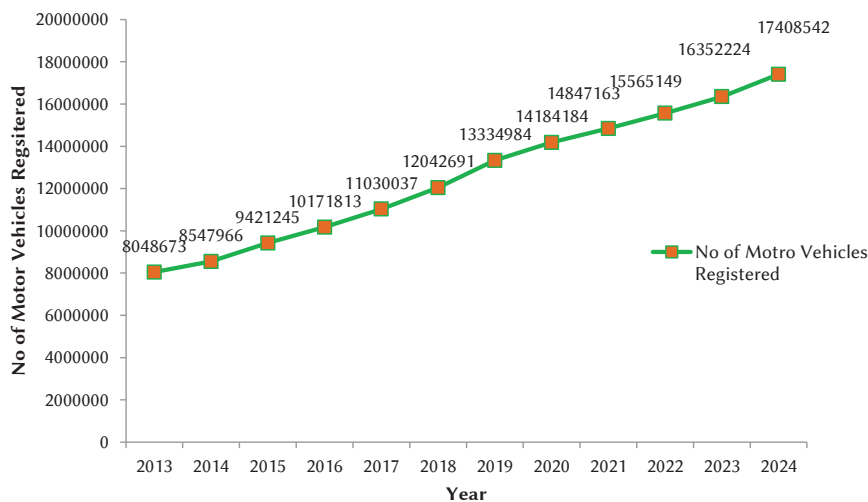
The number of motor vehicles having valid registrations as on March 31, 2024 is 174 lakhs as against 166 lakhs in the previous year, a growth of 4.50 per cent. As of March 31, 2024, the total number of two wheelers (Motor Cycles/Scooters/Mopeds) registered in the State is 113 lakh and there are 8 lakh auto rickshaws and 38.94 lakh cars in the State. As on March 31, 2024, 1.39 lakh buses (including education institution buses) and 1.31 private service vehicles are registered in the State. The total number of newly registered vehicles in 2023-24 is 7.44 lakh. Out of this, two wheelers are 4,82,892, three wheelers are 32,740, buses including Omni/ educational institution buses are 5,339 and ambulance are 734. The details are given in the **Appendix 11.1.7** and **Appendix 11.1.8**. The growth in the number of motor vehicles in the last twelve years since 2013 is shown in **Figure 11.1.2**.

Of the total registered vehicles in the State (174 lakh), the highest vehicle population was recorded in Ernakulum District with 22.80 lakh vehicles (13.1 per cent) followed by Thiruvananthapuram with 20.78 lakh (11.9 per cent). Wayanad District has the lowest number of 3.2 lakh vehicles (1.8 per cent). The District-wise growth in number of motor vehicles in Kerala is given in **Appendix 11.1.9** and the category-wise growth of motor vehicles in Kerala from 2012-13 to 2023-24 is given in **Appendix 11.1.10**. The mismatch between growth in motor vehicles and the capacity augmentation of roads has resulted in increasing traffic congestion and road accidents throughout Kerala. Percentage share of various type of motor vehicles registered in the State in 2023-24 is given in **Figure 11.1.3**.

### E-Mobility

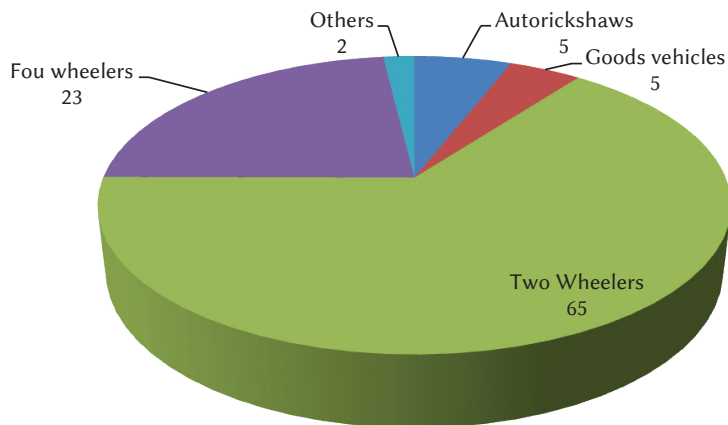
The State has been actively pursuing greener policies and environment-friendly programs. Electric vehicles (EV) have zero tailpipe emissions and are much better for the environment. Kerala is witnessing a growing inclination towards electric vehicles (EVs) and the total number of electric vehicles registered in Kerala from January to August, 2024 is 5, 02,083. Out of this, electric motor cycles or scooters are 3,28,608, electric motor cars are 1,29,344 and three wheelers are 18,947. The e-vehicle registration details in Kerala in 2023 and 2024 (up to August) are given in **Appendix 11.1.11**.

**Figure 11.1.2** Growth in the number of motor vehicles in Kerala since 2013



Source: Motor Vehicles Department, Government of Kerala

**Figure 11.1.3** Distribution of Motor Vehicles Registered by type, 2023-24, in per cent



Source: Motor Vehicles Department, Government of Kerala

Kerala is extensively promoting electric vehicles (EVs) for use in Government offices. Motor Vehicles Department (MVD) and other Departments have switched to ‘Plug-in Electric Vehicles’ on dry-leased from the Energy Efficiency Services Ltd (EESL), a Union Government institution under the Ministry of Power, through the Agency for Non-Conventional Energy and Rural Technology (ANERT).

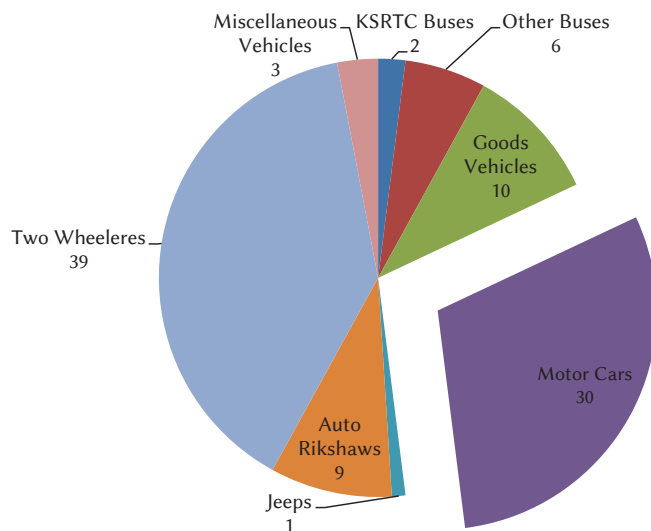
**Road Safety**

Despite being well connected, the road network of Kerala faces severe constraints such as the

urban sprawl, the erratic ribbon development along the roadways, excessive road traffic that is beyond the capacity of the roads, and so on. The constant increase in road traffic exerts pressure on the existing road network. Capacity augmentation of existing roads is beset with problems relating to limited right of way and land acquisition.

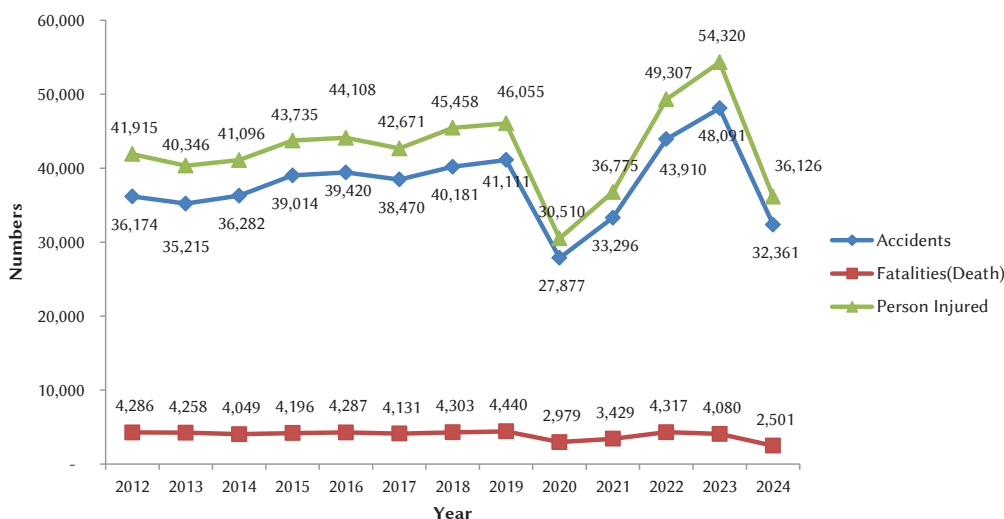
According to State Crime Records Bureau (SCRB), 4,080 deaths and 54,320 injuries from road accidents in 2023 were reported in Kerala. Thiruvananthapuram District reported the highest number of fatalities (462) in 2023 whereas Wayanad reported the least number (84). As

**Figure 11.1.4** Details of road accident by vehicle type in Kerala, January to August, 2024, in per cent



Source: Motor Vehicles Department, Government of Kerala

**Figure 11.1.5** Trend in Motor Vehicle Accidents, Fatalities and Number of persons injured in Kerala, 2012 to 2024\*



\*Details as on August, 2024

Source: State Crime Records Bureau (Kerala) & Ministry of Road Transport & Highways (Government of India)

per the records of the SCRB, 2,501 deaths were reported in Kerala from 32,361 accidents from January to August, 2024.

Road accidents are attributed mainly to rash driving, bad road conditions, unfit vehicle conditions and unfavorable environment. Road Safety being a complex issue, it requires consistent, prolonged and concerted efforts from various stakeholders to achieve the goals. Despite various road safety initiatives and enforcement measures taken by the Motor Vehicles Department and Police, increase in the number of road accidents, especially that involving two wheelers, is a cause of concern. The District-wise motor vehicle accidents occurred in Kerala in 2023 (January to December) and the category-wise details of motor vehicles involved in those road accidents in 2023 (January to December) are given in **Appendix 11.1.12** and **Appendix 11.1.13** respectively.

Largest number of road accidents involve two wheelers that constitute 38.6 per cent of accidents occurred in the State in from January to August, 2024. The number of traffic accidents involving two wheelers was 19,403 in 2023 and it is 12,480 from January to August, 2024. The percentage of vehicle category-wise accidents that occurred

between January and August, 2024 in Kerala is shown in **Figure 11.1.4**.

A total of 3,499 bus accidents were registered in Kerala in 2023. Out of this, KSRTC buses were involved in 688 accidents and other buses in 2,811 accidents. As a whole the number of road accidents and number of persons injured has increased slowly but steadily from 2012 to 2023. The exceptions were the years 2020 and 2021 which witnessed the Covid 19 pandemic. However fatalities in road accidents has decreased from 4,317 in 2022 to 4080 in 2023. Trend of motor vehicle accidents, injuries and deaths reported in Kerala from 2012 to August, 2024 is presented in **Figure 11.1.5**.

Crash rates are generally used in traffic safety analysis and planning, which is used to assess the frequency and severity of crashes in specific region/ area, road segments or intersections, often normalised by exposure factors like traffic volume, distance or population. Crash rate normalised based on the vehicle population is given in the report of NATPAC. Over the years (2021-23), crash rate has been declining because of hike in registrations of vehicles, inoperative vehicle, vehicle with invalid registration. As per the data provided by NATPAC, crash rate in Kerala (per 10,000 vehicles with valid registration) has declined

from 156.58 in 2021 to 29.41 in 2023. The motor vehicles department has registered 18,91,947 cases of violation of motor vehicle rules including over speeding and red-light violation from June, 2023 to October, 2024 and an amount of Rs.114.5 crore was collected as penalty for the violation of motor vehicle and road rules in the period. Among Districts, Thiruvananthapuram (2, 19,480 cases) reported the highest number of incidents of traffic rule violations followed by Ernakulum (1, 85,331) and Kozhikode (1, 82,403). Idukki (78,946) District reported the least number of violation incidents in the period from June, 2023 to October, 2024 (Under Safe Kerala Project E chellan statistics).

As per the records with the Police Department and crime records bureau, most of the accidents are attributable to the fault of drivers. In order to ensure road safety, it is necessary to monitor accidents and assess the scope of remedial treatment to reduce crash rate and severity. Identifying, analysing and treating the black spots are widely regarded as the most effective approaches to prevent road crashes. NATPAC under the Kerala State Council for Science Technology and Environment (KSCSTE) identified 4,592 accident black spots and hazardous locations across Kerala in 2021 based on the accident data for the years from 2018 to 2020 of Kerala State Crime Records Bureau. It submitted a report to Kerala Road Safety Authority (KRSA). Ernakulum District has highest number (703) of accident black spots, followed by Thiruvananthapuram District (694) and Thrissur (548) Districts. NATPAC at the instance of Kerala Road Safety Authority (KSRA) had also identified a total of 323 vulnerable road corridors on National Highways and State Highways in Kerala, of which, 149 corridors were on the National Highways and 174 corridors on the State Highways in Kerala.

### **Kerala State Road Transport Corporation (KSRTC)**

The Public transports sector in Kerala include both State owned transport services (KSRTC, KURTC, and KSRTC-SWIFT Ltd.) and private stage carriages. Kerala is different from the other South Indian States as the share of private stage carriages is higher in the overall public transport system. Over the years, there has been a gradual decline in the number of public transport buses. Kerala Urban Road Transport Corporation (KURTC), is incorporated under the management of KSRTC.

The service, operation and maintenance of buses of KURTC are being undertaken by KSRTC.

KSRTC is the single largest public sector undertaking, carrying out passenger transport operations in the State. Development of infrastructure and modernisation of workshops and total computerisation are activities of KSRTC funded through State Plan. As of March 31, 2024, there were 5,509 buses (including *Navakerala* bus procured by utilising Government assistance of Rs.1.05 Crore), of which 414 were purchased under SWIFT Ltd.

As the part of Green initiative, M/s Smart City, Thiruvananthapuram Ltd has sanctioned Rs.103.74 crore to KSRTC-SWIFT Ltd to purchase 113 electric buses in 2023-24. The number of buses owned by KSRTC/SWIFT is given in **Appendix 11.1.14**, age-wise details of vehicles owned by KSRTC is given in **Appendix 11.1.15** and major internal indicators of KSRTC are given in **Appendix 11.1.16**.

The performance indicator of KSRTC shows that 60.2 per cent of buses owned by the Corporation are ten or more year's old (3,066 out of 5,095 buses, excluding swift). Average fleet operated by KSRTC in 2023-24 is 3,731 buses and average age of fleet is 11 years. There are 23,599 staffs in KSRTC as per the details furnished in 2023-24. The Driver per bus and Conductor per bus ratio is 1.64 and 1.66 respectively. It is 0.26 and 0.82 when the ratio comes to ministerial and mechanical staff respectively. The average occupancy rate per bus per month is 78.1 per cent. The major indicators showing operational efficiency of KSRTC and KURTC are shown in **Appendix 11.1.17 & 11.1.18** and District-wise operational statistics of KSRTC is given in **Appendix 11.1.19** respectively.

The gross revenue earning of KSRTC has increased from Rs.2, 092.49 crore in 2022-23 to Rs.2, 347.94 crore in 2023-24. Upto to August, 2024, KSRTC earned revenue of Rs.987.87 crore. The gross revenue expenditure in 2023-24 was Rs.2,650.35 crore as compared to Rs.2,407.02 crore in 2022-23 and operating loss in 2023-24 was Rs.302.41 crore as compared to Rs.314.53 crore in 2022-23.

Some of the notable schemes/ achievement/ activities of KSRTC are given below.

- **Gramavandi:** Gramavandi is the ambitious project rolled out by KSRTC in July, 2022 to address the connectivity issues in rural areas. As of March, 2024, 20 Gramavandi services are being operated by KSRTC across 11 Districts.
- **Samudra:** KSRTC in cooperation with the Fisheries Department had started special bus service to ferry women fish vendors from coastal areas to the city. Three buses are being operated in Thiruvananthapuram city by KSRTC under the project and these buses have been modified to include racks for fish baskets and other facilities.
- **KSRTC Driving School:** KSRTC has launched a commendable initiative as “driving school” on June 26, 2024 at Staff Training Center in Thiruvananthapuram. This is the first government owned driving school in the State with the message of best training in driving at reasonable cost. As of now, 205 people have been admitted to the center. The training center has generated an income of Rs.17.17 lakh
- **Air-conditioned passenger waiting areas:** As part of the initiative to improve customer friendly services at KSRTC bus stations air-conditioned rest areas have been set up for passengers and families arriving together. The service has commenced at Thiruvananthapuram central, Kozhikode and Angamaly bus stations.
- For revitalising the entity, KSRTC introduced projects such as Logistics services, online concession system, Stay on KSRTC bus in Munnar, retail fuel filling stations in association with Indian Oil Corporation and Hindustan Petroleum Corporation called ‘Yatra Fuel’.
- Another initiative by the KSRTC is computerised vehicle tracking and monitoring system, which has been implemented to provide real-time timing of schedules and services using information technology in manner useful to the public and passengers. Real time of schedules and services are available online to public and passengers using mobile application ‘ente KSRTC neo’.
- Courier and parcel system, and Phone Pe based ticketing are the other initiatives of KSRTC for the benefit of public and passengers.
- KSRTC was awarded the National Public Transport Excellence Award by the Secretary of MoRTH on March 15, 2024
- On September 26, 2024, KSRTC received recognition at the ‘Governance Now 9th PSU IT Forum’ event held in New Delhi, under the theme ‘Innovating Tomorrow by Leveraging

Technology for Progressive Public Sector

- **Super-Fast Premium AC Buses;** KSRTC has introduced 40 seated AC Premium Superfast Diesel Buses at a lower cost with facilities. The buses are equipped with modern amenities including Wi-Fi, comfortable push back seat, reading lamps, bottle holders, magazine pouches, music system, TV, CCTV Cameras, electronic stability control for safety, AI cameras assisted driver monitoring system and passenger information system.

### Challenges

The most important challenge in the road sector involves building all weather roads connecting each and every village. Ensuring high-quality standards during the entire lifespan of a road is crucial for its durability and longevity. By adopting rigorous quality control measures, performing regular inspections, and prioritising preventive maintenance, it is possible to prolong the lifespan of roads, lower repair expenses, and improve safety for users. The road construction sector in Kerala encounters numerous obstacles that hinder the advancement of infrastructure.

To overcome these challenges, it is essential to tackle land acquisition difficulties, investigate creative financing alternatives, adopt technological advancements, emphasize sustainability, refine project management methodologies, and strengthen quality control and maintenance practices. Implementing these strategies will facilitate the development of efficient, resilient, and sustainable road infrastructure, thereby fostering economic growth and enhancing connectivity across the State.

### Way Forward

An action plan should be made for prioritising the road works in the State. Major emphasis should be given to widening the State Highways and MDRs along with professional design and adequate drainage facilities. The new road development initiatives like the National Highway widening, highways, coastal highways and bypasses need to be completed in the 14th Five-Year Plan period.

There is a need to undertake futuristic development of State Highways, important MDRs and city roads in the State, through geometrical improvement, junction improvements, covering pedestrian facilities, utility ducts, re-laying the roads incorporating technical corrections and entering

into maintenance contracts. Road-side parking is another issue to be addressed to improve the level of service.

### Rail Transport

Kerala has a total track length of 2,106 km including running track. Railway in the State comes under Thiruvananthapuram and Palakkad divisions of the Southern Railways. Palakkad Division has a total route length of 1075 km and operates 99 mail and express, 60 passenger trains and 64 freight trains. Thiruvananthapuram division has a total route length of 1031.7 km and operates about 170 mail/express /passenger trains and 8 goods trains per day. All the railway lines passing through the State have been converted into broad gauge. There are 200 railway stations in the State (95 under Palakkad Division and 105 under Thiruvananthapuram Division). Doubling and electrification works are in progress. Feasibility studies for new lines including the coastal railway line connecting Kodungallur, Nedumangad, Malappuram and Manjeri are underway in the railway sector.

### Kerala Rail Development Corporation Limited (KRDCL)

Kerala Rail Development Corporation Limited has been incorporated as a joint venture company with an equity share of 51 per cent and 49 per cent between Government of Kerala and Government of India. This has been formed with the objective of taking up major railway infrastructure development projects in Kerala on a cost sharing mode. The company has an initial paid-up capital of Rs.100 crore which can be enhanced, based on the quantum of projects to be undertaken. The following activities are planned to be executed through KRDCL

- A. Semi High-Speed Rail Project (Silver Line)  
The 529.45 km long semi high-speed rail corridor (Silver line) connecting Kasaragod and Thiruvananthapuram will enable trains to run at an operating speed of 200 kmph. The project is envisaged as a 100 per cent green project. Silver Line will divert road vehicles and trucks from road, and reduce emissions of carbon dioxide.
- B. Broad-Gauge Line from Thalassery to Mysore (240 km),
- C. Construction and commissioning of 27 Road Over Bridges
- D. Angamali-Erumeli-Sabari rail project- The

agency has already completed the LiDAR survey works

E. Nilabur- Nanjangud rail project-DPR under preparation

### Kochi Metro Rail Project

Kochi Metro Rail Project is the flagship project of the Government of Kerala is designed to address the transportation woes of Kochi city. The project is implemented through the Kochi Metro Rail Ltd (KMRL) which is an SPV jointly owned by the Government of Kerala and Government of India through equity participation. The Government of India sanctioned the Phase I (Blue Line) of the project in July 2012 to construct a fully elevated metro on a viaduct with 22 stations for 25.2 km stretch from Aluva to Petta at a total cost of Rs.6,218.14 crore (revised) and this was commissioned on June 19, 2017.

The Extension of Phase I (Petta to Thrippunithura Terminal) consists of two Phases, Phase IA from Petta to SN Junction (1.80 km) and Phase IB from SN Junction to Thrippunithura Terminal (1.2 km). The Phase IA of the project with an approved cost of Rs.7, 10.93 crore was commissioned in September, 2022 and the Phase IB has a total project cost of Rs.448.33 crore. The Government of India has accorded approval for the Phase II (Cost of Rs 1,957.05 crore) of Kochi Metro Rail Project from JLN Stadium to Infopark via Kakkanad (11.2) and foundation stone for the project was laid on September, 2022.

The summary of revised funding pattern of combined phases and component-wise details of Phase I (including cost escalation), Phase IA, and Phase IB ( revised) including cost escalation) as per the Government Order issued by Government of Kerala are shown in **Table .11.1.3**.

The metro had experienced steady growth in ridership since its inception, indicating its increasing popularity among commuters and residents. The revenue earnings and expenditure of Kochi Metro Rail Project for the period from 2017-2024(up to August) is depicted in the **Figure 11.1.6**.

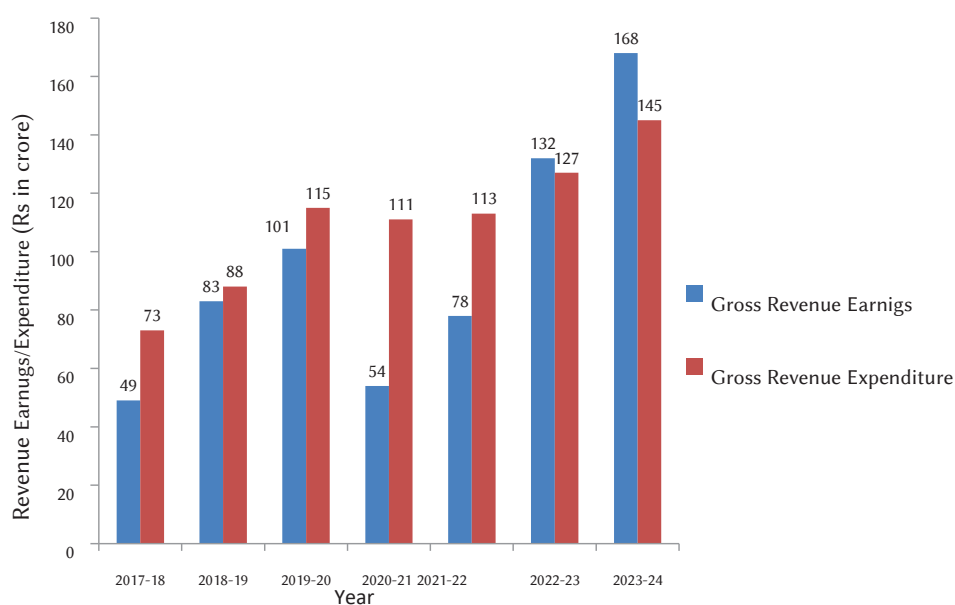
The gross revenue earnings of Kochi Metro have increased from Rs.132.21 crore in 2022-23 to Rs.168.23 crore in 2023-24. An amount of Rs.74.31 crore was earned till August 2024 by the Kochi Metro Rail Corporation. The gross revenue

**Table 11.1.3** Revised funding pattern of combined phases and component -wise details of Phase I (including cost escalation), Phase IA, and Phase IB I including cost escalation)

Sl. No.	Particulars	Project cost (Rs. in crores)		
		Phase I (with approved second cost escalation)	Phase I A	Phase IB(Revised)
1	Equity by Gol	753.73		
2	Equity by Government of Kerala	753.73		
3	SD for CT by Gol (50 per cent)	248.50		
4	SD for CT by Government of Kerala (50 per cent)	248.50		
5	Gol grant /SD		53.98	27.21
6	Pass through Assistance (PTA)	1327.11		
7	Canara Bank Term Loans	1349.00		
8	SD by Government of Kerala for land including R&R cost including EDCB loan	672.00		
9	HUDCO loan for phase I, IInd cost escalation and project part of HUDCO loan amounting to Rs. 589.82 crore for Phase IA and Phase IB only	390.00	39.27	43.23
10	SD by Government of Kerala Phase IA land		58.11	
11	Term loan for LA backed by Budgetary allocation and Government of Kerala guarantee			92.63
12	SD by Government of Kerala for Taxes	237.33	73.79	40.37
13	SD by Government of Kerala property development	98.00		
14	Sd by Government of Kerala, Part of Phase I , IInd coat escalation	140.24		
15	Term loan, Consortium of Canara & UBI		485.78	244.89
<b>Total</b>		<b>6218.14</b>	<b>710.93</b>	<b>448.33</b>

Source: GO.(Ms) No.14/2021/TRANS From Transport © Department

**Figure 11.1.6** Revenue earnings and expenditure of Kochi Metro Rail Project, 2017 to 2024, Rs in crore



Source: Kochi Metro Rail Limited (KMRL)

expenditure of Kochi Metro is Rs.145.28 crore in 2023-24. In 2022-23, it was Rs. 127.00 crore. The number of passengers carried increased to 323 lakhs in 2023-24 as compared to 249 in 2022-23. Major indicators showing the operational efficiency of Kochi Metro is given in **Appendix 11.1.20**.

### **Kochi Water Metro Project**

Kochi Water Metro Limited (KWML) is an SPV formed for the operation and maintenance of Water Metro with 74 per cent share by Government of Kerala and 26 Per cent by KMRL. The total cost of the project (including land acquisition) is 1,136.83 crore of which Rs.908.76 crore is funded by KfW, Germany, and Rs.228.07 crore by Government of Kerala.

The Kochi Water Metro is an innovative and sustainable mode of transportation that connects various parts of the city through its intricate network of waterways. The Water Metro Project comprises of fifteen (15) identified routes connecting thirty six (36) jetties across ten (10) island communities and 2 boatyards. The overall length of the line lengths of these 15 routes is 76.2 line kilo meters. More than 34,000 islanders are expected to benefit from the water metro. The project is expected to reduce pollution and traffic congestions in the city and also ease access to business areas on the mainland for urban households situated along the Kochi lakeshore. Water Metro has won the awards like Urban Mobility Conference Awards 2023 and Urban Infrastructure Award in 2023 in the “Global Maritime India Summit 2023”.

Kochi Water Metro has covered a total route length of 24.6/day km in 21,117 schedules operated as of August, 2024 and earned gross revenue of Rs.283.42 crore. Water Metro had ferried 8,03,390 passengers with a fleet of 15 boats in this period. The operational statistics of water metro is given in **Appendix 11.1.21**.

### **Air Transport**

India’s aviation sector has been among the fastest growing in the world. The industry has transformed into a competitive sector, becoming the third-largest domestic market globally. The government’s strategic initiatives have boosted growth, empowering the industry and unlocking its full potential.

With the establishment of Kannur International Airport in 2019, Kerala has four operational international airports. Aviation industry in Kerala has emerged as one of the fastest growing in recent times. Of these four airports, Kochi and Kannur airports are developed on PPP basis, Thiruvananthapuram was transferred to Adani Group for development under PPP mode whereas the airport at Kozhikode is owned by Airport Authority of India (AAI).

### **Cochin International Airport Ltd. (CIAL)**

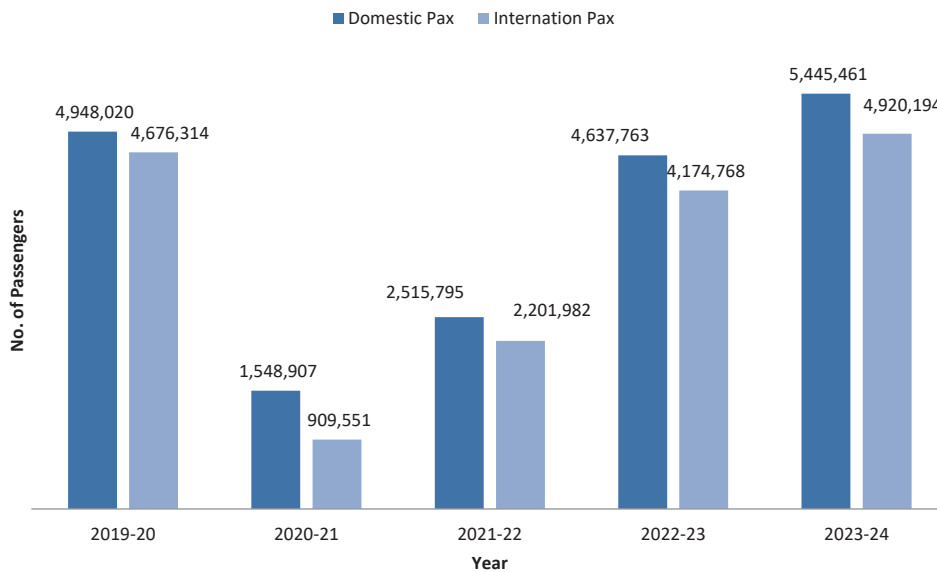
The first Greenfield airport in India, the CIAL was ranked the third best airport in the 50 to 150 lakh passengers category based on the 2016 Airport Service Quality (ASQ) Survey conducted by Airports Council International (ACI), Montreal, Canada. The airport has 3,400 m length with 45m wide code E runway. Total area of the domestic terminal is six lakh square feet, apart from the existing one lakh square feet. It has the State-of-the-art facilities which include 56 check in counters, 11 gates, seven aero bridges with a capacity to handle 2,000 passengers in peak hours. CIAL handled 10.5 million passengers in 2023-24 and became the third largest airport in India in the international sector. CIAL has accomplished a remarkable record gross income of Rs.1,014.00 crore in the 2023-24 fiscal year, surpassing the annual revenues of all the previous years. Substantial increase in the revenue can be attributed to the impressive growth of non-aero income, collection of User Development Fee (UDF) and the increase in aeronautical tariffs as per the approved tariff card by the Airports Economic Regulatory Authority (AERA).

The details of passenger movement through Cochin International Airport (domestic and international from 2019 to 2023) is illustrated in the **Figure.11.1.7**.

In 2023-24, 29,502 international and 37,967 domestic flights were operated from the airport as compared to the 25,724 international and 32,554 domestic flights in 2022-23. In 2023-24, CIAL handled 49,20,194 international and 54,45,461 domestic passengers, resulting in 18.8 per cent increase in the passenger movement over 2022-23. In 2022-23, it handled 41,74,768 international and 46,37,763 domestic passengers. By handling a total of 88.12 lakh passengers in 2022-23, the Cochin International Airport became the third airport in the country in terms of passenger traffic.



**Figure 11.1.7** Passenger Traffic in Cochin International Airport, 2019 to 2024



Source: Airport Authority of India

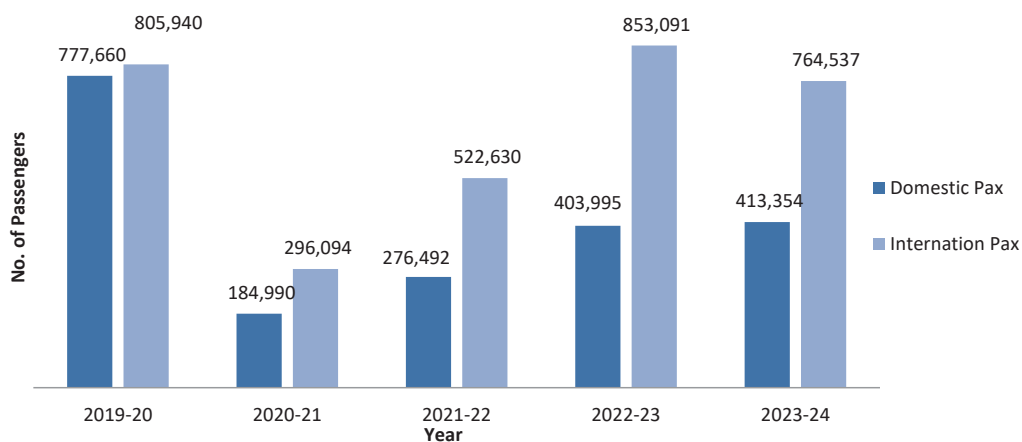
The airport witnessed about 5 per cent increase in the cargo movement in 2022-23, it handled 56,773 MT cargo in 2022-23 as compared to 59,973 MT in the previous year. CIAL has earned revenue of Rs.29, 339.59 lakh from operation in 2023-24 and it was Rs.26, 623.06 lakh in previous financial year. That is, increase of 10.2 per cent in earnings from operation in 2023-24 over 2022-23.

**Kannur International Airport Limited (KIAL)**  
Kannur International Airport Limited (KIAL) was set up by Government of Kerala to build and

operate Kannur International airport. The airport project is being developed in two phases by KIAL. The first phase is envisaged to span from 2016-17 to 2025-26 and second phase would be from 2026-27 to 2045-46. The first phase was inaugurated in December 2018. The airport will help the Non-Resident Keralites (NRKs), especially working in the Middle East region and boost tourism and exports which will open up several job opportunities.

The facilities in the airport include a runway length

**Figure 11.1.8** Passenger Traffic in Kannur International Airport, 2019 to 2024



Source: Airport Authority of India

of 3,050m (10,006.56ft.), with a terminal building of 96,000sq.m, 900 KL capacity aviation fuel farm, Interim cargo terminal building with 12000 MT annual capacity, and 22,000sq.m car/bus parking, 1,200sq.m. ATC/Technical Building and around 7,750sq.m near the apron area of Ground Service Equipment parking area.

In 2023-24, the number of domestic flights operated from Kannur Airport is 5,969 and in 2022-23 it was 5,791. The airport experienced a spike in the number of international flights from 6,233 in 2022-23 to 5,002 in 2023-24, recording a decrease of 19 per cent in international flight operation.

In 2023-24, the airport witnessed decrease in the passenger traffic of about 6.7 per cent over the previous year. The total number of passengers handled in 2023-24 is 11, 77,891 which includes the domestic passenger traffic of 4,13,354 and international passengers' traffic of 7,64,537 pax.

The passenger traffic (domestic and international) of the Kannur International Airport is illustrated in the **Figure11.1.8**.

In 2023-24, the airport handled 3,265 MT (Export) and 41 MT (Import) cargo. The revenue earnings from operations of KIAL in 2023-24 financial year is Rs.99.24 crore and it was an amount of Rs.112.66 crore in financial year 2022-23.

### Thiruvananthapuram International Airport

The Adani Group has been managing and developing the Thiruvananthapuram International Airport (IRV) since October 2021. Currently, Rs 1,300 crore expansion plan called “Project Anantha” is underway and is expected to complete by 2027. The airport’s current area is 45,000 square meters, but after the expansion it will become 165,000 square meters. Then, the airport can to handle about 12 million passengers annually, now it is 3.2 million.

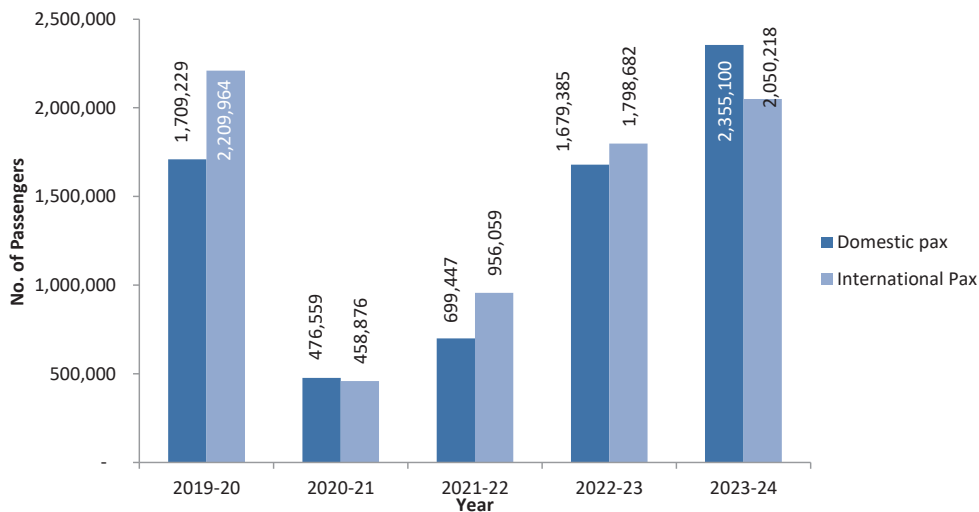
In 2023-24, 13,216 international and 16,925 domestic flights were operated from the airport. With regard to the passenger movement, the airport handled 20,50,218 international and 23,55,100 domestic passengers. The airport handled 18,392 MT cargo in 2023-24.

The passenger traffic (domestic and international) of the Thiruvananthapuram International Airport is illustrated in the **Figure11.1.9**.

### Sabarimala Greenfield Airport Project

Sabarimala Airport project aims to build a Greenfield airport at Erumeli of Kottayam District for the convenience of Sabarimala pilgrims and also as a fillip to tourism and local economy of Pathanamthitta, Kottayam, and Idukki Districts. The proposed site is spread over 2,263 acres (9.16 sq km) of land at Cheruvally estate in Manimala Panchayath of Kanjirappally Taluk which is located on the way to the hill shrine Sabarimala. As per the Master Plan for the project, the airport will have

**Figure 11.1.9** Passenger Traffic in Thiruvananthapuram International Airport, 2019 to 2024



Source: Airport Authority of India

a runway of length not less than 3,500 meters on 08/26 alignment. The spatial data pertaining to the Sabarimala Greenfield Airport Project has been integrated to the PM Gati Shakti National Master Plan portal maintained by Bhaskaracharya National Institute for Space Applications and Geoinformatics (BISAG-N) and the Ministry of Civil Aviation (MoCA) has granted 'Site Clearance' in April, 2023. Kerala State Industrial Development Corporation (KSIDC) was entrusted with the task of identifying a technically competent agency for conducting the Techno Economic Feasibility Study (TEFS) and Environmental Impact Assessment (EIA) and land acquisition. Final Techno Economic Feasibility report was submitted to the Ministry of Civil Aviation on June 2022 and EIA study has been done, sanction has been accorded by revenue department for land acquisition.

The Sabarimala Greenfield Airport will become the 5th International Airport in Kerala once commissioned.

### **Air Strips & Heliports**

The State is devising an extensive air connectivity project with air-strips in selected Districts and heliports and helipads in others with the objective of ensuring seamless air travel between the Districts. The airstrip is planned to operate airline service connecting the Kerala's major tourist spots by operating tiny single-engine aircraft having 8 to 10 seats. The plan is to set up air strips at Bekal in Kasaragod, Kalpetta in Wayanad and in Idukki in the initial phase. The State Government has requested the Centre to include the proposed air strips under its Regional Connectivity Scheme-UDAN to operate them as feeder ports of the international airports.

## **WATER TRANSPORT**

A country's overall development has always been significantly impacted by its transportation system, and water is an essential means of transportation. The effectiveness of inland waterways as an economical, fuel-efficient, safe, and secure means of transportation has attracted attention. India has a widespread network of inland waterways in the form of rivers, canals, backwaters, creeks, and tidal inlets. These not only provide a cost-effective and competitive alternative method of transportation but they are also sustainable and eco-friendly for both passenger and freight transportation. The economic, social, and environmental aspects of a

region are significantly impacted by inland water transportation. In Kerala, water transport has the potential to become a viable supplement to road and rail transport. Its huge carrying capacity and suitability for carrying bulk goods over long distances makes water transport more attractive.

### **PORT SECTOR**

Maritime transport is the backbone of globalised trade and the manufacturing supply chain. The Maritime Sector in India comprises of Ports, Shipping, Shipbuilding and Ship repair and Inland Water Transport Systems. According to the Ministry of Ports, Shipping and Water Ways, India has 12 Government owned major ports and more than 217 non-major ports. As per the Ministry's Annual Report 2023-24, Indian Shipping Industry has over the years played a crucial role in the transport sector of India's economy. Approximately 95 per cent of the country's trade by volume and 68 per cent by value is moved through maritime transport. Therefore, shipping and ocean resources, ship design and construction, ports and harbours, issues relating to human resource development, finance, ancillaries and new technologies need to be developed in the light of the emerging scenario. Zero Carbon Emission Goal, '*Harit Sagar*' the Green Port Guidelines were launched on 10th May 2023. The Indian port sector has a cargo handling capacity of 2690 million metric tonnes per annum (MTPA) (1630 MTPA Major Ports + 1060 MTPA non-major Ports). In 2023-24, major and non-major ports in India handled a total cargo of approximately 1540 million metric tonnes (Source: Ministry of Ports, Shipping and Waterways, Government of India).

### **Sagarmala Programme**

The Sagarmala Programme is a flagship initiative of the Ministry of Ports, Shipping and Waterways, Government of India, to harness the nation's 7,517 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes. By lowering logistics costs for both domestic and international trade, the Ministry hopes to improve the performance and efficiency of the logistics industry through this programme. The programme intends to promote port-led development in the country through modernisation and development of new ports, enhancing connectivity, promoting port linked industrialisation, coastal community development and promotion of Coastal Shipping and Inland Waterways in India.

**Table 11.1.4.** Summary of projects under Sagarmala Programme

SI No	Project Theme	Completed		Under Implementation		Under Development		Total	
		No. of Projects	Project Cost (Rs.in Cr)	No. of Projects	Project Cost (Rs.in Cr)	No. of Projects	Project Cost (Rs. In Cr)	No. of Projects	Project Cost (Rs.in Cr)
1	Port Modernisation	98	32,066	62	76561	74	1,82,652	234	2,91,279
2	Port Connectivity	91	57,997	57	68,010	131	80,366	279	2,06,373
3	Port Led Industrialisation	9	45,865	3	9,247	2	625	14	55,737
4	Coastal Community Development	21	1,559	32	6,166	28	3,847	81	11,572
5	Coastal Shipping and Inland Water Transport	43	2,956	63	4,665	125	6,980	231	14,601
<b>Total</b>		<b>262</b>	<b>1,40,443</b>	<b>217</b>	<b>1,64,649</b>	<b>360</b>	<b>2,74,470</b>	<b>839</b>	<b>5,79,562</b>

Source: Annual Report 2023-24, Ministry of Ports, Shipping and Waterways, Government of India

Currently there are total 839 projects worth investment of Rs 5.79 Lakh crore under the Sagarmala Programme. Out of which, 262 projects worth Rs 1.40 Lakh crore have been completed and 217 projects worth Rs1.65 lakh crore are under implementation. The rest of 360 projects worth Rs 2.74 Lakh crore are under various stages of development. These projects are being implemented by relevant Central Ministries, State Governments, major ports and other agencies primarily through private or PPP mode. A summary of schemes being undertaken under the Sagarmala Programme is provided in **Table 11.1.4**.

The Government of India has formed the Sagarmala Development Company Limited (SDCL), to achieve the objectives of this programme and to fast-track the implementation of the port-led development activities. As per the project requirements, SDCL will raise funds as debt or equity (as long-term capital), by leveraging resources provided by the Government of India and from multi-lateral and bilateral funding agencies. As per the approved structure of Sagarmala Programme, the implementation of the projects shall be done by the line ministries, State Governments and State Maritime Boards (SMBs) and SPVs. The SDCL will provide a funding window and implement only those residual projects that cannot be funded by any other means or mode.

## Cargo Traffic at Ports in India

### Major ports in India

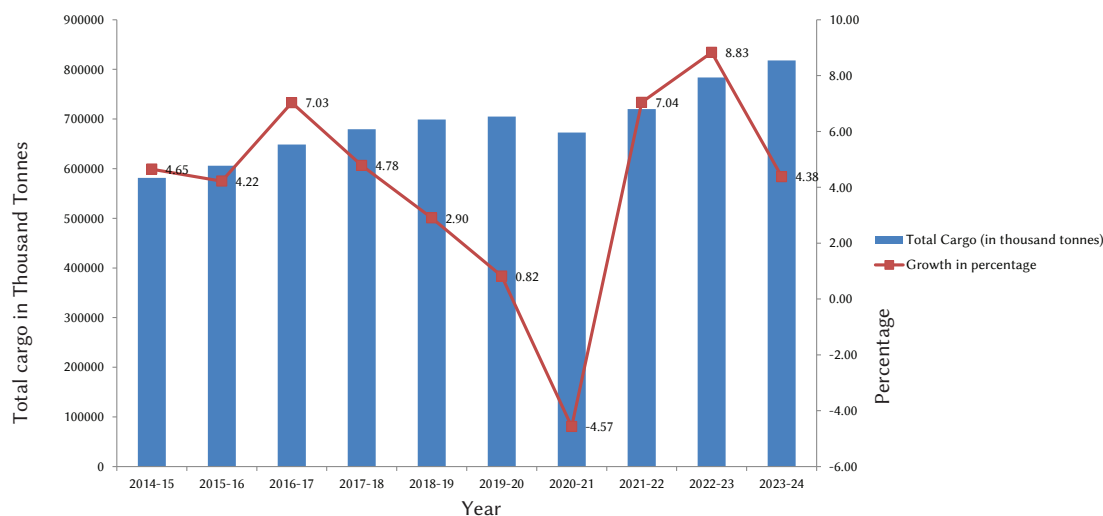
The ecosystem of international commerce is facilitated by the maritime sector. Its affordability and global connectivity make it very vital to the world economy. Developments in the global economy, specifically expansion of the global output and trade are the factors that boost maritime transportation activity. Thus, the volume of seaborne cargo traffic handled by ports is mainly shaped by the levels and changes in both the global and domestic activity. The total cargo handled by the 12 major ports increased by 4.4 per cent in 2023-24, but the growth rate is lesser compared to 8.8 per cent in 2022-23.

Growth trends in the cargo handled by Major Ports during the past ten years is seen in **Fig 11.1.10**.

In the total amount of cargo handled by major ports between the period 2014-15 to 2023-24, the significant growth was in the year 2022-23 (8.8 per cent), while the lowest was in the year 2020-21 (-4.6 per cent).

Mormugao Port recorded highest growth (16.4 per cent) in the traffic handled at Major Ports in 2023-24, followed by New Mangalore Port Authority

**Figure 11.1.10** Growth trend in cargo handled by Major Ports during 2014-15 to 2023-24



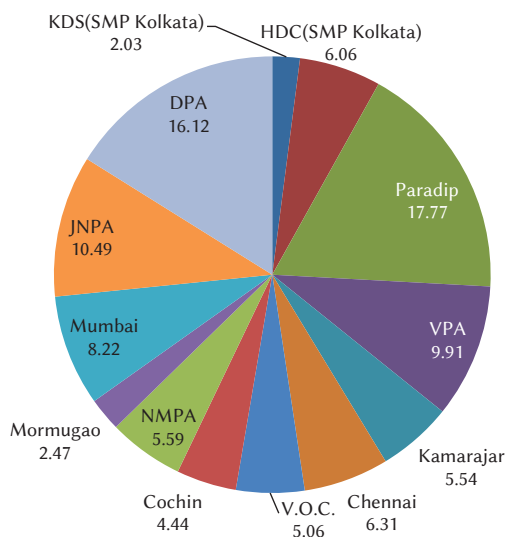
Source: Ministry of Ports, Shipping and Water ways, Government of India

(NMPA) (10.4 per cent), Visakhapatnam Port (VPA) (10.0 per cent), V. O. Chidambaram Port, Tuticorin (8.8 per cent), Paradip Port (7.4 per cent), Mumbai Port (5.7 per cent), Chennai Port (5.4 per cent), Kamarajar Port (4.1 per cent), Cochin Port (3.0 per cent), Jawaharlal Nehru Port Authority (JNPA) (2.3 per cent), Syama Prasad Mookerjee Port (1.9 per cent) and Haldia Syama Prasad Mookerjee Port, Kolkata (1.6 per cent) Among the major ports, Deendayal Port (DPA) recorded negative traffic growth rate (-4.2 per cent) in 2023-24.

Amongst the Major ports, Paradip Port handled

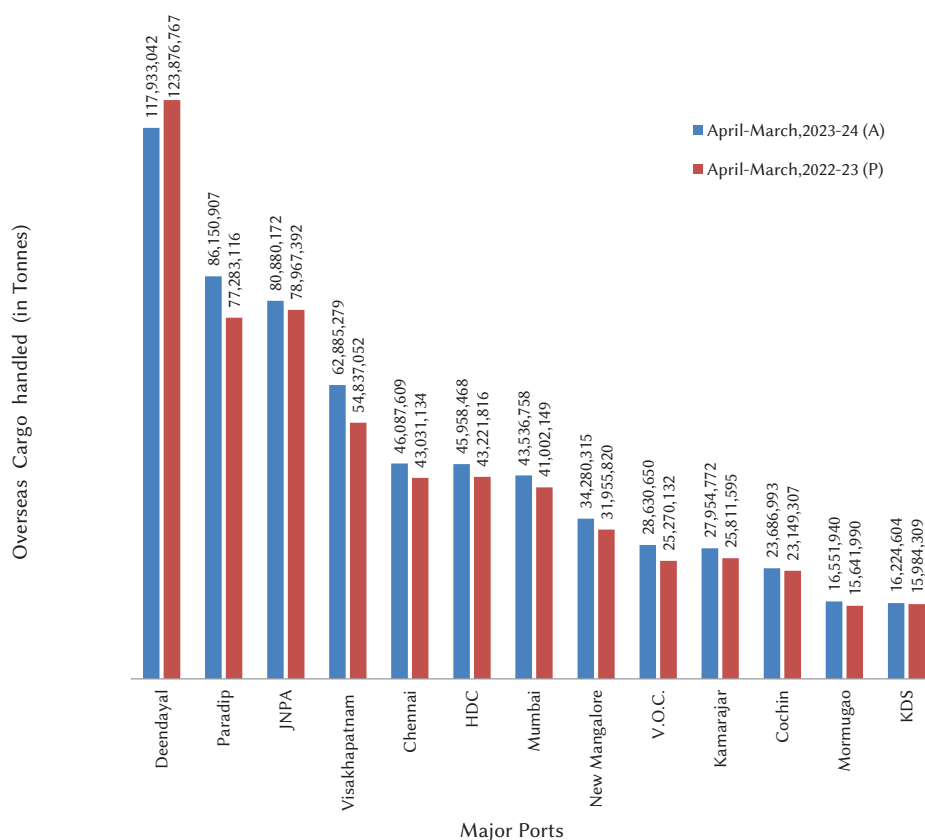
the maximum cargo of 145.38 million metric tonnes followed by Deendayal Port (131.82 MMT), Jawaharlal Nehru Port Authority (JNPA) (85.80 MMT), Visakhapatnam Port (VPA) (81.09 MMT), Mumbai Port (67.26 MMT), Chennai Port (51.59 MMT), Syama Prasad Mookerjee Port ,Haldia (49.54 MMT), New Mangalore Port Authority (NMPA) (45.70 MMT), Kamarajar Port (45.28 MMT), V. O. Chidambaram Port (41.40 MMT) , Cochin Port (36.32 MMT), Mormugao Port (20.17 MMT) and Syama Prasad Mookerjee Port ,Kolkata (16.63 MMT) in 2023-24. The share of total traffic handled by major ports is shown in **Figure 11.1.11**.

**Figure 11.1.11** Major Port-wise percentage share of total cargo handled in 2023-24



Source: Ministry of Ports, Shipping and Water ways, Government of India

**Figure 11.1.12** Major Port-wise share of Overseas Cargo handled in 2022-23 & 2023-24, in Tonnes



Source: Ministry of Ports, Shipping and Water ways, Government of India

The overseas cargo handled by the 12 major ports increased by 5.1 per cent in 2023-24, to 630.76 million metric tonnes (MMT). Amongst the Major Ports, Deendayal Port (DPA) handled the maximum overseas cargo of 117.93 million metric tonnes with a share of 18.7 per cent, followed by Paradip Port (13.7 per cent), Jawaharlal Nehru Port Authority (JNPA) (12.8 per cent), Visakhapatnam Port (VPA) (10.0 per cent), Chennai Port (7.3 per cent), Syama Prasad Mookerjee Port, Haldia (7.3 per cent), Mumbai Port (6.9 per cent), New Mangalore Port Authority (NMPA) (5.4 per cent), V. O. Chidambaram Port, Tuticorin (4.5 per cent), Kamarajar Port (4.4 per cent), Cochin Port (3.8 per cent), Mormugao Port (2.6 per cent) and Syama Prasad Mookerjee Port Kolkata (2.6 per cent) in 2023-24. The share of Overseas Cargo handled by major ports is shown in **Figure 11.1.12**.

The coastal cargo handled by the 12 major ports increased by 2.0 per cent in 2023-24, to 187.22 million metric tonnes (MMT). Among the Major Ports, Paradip Port handled the maximum coastal cargo of 59.23 million metric tonnes with a share

of 31.6 per cent followed by Mumbai Port (12.7 per cent), Visakhapatnam Port (9.7 per cent), Kamarajar Port (9.3 per cent), Deendayal Port (DPA) (7.4 per cent), V.O. Chidambaram Port (6.8 per cent), Cochin Port (6.8 per cent), New Mangalore Port Authority (NMPA) (6.1 per cent), Chennai Port (2.9 per cent), Jawaharlal Nehru Port Authority (JNPA) (2.6 per cent), Mormugao Port (1.9 per cent) Syama Prasad Mookerjee Port, Haldia (1.9 per cent), and Syama Prasad Mookerjee Port Kolkata (0.2 per cent). The share of Coastal Cargo handled by major ports in 2023-24 is shown in **Figure 11.1.13**.

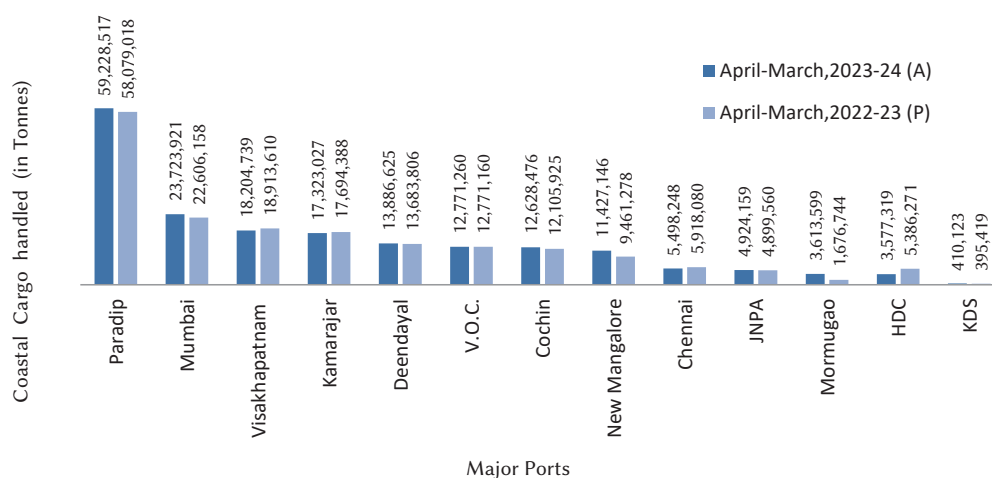
Port-wise traffic at major ports in 2022-23 and 2023-24 is given in **Appendix 11.1.22**.

#### Cargo traffic at non-major ports in India

Growth trends in the cargo handled by non-major ports during the past ten years is seen in **Fig 11.1.14**.

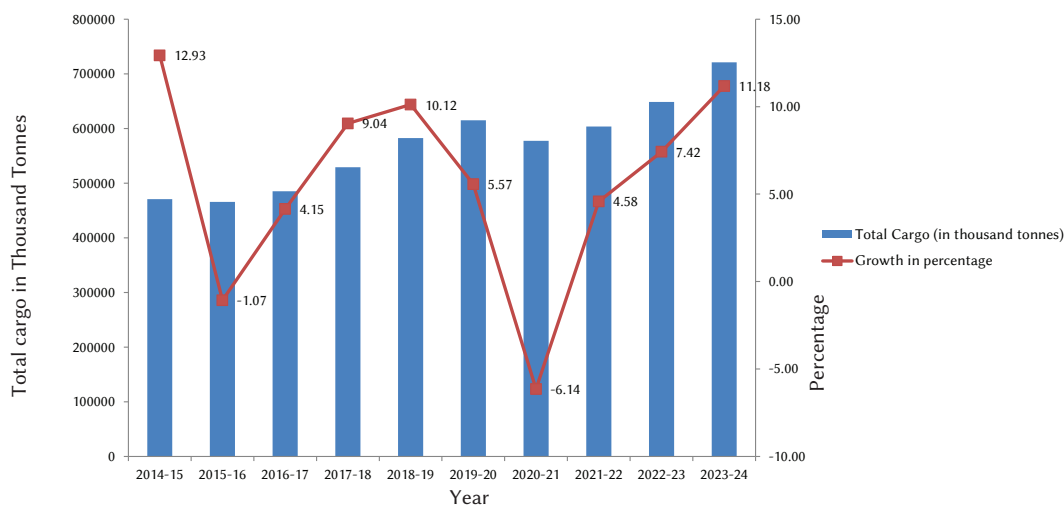
From 2014-15 to 2023-24, the total cargo handled through the non- major ports recorded the highest

**Figure 11.1.13** Major Port-wise share of coastal cargo handled in 2022-23 & 2023-24, in Tonnes



HDC –Haldia Dock Complex, KSD- Kolkata Dock System  
 Source: Ministry of Ports, Shipping and Water ways, Government of India

**Figure 11.1.14** Growth trend in cargo handled by non-major ports during 2014-15 to 2023-24



Source: Ministry of Ports, Shipping and Water ways, Government of India

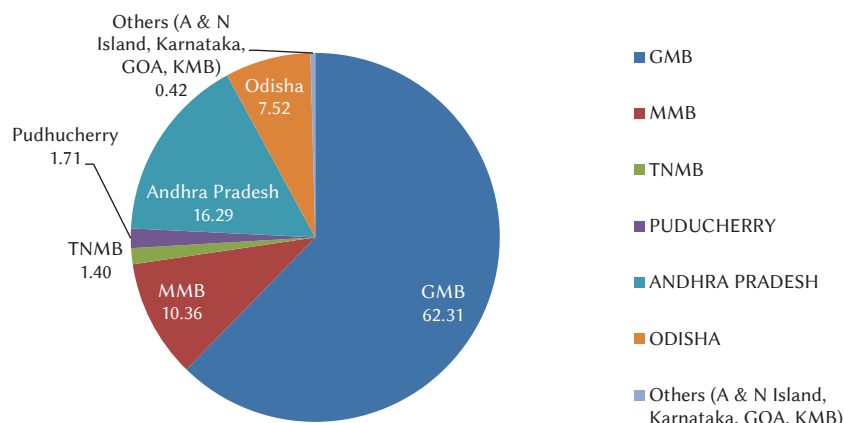
growth in 2014-15 (12.9 per cent), while the lowest growth was in the year 2020-21 (-6.1 per cent).

Cargo traffic at non-major ports in 2023-24, increased by 11.2 per cent to 721.05 million metric tonnes from 648.54 million metric tonnes handled in 2022-23. Amongst the State Maritime Boards (SMB) and Directorate of Ports (DoP), Gujarat Maritime Board handled the maximum cargo of 449.25 million metric tonnes with a share of 62.3 per cent followed by Andhra Pradesh Maritime Board (117.46 MMT), Maharashtra Maritime Board (74.71 MMT), Directorate of Ports, Odisha (54.19 MMT), Directorate of Ports, Puducherry (12.31 MMT), Tamil Nadu Maritime Board (10.11

MMT), and Others (3.01 MMT) which includes cargo handled by Non-major ports of Andaman and Nicobar Islands, Karnataka, Goa and Kerala Maritime Board in 2023-24 (April-March). The share of total traffic handled by Non-Major Ports is shown in **Figure 11.1.15**.

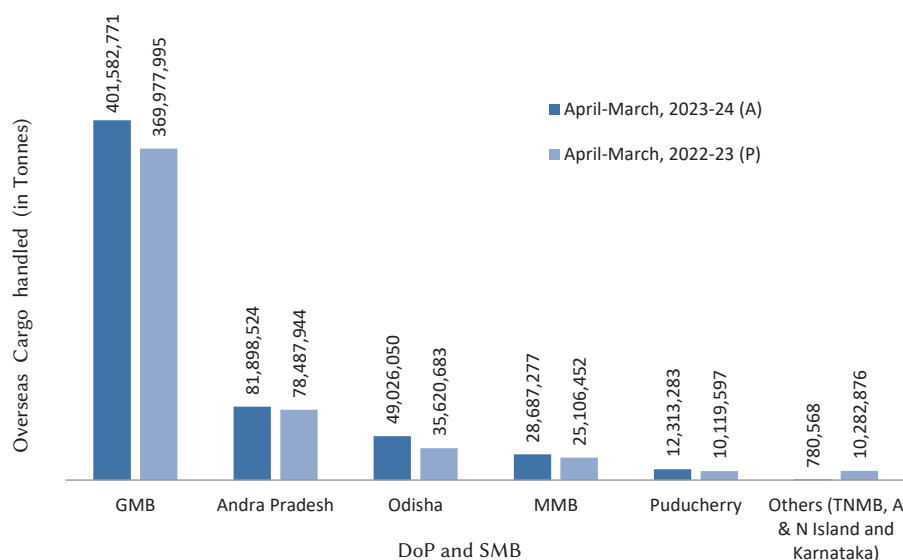
The overseas cargo traffic handled at non-major ports in 2023-24 (April-March) increased by 10.29 per cent to 584.09 million metric tonnes from 529.60 million metric tonnes in 2022-23 (April-March). Amongst the Non-Major Ports, Gujarat Maritime Board handled the maximum overseas cargo of 401.58 million metric tonnes with a share of 68.8 per cent followed by Andhra Pradesh

**Figure 11.1.15** Port-wise percentage share of cargo traffic handled at non-major ports in 2023-24



Source: Ministry of Ports, Shipping and Water ways, Government of India

**Figure 11.1.16** Port-wise share of overseas cargo in 2022-23 & 2023-24



Source: Ministry of Ports, Shipping and Water ways, Government of India

\* Non major ports in Goa and Kerala handled nil overseas cargo traffic during the period.

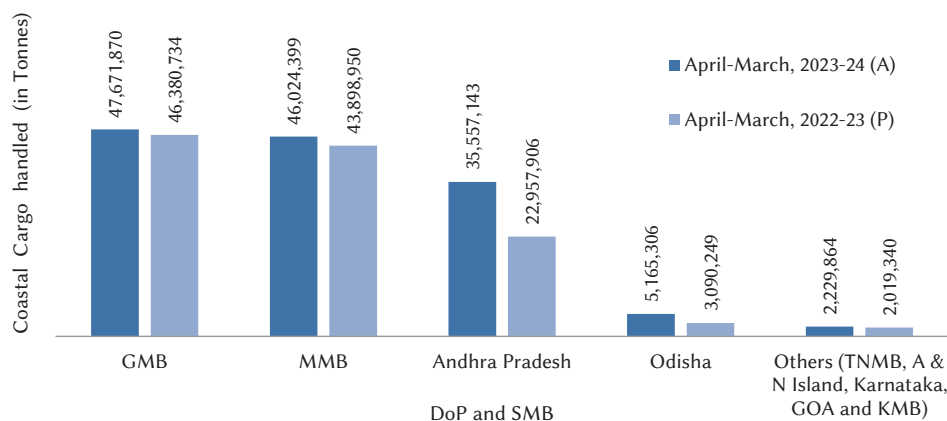
Maritime Board (14.0 per cent), Directorate of Ports, Odisha (8.4 per cent), Maharashtra Maritime Board (4.9 per cent), Directorate of Ports, Puducherry (2.1 per cent) and Others (1.8 per cent) which includes cargo handled by Non-Major Ports of Tamil Nadu Maritime Board, Andaman and Nicobar Island and Karnataka in 2023-24 (April-March). The share of Overseas Cargo handled by non-major ports is shown in **Figure 11.1.16**.

The coastal cargo traffic handled at non-major ports in 2023-24 increased by 15.2 per cent to 136.96 million metric tonnes from 118.94 million

metric tonnes handled in 2022-23. Amongst the Non-Major Ports, Gujarat Maritime Board handled the maximum coastal cargo of 47.67 million metric tonnes with a share of 34.8 per cent followed by Maharashtra Maritime Board (33.6 per cent), Andhra Pradesh Maritime Board (26.0 per cent), Directorate of Ports, Odisha (3.8 per cent), and Others (1.9 per cent) which includes cargo handled by Non-Major Ports of Andaman and Nicobar Islands, Tamil Nadu Maritime Board (TNMB), Goa, Kerala and Karnataka in 2023-24 (April-March). The share of Coastal Cargo handled by non-major ports is shown in **Figure 11.1.17**.



**Figure 11.1.17** Port-wise share of coastal cargo in 2022-23 & 2023-24



Source: Ministry of Ports, Shipping and Water ways, Government of India

\* Non major ports in Goa and Kerala handled nil overseas cargo traffic during the period.

Port-wise traffic at non-major ports in 2022-23 and 2023-24 is given in **Appendix. 11.1.23**.

### Ports in Kerala

Kerala has a coastal length of approximately 590 km. There is one Major Port at Cochin and 17 non-major ports. A transshipment port at Vizhinjam is being developed through PPP mode. Out of 17 non-major ports in Kerala, only four viz Vizhinjam, Beypore-Kozhikode, Azhikkal and Kollam ports are functional. There is also a riverine port at Nattakom in Kottayam. Malabar Port & SEZ is a company formed for the development of a PPP port in Malabar area (Azhikkal based).

### Kerala Maritime Board (KMB)

Kerala Maritime Board came into existence after the approval of Kerala Maritime Board Act on September 2017. As per the act, KMB is constituted for the non-major ports in Kerala and is vested with administration, control and management of non-major ports. The Government constituted KMB by merging the establishment of Directorate of Ports, Kerala State Maritime Development Corporation Ltd and Kerala Maritime society. The Board consists of a chairman, a vice chairman, 6 ex-officio members and four nominated members. All non-major port related activities, modernisation of ports and enhancement of shipping activities are major objectives of Kerala Maritime Board.

### Major achievements of Kerala Maritime Board

- Launch of “E-Port” for the registration and

survey of all mechanised inland vessels in the State.

- Sale of purified dredged material has been regulated through online mode
- Development of port assets and port lands on PPP mode.
- All the four non-major ports have been made International Shipping and Port Security Code (ISPS) compliant.
- Beypore, Vizhinjam and Kollam Ports have been made Custom notified Integrated Check Post (ICP) compliant.
- Kerala Maritime Institutions at Kodungalloor and Neendakara started functioning for imparting training on Inland Vessel related courses.

### Kerala Inland Vessel (KIV) Rules, 2010

On September 15, 2010, KIV Rules came into existence. The Director, Port department was the implementing authority, but now the implementation is vested with KMB. As per the KIV Rules, there are 6 Port of registries including Vizhinjam, Kollam, Alappuzha, Kodungalloor, Beypore and Azhikkal. As per the KIV Rules, the registration period of vessels is decided as 5 years and the annual survey certificate is valid for 1 year. These two certificates are essential for operation of the vessel. In addition, the vessels should be surveyed in dry dock once every 3 years. As per the KIV Rules, survey certificates should be provided to house boats only on providing viability certificate for 3 years from pollution control board and third party insurance for one year period.

**Table 11.1.5** Details of inspection conducted for KIV implementation

Sl.no.	Item	2019-20	2020-21	2021-22	2022-23	2023-24
1	No. of Vessels inspected	770	580	651	1120	1145
2	No. of Vessels found perfect	527	435	485	830	904
3	No. of Vessels found defective	243	145	166	290	241
4	No of detention orders issued	73	16	17	45	19

Source: Kerala Maritime Board

**Table 11.1.6** Number of vessels registered in Kerala (As per KIV Rules)

Sl. no.	Item	2019-20	2020-21	2021-22	2022-23	2023-24
1	Category A	23	6	1	5	0
2	Category B	169	158	192	224	36
3	Newly constructed vessel	43	37	56	80	52
4	Registration Name changed	52	73	109	122	149
<b>Total</b>		<b>287</b>	<b>274</b>	<b>358</b>	<b>431</b>	<b>237</b>

Source: Kerala Maritime Board

### Registered Vessels

The type of vessels registered includes passenger vessel, speed boat, house boat, cargo vessel, floating resort, motor boat, cutter section dredger, jankar, shikkaras, tug, rescue boat, and cruise boat. In 2023-24, 1145 vessels were inspected of which 904 vessels were found to be perfect and 241 were found to be defective. As the port department is implementing the KIV rules, it conducts inspections and facilitates registration of vessels. Details are in **Table 11.1.5** and **11.1.6**.

### Cargo handled in non-major ports in Kerala

The details of cargo handled by non-major ports in Kerala for the last five years is shown in **Table 11.1.7**. The quantity of cargo handled by Kerala's non-major ports varies significantly year on year when analysing the last five years. In all these five years, export cargo (coastal and overseas) is higher

than import cargo (coastal and overseas). The total cargo export from Kerala was 2,33,216 tonne in 2022-23 and 77,307 tonne in 2023-24. In Beypore, which is one of the functional non-major port with some activities and well equipped to handle the cargo and passenger movement, the main activity is cargo movement to Lakshadweep. But due to various reasons there is tendency to shift the cargo movement from Kerala to other states.

Out of the 17 non major ports, four ports (Beypore, Kollam, Azhikkal and Vizhinjam) are operational for trade. Beypore port (Kozhikode) had overseas transportation of Petroleum Products (POL) whereas, Kollam, Azhikkal and Vizhinjam ports had no trade activities in 2023-24. The coastal cargo movement through non major ports is less due to the non-availability of cargo. Even though the inbound cargo is

**Table 11.1.7** Cargo Handled at the non-major ports of Kerala 2019-20 to 2023-24, in tonne

Year	Import			Export			Total
	Coastal	Foreign	Total	Coastal	Foreign	Total	
2019-20	37,338	908	38,246	1,15,968	0	1,15,968	1,54,214
2020-21	8,074	119	8,193	41,118	69	41,187	49,380
2021-22	57,253	0	57,253	2,64,989	549	2,65,538	3,22,791
2022-23	7,648	0	7,648	2,33,216	0	2,33,216	2,40,864
2023-24	7,443	0	7,443	77,307	0	77,307	84,750
<b>Total</b>	<b>1,17,756</b>	<b>1,027</b>	<b>1,18,783</b>	<b>7,32,598</b>	<b>618</b>	<b>7,33,216</b>	<b>8,51,999</b>

Source: Kerala Maritime Board

**Table 11.1.8** Category-wise break up of Revenue collected at the non-major ports of Kerala from 2019-20 to 2023-24, Rs in crore

Year	Port Dues		Export Import dues		Merchant Overtime Charges		Dredged Material		All Others		Total
	Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total	
2019-20	0.04	0.07	0.05	0.09	0.46	0.79	52.73	90.9	4.73	8.15	58.02
2020-21	0.04	0.10	0.37	0.90	10.15	24.66	25.78	62.6	4.81	11.69	41.16
2021-22	0.12	0.23	0.55	1.05	0.74	1.42	39.51	75.7	11.28	21.62	52.17
2022-23	0.06	0.13	0.17	0.37	0.33	0.72	35.58	77.33	9.87	21.45	46.01
2023-24	0.002	0.08	0.013	0.40	0.007	0.23	25.62	76.47	7.65	77.17	33.50

Source: Kerala Maritime Board

available non availability of return cargo is a reason for the reduction in cargo movement compared to previous years. Details are given in **Appendix 11.1.24**.

#### Revenue from Ports in Kerala

Details of revenue collected in the non-major ports of Kerala from 2019-20 to 2023-24 are given in **Table 11.1.8**. Non-major ports in Kerala generated Rs 33.50 crore from various port-related activities in 2023–2024. Though merchandise transport is considered the main activity of ports, data shows that the share of export import duties in the total revenue is very low over these years. Major share of port revenue (Rs 25.62 crore) was earned from dredged materials, which is around 76 per cent of the total revenue. Category -wise break up of revenue earned by non-major ports of Kerala is given in **Appendix 11.1.25**.

#### Port Activities and Operations (Non-Major ports in Kerala)

In 2023-24, the total number of sailing vessels (break-bulk ship, mini container vessel, passenger

vessel, mini bulk vessel, *urus*, research vessels, barges and yachts) that arrived at the operational ports in the State was 527, which included 258 steamers and 269 sailing vessels. Of the four operational ports in Kerala, Beypore (Kozhikode) was the busiest port during the period in terms of the number of vessels arrived (348 nos). This was followed by Vizhijnam (165 nos), Kollam (12 nos) and one each at Azhikal and Kodungalloor. The number of steamers that arrived in the Vizhinjam port was higher (165 nos) than in the other ports. Details are shown in **Appendix 11.1.26**. The infrastructural facilities available in the ports of Beypore, Azhikkal, Kollam and Vizhinjam are detailed in **Appendix 11.1.27**.

#### Cochin Port

Cochin Port is the only major port in Kerala. It spreads over 827 hectares. It has a water frontage of 7.5 km. In addition to rail access (Konkan and Southern Railway), the port is connected to the hinterland via NH 544, NH 66, and NH 185. An inland waterway connecting Kollam and Kottappuram is being developed on either

**Table 11.1.9:** Year Wise Cargo Handled at Cochin Port (In thousand tonnes)

	Financial Year (2022-23)		Financial Year (2023-24)	
	Cargo handled	% share to total Major ports	Cargo handled	% share to total Major ports
Overseas	23,149	3.9	23,686	3.76
Coastal	12,106	6.6	12,628	6.75
<b>Total</b>	<b>35,255</b>	<b>4.50</b>	<b>36,315</b>	<b>4.44</b>

Source: Port Data Management Portal (PDMP), Ministry of Ports, Shipping and Waterways P-Provisional

side by the Inland Waterways Authority of India. Because of its closeness to the international sea route connecting Europe, the Far East Countries, and Australia, Cochin can attract a lot of container lines, which provides an immense amount of commercial potential.

The Kochi International Transshipment Terminal (ICTT) locally known as the Vallarpadam Terminal is the first transshipment terminal in India to operate in a SEZ. It is part of the Cochin Port in Kochi. The first part of the Terminal was commissioned on 11th February 2011. The Terminal can handle cargo up to one million TEUs (Twenty-foot equivalent units) per annum. It is operated by the Dubai Ports World (DPW). The Terminal is located on the Vallarpadam Island in Kochi. In 2023-24, ICTT handled Containers of 7.54 lakh TEUs, it is an increase of 8.5 per cent than in 2022-23.

Cochin Port has 22 Berths including 1 Single Point Mooring SPM with an effective rated capacity of 79.90 MMTPA. From April to March, 2023-24, Cochin port handled 4.4 per cent of the total cargo handled by India's 12 major ports. Details are given in **Table 11.1.9**.

#### **Vizhinjam International Seaport Ltd (VISL)**

Vizhinjam International Transshipment container terminal, the first deep water transshipment terminal in India, with a capacity of 1 Mn TEUs/annum, is commissioned on 3rd December 2024. Government of Kerala has constituted a special purpose vehicle namely Vizhinjam International Sea port Limited (VISL) to facilitate the implementation of the project. VISL is responsible for carrying out all duties of the Government of Kerala in respect to project and the concession agreement. VISL is the implementation agency for all obligations and responsibilities of the Government of Kerala in respect of project and the concession agreement. The Vizhinjam port has many geographical advantages to be developed as an international transshipment terminal. The availability of 20m contour within one nautical mile from the coast and minimal littoral drift along the coast demanding hardly any maintenance dredging, access to national/regional road and rail network, proximity to International shipping route and flexibility to design and develop as a greenfield project are the notable advantages.

Port operation and development is also planned on PPP model for an agreed concession time period. Terminal operator(s) will be required to develop the container yard, terminal buildings, and purchase and operate the cargo handling equipments. As per project funding pattern of VISL, the largest share comes from the State Government. Over all progress of construction work details is given in **Appendix 11.1.28**.

The Vizhinjam International Seaport, nestled in Thiruvananthapuram, is more than just a port; it's a symbol of India's maritime aspirations. With its strategic location along the Arabian Sea, this deep-sea water container transshipment hub is poised to revolutionise the nation's maritime landscape. This ambitious project was conceived with the primary objective of accommodating mother vessels in India, which has been a critical challenge for the country for years, and it will enhance the efficient transshipment of cargo as well.

The first international cargo ship 'Shenhua 15' docked at Vizhinjam International Port, India's first mother port on 15th October 2023. Upon completion of the first 400 meters of the 800 meters long berth of phase -1 in July 2024, the trial operations of the port were commenced by docking the maiden container vessel (San Fernando) at the port on the July 11, 2024. Since the commencement of trial operations, port has handled around 20,000 containers from 7 mother vessels and 4 feeder vessels. A container vessel named, MSC Clause Girardet, an Ultra Large Container Vessel (ULCV) category vessel with 24,116 TEUs capacity had called at the port on the 13th of September 2024. This is the biggest container vessel to have berthed at any of the South Asian ports.

The Vizhinjam international seaport is the only project of Government of Kerala that has been identified and prioritized by the Ministry of Ports, Shipping and Waterways in its vision document, the Maritime India Vision (MIV) 2030. Since Indian ports currently handle 25 per cent of Indian cargo, the vision document highlights the significance of strengthening transshipment hubs in Southern India. Seventy-five per cent of the Indian cargo reaches other ports such as Sri Lanka, Dubai and Singapore before transshipment to India. The MIV 2030 aims at 75 per cent of transshipment cargo within ten years through Indian ports. With

### Box 11.1.1 Vizhinjam Port – Significant milestone in Kerala’s port infrastructure

Vizhinjam International Seaport, the largest port in country, has officially commenced its services on December 3, 2024 (Commercial Operation Date). The port had started trial run from July 12, 2024. In the trial run, 72 cargo ships, including ultra-large mother vessels, docked at Vizhinjam. The port handled 1,47,818 Twenty-Foot Equivalent Units (TEU) containers, generating Rs 94.31 crore in revenue, with Rs 16.65 crore as GST.

The State Government entered into a supplementary concession agreement with the Concessionaire on November 28, 2024, extending the concession period of the project by an additional five years. However, the revenue sharing schedule with the concessionaire remains unchanged, as per the original agreement, ensuring early commencement of revenue sharing. The supplementary agreement mandates that the remaining phases of capacity augmentation must be completed by 2028, advancing the timeline from the originally stipulated 2045. This capacity expansion will increase the port’s container handling capacity from the current 10 lakh TEUs to 30 lakh TEUs.

Of the total Phase 1 investments of Rs 7,868.66 crore, the Government of Kerala will contribute Rs 5,414.66 crore (68.8 per cent). The cost escalation due to rehabilitation measures and delays in associated infrastructure projects, such as railways, will also be borne by the State Government. The VGF support from the Union Government is Rs 817.8 crore (9.4 per cent). However, for availing this amount, the Union Government has imposed the condition that it should be repaid with interest after 2034 by sharing 20 per cent of the income from the concession fee. The State has requested the Union Government to reconsider this decision on account of the major investment made by the State in the project, and the returns of which will accrue to the nation as a whole. The Concessionaire’s share of investment for Phase 1 is approximately Rs 2,454 crores (31.2 per cent).

The world’s largest shipping company, Mediterranean Shipping Company (MSC), has included Vizhinjam Port in two of their shipping services: (a) Jade service, connecting Europe and Asia, and (b) the Dragon service, connecting Asia and the Mediterranean. These new routes are expected to increase the frequency of ships docking at Vizhinjam.

There is also progress in the setting up of the 10.76 km railway line. 5.5 hectares of land are to be acquired, and handed over to the Konkan Rail Development Corporation. About 70 per cent of the railway line will run along the existing Balaramapuram -Vizhinjam road, which will reduce the cost of land acquisition and resettlement. A key feature of the railway line is the 9.5 km tunnel, which will be the third longest railway tunnel in the country. The construction is expected to be completed in 42 months, and the cost of construction is expected to be around Rs 1,400 crore.

Vizhinjam Port is primarily a transshipment hub, serving as a transit point for cargo. As per the original feasibility study, 80-85 per cent of the cargo from mother ships is expected to be transferred to other ships destined to other ports in India. However, Kerala is pursuing a port-led development strategy to capitalise on the opportunities presented by this international port and its strategic location. Vizhinjam is poised to become the focal point of a burgeoning commercial corridor. Once the port operates at full capacity, it will unlock significant developmental opportunities in the State. To realise this potential, the Government of Kerala is promoting industrial corridors and clusters in the region, aiming to attract large-scale investments and transform the region.

The construction of the proposed Vizhinjam–Navayikulam outer ring road and development corridor in Thiruvananthapuram is expected to be completed in a timely manner, with active cooperation and participation of all associated agencies, citizens and entrepreneurs. The Government plans to establish a Special Development Zone (SDZ) in order to utilise the full developmental potential of Vizhinjam port. The vision includes transforming Vizhinjam into a comprehensive hub, with townships, residential areas, commercial centres, warehouses and entertainment zones.

The State Government has also conceptualised the Vizhinjam – Kollam – Punalur industrial and economic growth triangle, which will be implemented through KIIFB. This initiative aims to leverage the potential of Vizhinjam port for the State’s benefit.

The State Government will also spend Rs 795 crore on the project from the loan availed under the Scheme for Special Assistance to States for Capital Investment (SASCI) in 2024-25. This interest-free loan, provided for capital investment in development projects, has a repayment period of 50 years.

Source: VISL

the construction of Vizhinjam the larger mother ships could directly reach Indian shores

### **Malabar International Port and SEZ Limited (Azhikkal Port)**

Malabar International Port and SEZ Limited (MIPS Ltd), a Company wholly owned by the Government of Kerala was incorporated to execute the project for development of Azhikkal Port. Azhikkal Port is envisaged as an international as well as coastal shipping seaport with inter-modal connectivity with SEZs/industrial parks that can funnel cargo to the port and entrepreneurial resources into potential sectors in the Malabar region.

The development of a new seaport for domestic and international cargo in the open sea at Azhikkal is envisaged in 3 Phases - capable of handling up to Panamax size ships (capacity of 4000 to 4500 containers). A 500-metre berth is planned in Phase I, a 300-metre berth in Phase 2 and another 300-metre berth in Phase 3. Once the port becomes fully operational, Azhikkal port will handle even internationally plying ships of around 5000 TEU Panamax vessels with a dredged depth of around 14.1m in the harbour basin. The port can handle containers, liquid bulk, petroleum products, dry bulk and break-bulk cargos. The estimated project cost (including the land acquisition cost) as per the latest financial assessment done by the Technical Consultant M/s.Howe is Rs.5,047 crore: in 3 phases (Rs.3,742+Rs.375+Rs.930 crores respectively) and the Technical Consultants submitted the Draft DPR of the project to the Government of Kerala in September 2023 for approval. As per

G.O. (MS) No. 17/2024/F&P dated: 22.08.2024 the Government conditionally approved the DPR along with Financial Model submitted by CMD. Draft Environment Impact Assessment (EIA) report has also prepared.

### **Harbour Engineering Department (HED)**

The HED carries out investigation, planning, design, evaluation, execution, operation, maintenance and management of fishing harbours and fish landing centres as well as related marine engineering and technical works for the development schemes of the Fisheries and Port Departments. HED also function as a service department of Tourism and LSGD. Kerala Maritime Board entrusts HED for all kind of specialised construction works in the Port sector.

### **Major achievements of HED in 2023-24**

- Seven floating jetti projects totaling Rs. 117.48 crore have been approved under the Government of India scheme “Sagarmala”.
- Conducted a special training programme to engineers on coastal engineering and an up-skilling programme for the technical staff of electrical and mechanical wing of the Department.
- Construction of various infrastructure works – (1) Gate and Gate House Building at Kollam Port, (2) an office building and guest room for KIV registration at Port Compound, Asramom and extension of first floor of customs office building at Pallihottam (3) canteen cum Dormitory building and staff quarters in BC road compound at Beypore Port and (4) Office building for Harbour Engineering sub division at Manjeswaram.

**Table 11.1.10** Details of Survey conducted by Hydrographic Survey Wing

Sl. No.	Department	No. of survey
1	Cochin Shipyard Limited (CSL)	19
2	Harbour Engineering Department (HED)	37
3	Kerala Maritime Board (KMB)	2
4	Irrigation department	2
5	Kochi Metro Rail Limited (KMRL)	20
6	Cochin Port Trust (CPT)	2
7	Haritha Keralam	1
8	National Highway Authority of India (NHAI)	4
<b>Total</b>		<b>87</b>

Source: Hydrographic Survey Wing

### Hydrographic Survey Wing (HSW)

Hydrographic Survey Wing (HSW) was established in 1967 with the objectives of investigation and collection of Hydrographic Survey data for inland navigation development of all water bodies of the State of Kerala. HSW is the agency of the State in the port sector conducts investigations and prepares hydrographic charts both in digital and printed format. Such hydrographic charts give direct information on depth of overall water mass, underwater topography, contours, shore and land features and nature of bottom of water mass. The Wing also collects all hydrographic data and forwards to the National Hydrographic Office for updating navigational charts. The wing is equipped with a fleet of seven survey vessels. The Kerala Institute of Hydrography and Advanced Studies (KIHAS), established under the Hydrographic Survey Wing, conducts academic courses to equip the officers.

A total of 87 surveys were carried out by the Hydrographic Survey Wing during the period 2023-24 and up to August 31, 2024. Details of the survey are given below **Table 11.1.10**.

#### Major initiatives of the HSW

1. The department has implemented e-governance, which guarantees the transfer of data quickly for electronic navigation charts, real-time survey data, and e-charting.
2. For the seamless interconnection and data sharing between the sub offices and head office, ICCCs (Integrated Command & Control Centres) were established in both head and sub offices.
3. In collaboration with Digital University of Kerala HSW developed an open source web GIS based portal Hydrographic Data Management System (HSMSYS) to visualize layered 2D or 3D of bathymetric surface and computerization studies of data in various periods.
4. Developed 'Jalanethra- Hydrographic Survey Management System', a web-based system which facilitates a platform for the customers for availing survey related services/requests online.
5. Developed 'Theeram app', an android mobile app useful to HSW Marine Surveyors for the internal communications and for managing the internal operational processes. All preliminary / reconnaissance surveys can also be managed by this.
6. Developed 'Hydrographic Data Management System (HYMSYS)', an open-source Web-based

GIS platform developed by Digital University with the goal of transforming the Hydrographic Data Management process by transitioning to a digital model.

#### Challenges and Opportunities

The integration of port development with other sectors of economic growth will play an important role in future economic development. The Government has taken several initiatives to increase its investments in port sector by developing ports, augmenting existing facilities, mechanising ports and improving connectivity and logistics. Despite these initiatives, Kerala's port sector has not been comparable with other ports either nationally or internationally. The challenges in the sector include inadequate road networks within the port area, inadequate cargo-handling equipment and machinery, inefficiency due to poor hinterland connectivity through rail, road, highways, coastal shipping and inland waterways. More focus should be given on expanding capacity and improving operational efficiency. For enhancing the efficiency and sustainability of water transport, a comprehensive framework for the key aspects of navigation has to be established. A number of planned actions must be taken, if the inland water ways are to emerge as vibrant and sustainable solution for large scale cargo movement and commercial use. The regulatory framework, comprising of many regulators and multiple legislations, is also complex and needs simplification to enhance integration and better co-ordination. The State should fully and consistently leverage benefits of port-led development of its coastline. In order to promote coastal shipping and to reduce the congestion on the roads, policies have to be formulated to enhance the existing incentive schemes. The development of maritime cluster of different departments may be formed to develop port based industries to utilise the coastal transport facility of the State.

#### INLAND WATER TRANSPORT

Inland Water Transport (IWI) in the form of rivers, canals, backwaters and creeks, is intended to enhance the overall capacity of transportation network. This is an environment - friendly mode of transportation for freight and passenger movements. Inland waterways have its own natural advantages compared to roads and railways and hence it is important to develop and promote the Inland water transport sector. An integrated masterplan can be a spring board for the holistic

development of waterways in the State. Freight transportation by waterways remains underutilised in the country as compared to developed countries. India's hinterland connectivity is mainly based on road and rail with waterways. Inland Water Transport (IWT) in India has the potential to supplement the over-burdened railways and congested roadways. In addition to cargo movement, IWT sector also provides a convenient function in related activities such as carriage of vehicles on Roll-on-Roll-off (Ro-Ro) mode of cross ferry and tourism.

The National Waterways Act, 2016 has declared 111 inland waterways as 'National Waterways' (NWs) in the country to promote shipping and navigation on them. Inland Waterways Authority of India (IWAI), an autonomous organisation under the Ministry of Shipping Ports and Waterways is primarily responsible for the development, maintenance and regulation of those waterways which have been declared as NWs under National Waterways Act, 2016.

### Cargo Traffic in Inland Water Transport in India

In the year 2023-24, cargo movement on National Waterways was 133.03 Million Metric Tonne (MMT) as compared to 126.15 MMT in 2022-23, showing a growth of 5.5 per cent (Source: Ministry of Ports, Shipping and Waterways, Government of India). The Maritime India Vision (MIV) 2030 document sets a target of 200 MMT for cargo movement through national waterways by 2030.

### National Waterways in Kerala

Inland Navigation was the principal mode of passenger and commercial traffic till the middle of the twentieth century. With faster modes of transportation getting more popular, inland water transport, once dominant in the State was relegated to the background. Total length of inland waterways network in the State is estimated to be 1687 km, consisting of the National Waterways maintained by the Inland Waterways Authority of India and the other feeder and link canals maintained by the Coastal shipping and Inland Navigation/Irrigation Department of Kerala State.

As part of a programme for developing waterways by the Central Government, the portion of West Coast Canal (WCC) from Kollam to Kottapuram and Udyogamandal and Champakara Canals were declared as National Waterway 3 in 1993. The NW-3 is now extended up to Kozhikode by the National Waterway Act 2016. After the National waterway Act 2016; three canals were added to National Waterways under class 3 specification of 2.20m draught, 6.0m vertical clearance and 32- 40m width. National Water Ways in Kerala are listed in **Table 11.1.11**.

Total length of WCC is 616 km. There are 1,100 km feeder and link canals connecting WCC and important destinations like commercial centres, ports and tourism spots. WCC can broadly be divided into five sections namely (1) Kovalam-Kollam (74.18 km), (2) Kollam-Kottappuram (Kodungallur) (168 km), (3) Kottappuram-Kozhikode (160 km), (4) Kozhikode-Neeleswaram

**Table 11.1.11** National Water Ways in Kerala

Sl.No	Route	Length (in km)	NW No.
1	Kollam – Kottapuram portion of WCC	168	NW-3
	Udyogamandal canal	37	
	Champakara canal	14	
2	Kottappuram-Kozhikkode portion of WCC	160	NW-8
	Alappuzha -Changanassery	28	
	Alappuzha- Kottayam- Athirampuzha	38	
	Kottayam-Vaikkam	28	
	Poovar- Erayumanthurai-AVM canal (Major portion in TN)		
<b>Total Length(excluding AVM canal)</b>		<b>473 KM</b>	

Source: Inland Waterways Authority of India, Kochi



(187.82 km) and (5) Neeleswaram-Bekal (26 km) respectively. Out of the total length of 616 km, three portions between Mahe and Valapattanam having total length of 26 km are uncut portions. Further extension for 41 km from Neeleswaram to Kasaragod is also under consideration.

Inland Waterway Transport (IWT) mode is the preferred mode for transportation of Over Dimensional Cargo (ODC) because of multiple advantages vis-à-vis land transport. Rail transport doesn't have significant flexibility to accommodate ODC cargo because of standard wagon sizes. Road transport faces significant challenges such as route and time restrictions, the requirement of multiple permissions, and significant effort in carrying out route surveys to carry ODC cargo. IWT mode allows the movement of ODC cargo in a relatively convenient manner. An analysis of cargo movement in NW 3 in the last five years is given in **Table 11.1.12**.

**Table 11.1.12** Cargo Movement in NW.3 during last 5 years in metric million tonnes (MMT)

Financial Year	Cargo Movement (in MMT)
2019-20	0.55
2020-21	0.73
2021-22	1.7
2022-23	3.23
2023-24	3.29

Source: Ministry of Ports, Shipping and Water ways, Government of India

### State waterways

Most of the canals in the State was silted up and suffer from many navigation constraints like shallow depth and narrow width, bank erosion, absence of infrastructural facilities like jetties and terminals and navigation aids and need development. Kozhikode-Vadakara stretch is partially navigable. National waterways-3 between Kollam and Kottappuram and the feeder canals of Champakkara and Udyogmandal were developed in class-3 standard and barge services are operating in these canals. The Present status of reaches of WCC is given in **Appendix 11.1.29**.

### Coastal Shipping and Inland Navigation Department (CSIND)

The Coastal Shipping and Inland Navigation Department is involved in the development of waterways and promotion of Inland Navigation in

Kerala. To make the state waterways navigable, the department had undertaken various works. Listing below the works that were completed during the review period -

- Boundary stone laying works from Kovalam to Pallithura
- Kallupalam bridge at Kollam
- Construction of 9 boat jetties and jankar kadavu in Alappuzha District
- Steel lifting bridge at Karikkakam, in Thiruvananthapuram district
- 11 numbers of steel foot bridge at Kozhikkode District
- Chain link fencing for the protection of Maniyamkulamthodu from Kuttur bridge to Attumpuram bridge
- Cleaning works of Varkala tunnel in Thiruvananthapuram district and Kollam Thodu reach II.

Some of the ongoing projects are - (1) construction of Lock Cum Bridge at Veliyancode (Phase II) in Malappuram District, (2) development of TS canal in Vettoor Panchayat, (3) construction of St.Andrews bridge inThiruvananthapuram district, (4) construction of steel lattice bridge across Parvathy Puthanar, (5) construction of sluice in the downstream of Chettuva bridge in Thrissur District (6) acquisition for the construction of bridge at Kadakom, Thekkearayathuruth and Vadakkearayathuruth near Anchuthengu kayal, (7) construction of Thrikkunnupuzha Lock cum bridge in Alappuzha district, (8) chain link fencing for the protection of Attumpuram bridge to Maniyamkulam bridge,(9) development of WCC at Varkala and (10) Construction of Moozhikkal Lock cum bridge in Vadakara-Mahe canal in Kozhikkode district. Construction of approach road to Moozhikal lock cum bridge is in final stage.

### Kerala Shipping and Inland Navigation Corporation. Ltd (KSINC)

Kerala Shipping and Inland Navigation Corporation Ltd. (KSINC) is the pioneer of inland navigation in the Kerala waterways and is a Government of Kerala undertaking. KSINC owns two yards for the construction and maintenance of small vessels. KSINC maintains high standards of excellence in every aspect of building, maintaining and operating vessels catering to a wide range of customer requirements. KSINC's own cruise vessels, the premier Sagararani (1 and 2) and the exclusive luxury cruise, Nefertiti are its highlights.

KSINC started tourism operations in 2005. Trips in Sagararani to the sea are scheduled for the general public. Currently, two vessels are operational. It is also the pioneer in mechanised cargo movement in Kerala and still the largest player. KSINC now operates two cargo barges, six petroleum barges, two acid barges and two RO-RO. KSINC earned a net profit of Rs.57.31 Lakh and a turnover of Rs.25.44 crore during 2023-24. Operational statistics of the Inland Water Transport Agencies in Kerala is provided in **Appendix 11.1.30**.

#### **Major achievements of KSINC in 2023-24**

- First solar (hybrid) tourist boat (100 Pax Capacity) in Kerala became operational
- Construction of 1400 MT carrying capacity POL barge completed
- Construction of 300 MT acid carrier barge Lekshmy completed and started transporting acid for FACT Ltd.

#### **State Water Transport Department**

The State Water Transport Department (SWTD) is an essential service department under the State Government and is committed to cater to the transportation needs of the public residing in the waterlogged areas of Alappuzha, Kottayam, Kollam, Ernakulam, Kannur and Kasaragod Districts. The department ferried 107.71 lakh passengers in 2023-24 with wooden/steel/Solar based fiber glass passenger vessels covering a total route length of 507399 km in 124 identified routes. SWTD operates around 2,36,064 trips per annum utilizing a fleet strength of 63 vessels (Source: SWTD). The department functions through 14 terminal jetties adjacent to 14 station offices of the department. The operational Statistics of the department is given in **Appendix 11.1.31**.

The State Water Transport department has not confined its operation merely to the transportation of passengers but has also extended its operation to the tourism sector to reap its benefits and augment revenue generation. The department, in a bid to extract the benefits of tourism potential of Kuttanad Inland Water Ways and the connected Inland suburbs, built up a modern tourist cum passenger vessel '*See Kuttanad*' with 90 passenger capacity which was inaugurated in September, 2022. The departments has realized the importance of tourism in generating stable revenue and therefore, presently SWTD has three vessels (*Vega-2*, *See Kuttanad* and *See Ashtamudi*)

operating exclusively for tourists. In 2023-24, the department earned Rs 258.01 lakh from the operation of its tourist vessels and it was Rs 173.77 lakh in 2022-23 which is 48.5 per cent higher over the previous year. '*See Ashtamudi*' is the recent passenger cum tourist vessel introduced by the department in 2023-24 and is cruising through the scenic Ashtamudi Lake in Kollam District fetching average monthly revenue of Rs 80 lakh. In 2023-24, the revenue earning from '*See Kuttanad*' and '*Vega*' service is 180 lakh, which is 8 per cent increase in revenue as compared to previous year 2022-23.

Unlike in road traffic sector, water taxi in inland water is an uncommon venture. The department initiated the service of water taxi in inland service to provide more fruitful service to the public residing in the water logged areas. It has built of three water taxis, two of which-Thejas 1 and Thejas 2, are ferrying in Alappuzha and Payyannur routes respectively.

Water transport is inherently efficient than either rail or road transport and the use of Solar/ Electric powered vessels will have positive impact in reducing carbon emission and hence efforts to convert old fuel boats into solar or electric or CNG vessels need to be focussed.

#### **Challenges and Opportunities**

Despite the strong growth witnessed in the past years, the potential of IWT remains unexploited. Key impediments in development of this sector include – limited infrastructure availability, shortage of inland vessels and non-availability of return cargo. Further governance issues due to overlapping jurisdictions also slow down the sector progress. It is necessary to create a comprehensive master plan for the waterways in the State that focuses on development projects as well as the movement of people and goods, operates the Kovalam-Kasaragod stretch of the waterway in accordance with national standards by 2025, offers incentives for the purchase of modern vessels as well as the movement of people and goods, establishes terminal facilities and connectivity between ports and the hinterlands, and develops strategies to promote riverine industrial corridors and tourism, improve water quality in inland waterways and take steps to reduce liquid and solid waste pollution in waterways and promote waterway based Industrialisation

The Government should prepare a medium-term and long-term vision that will ensure sustainable development of the IWT sub-sector in line with Integrated Multimodal Transport Policy. Modal options for the development of the transport sector should be based on social and environmental advantages.

Inland waterways network should be reclassified according to sustainable navigability and traffic importance. The core waterways should include fairways connecting Thiruvananthapuram and Bakel and other National waterways, connecting all ports including the inland port at Kottayam and connecting local towns. Network development and dredging strategy should be prepared in line with the Waterway Management Plan. The new dredging strategy should coordinate and integrate programme of CSIND and Kerala Waterways Infrastructure Ltd (KWIL).

Private participation should be ensured in the field of waterway management and operations, development of IWT infrastructure, dredging and maintenance of waterways, mechanisation of cargo handling, development of inland container terminals and container traffic in the waterways. To this end, new guidelines and procedures should be prepared which will include the streamlining of the existing regulatory mechanism of inland ship safety and ship construction, ship design, supervision of ship construction, awarding survey certificates, and determining work force required for each ship. Competency certificates to different categories of crew should be awarded by training institutes after successful completion of service and training modules for each category.

## 11.2 ENERGY

In the last 150 years, global energy demand has increased unprecedentedly, due to rapid growth of population, industrial development, robust economic growth, intense heat waves, and continued electrification worldwide. Global electricity demand is forecast to grow by around 4 per cent in 2024, up from 2.5 per cent in 2023 (IEA's Electricity Mid-Year Update,2024).

### Power Sector – Indian scenario

India posts the fastest electricity demand growth rate through 2026, among major economies (IEA's Electricity Mid-Year Update,2024). The national grid has an installed capacity of 4,41,970 MW as on March 31, 2024. In India, electricity from thermal energy is the dominant source of power. It constitutes nearly 55 per cent of the total installed capacity in the country. The contribution of electricity generation from different sources is given in **Table 11.2.1**. Recently, renewable sources

**Table 11.2.1** Installed Generation Capacity (MW) in India as on 31.03.2024

Sl. No.	Fuel	Installed Capacity(MW)	
		As on 31.03.2024	per cent
1	Thermal	2,43,217	55
2	Hydro	46,928	10.6
3	Nuclear	8,180	1.8
4	Renewable Sources	1,43,645	32.5
<b>Total</b>		<b>4,41,970</b>	

Source: Annual Report 2023-24, Ministry of Power, Gol

have emerged as the second largest electricity source, relegating hydroelectric power to the third position.

In the sector-wise breakup of total energy generation as given in **Table 11.2.2**, as on March 31, 2024, the contribution of the State sector is 1,07,670 MW (24.4 per cent), Central sector is 1,04,453 MW (23.6 per cent), and private sector is 2,29,847 MW (52 per cent).

**Table 11.2.2.** Installed Generation Capacity (MW) in India as on 31.03.2024, Sector wise

Sl. No.	Sector	Installed Capacity (MW)	
		As on 31.03.2024	per cent
1	Central Sector	1,04,453	23.6
2	State Sector	1,07,670	24.4
3	Private Sector	2,29,847	52
<b>Total</b>		<b>4,41,970</b>	

Source: Central Electricity Authority (CEA), Ministry of Power, Gol

### Power Sector in Kerala

In Kerala, electricity consumption is predominantly in the domestic and commercial sectors. As per the Energy Data Management report published by the Bureau of Energy Efficiency in 2023, in India, the electricity consumption in agriculture is around 18 per cent. In many States, it is above 30 per cent of the total electricity consumption; but in Kerala, agricultural consumption is only 1.7 per cent.

### Box 11.2.1 “Angan Jyothi”

Energy Management Centre has devised the “Angan Jyothi” project to make Anganwadis in the State fully energy efficient. The focal point of the initiative is the establishment of eco-friendly kitchens in Anganwadis under the Integrated Child Development Services (ICDS) Scheme with energy efficient electric cooking systems, with the ultimate objective of creating carbon-neutral Anganwadis.

The project has been completed at 196 and 226 Anganwadis in Kazhakootam and Chittur Legislative Assembly Constituencies, respectively. As part of the Navakeralam Karmapathidhi Net Zero initiative, the first phase of the Anganjyothi project was completed at 91 Local Self Governments, which include 2,395 Anganwadis .

Source: Energy Management Centre

The primary energy source in the State is hydroelectric power. In recent years, there has been a significant increase in Variable and Renewable Energy (VRE) sources, such as solar and wind, within the energy mix.

The State has made significant steps towards implementing various schemes and programmes aimed at establishing a resilient and reliable power transmission and distribution network. The addition of critical infrastructure elements in the electrical network in 2023-24 marked a major milestone in strengthening the State’s ability to manage and sustain increased electricity demands, ensuring a more robust and reliable power supply system for future needs. The growth of the power system in Kerala during the last three years, is given in **Appendix 11.2.1**.

### Power Availability

In Kerala, power supply comes from central stations, private generators, power exchanges, and internal sources including stations owned by Kerala State Electricity Board Ltd (KSEBL), Independent Power Producers (IPPs), Captive Power Plants (CPPs), and prosumers. Details are given in **Table 11.2.3**.

### Power Demand

The State’s electricity demand is projected to grow at a CAGR of 5.1 per cent from 2023-24 to 2029-30, as per the forecast by the 20th Electric Power Survey India (Source: Central Electricity Authority, Ministry of Power, GoI).

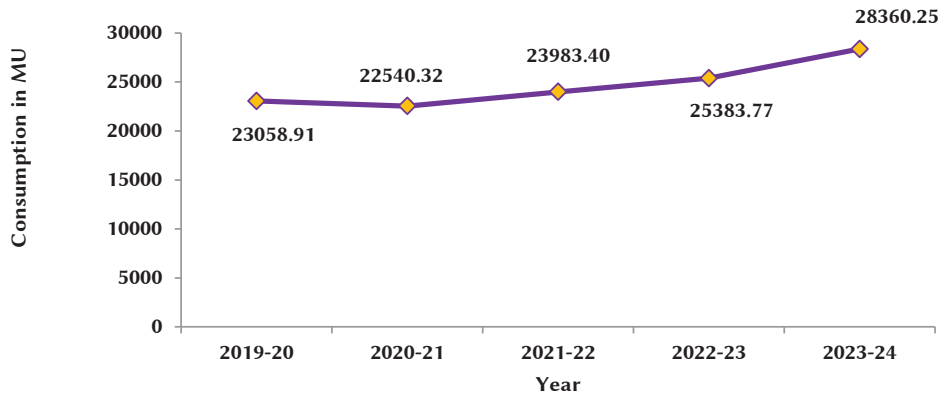
The State’s all-time maximum peak demand and

**Table 11.2.3** Energy sources & Quantum procured during 2023-24

Sl.No.	Particulars		Energy (MU)
1	Gross generation KSEBL	A	5,716.43
2	Power purchase at Kerala periphery through <ul style="list-style-type: none"><li>• CGS</li><li>• Long term/medium term/short term contracts</li><li>• Power exchange</li><li>• Swap</li><li>• DSM</li></ul>	B	24,922.95
3	Total power purchase from IPPs/CPPs inside the State	C	1,273.35
4	Total power purchase at Kerala periphery	D=B+C	26,196.3
5	Energy injected by Private IPPs at generated end for sale outside the State through open access	E	78.36
6	Energy availed through open access at Kerala Periphery	F	266.09
7	Auxiliary consumption	G	90.08
8	EXPORT-Energy sales by KSEBL , SWAP Return by KSEBL and Energy injected by Private IPP’s at KSEB periphery for sale outside the State through open access	H	759.96
9	Total energy input to Kerala periphery for meeting the consumption of the State including energy wheeled through open access	I=A+D+E+F-G-H	31,407.14

Source: KSEBL

**Figure 11.2.1** Electrical energy consumption in Kerala from 2019-20 to 2023-24



Source: KSEBL

power consumption was reported in 2023-24. Peak demand of the State in 2023-24 was 5,301 MW (on March 26, 2023), a 17.3 per cent increase from 4,517 MW- the peak demand in 2022-23. In 2023-24, the morning peak demand was 4,019 MW, and the day peak demand was 4,638 MW.

#### Pattern of Power Consumption

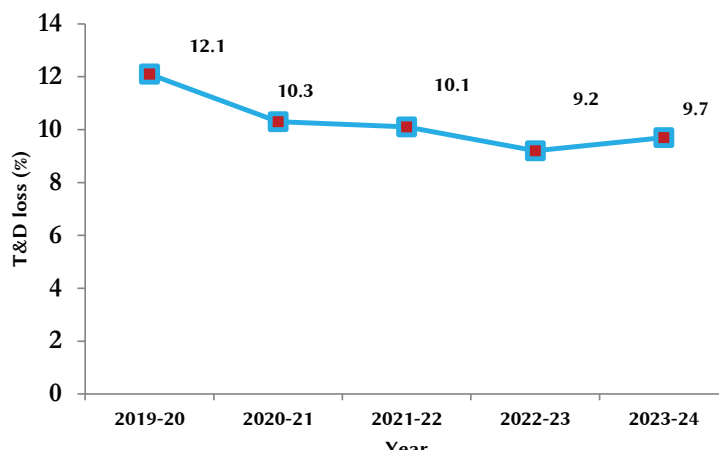
The electrical energy consumption in Kerala has increased to 28,360.25 MU (including open access consumption, and excluding consumption against captive generation) in 2023-24, from 25,383.77 MU in 2022-23. This is an increase of 11.7 per cent. This unusual increase in power consumption was because of the severe summer faced by the State. Electrical energy consumption in Kerala from 2019-20 to 2023-24 is given in **Figure 11.2.1**.

The total number of consumers as on March 31, 2024 was 1,38,64,176, with 1,04,94,734 (75.7

per cent) domestic and 26,14,838 (18.9 per cent) commercial users. KSEB has sold 27,674.73 MU power, which includes its own consumers, sales outside State, and also sale to other bulk licensees. The contribution of the domestic sector to consumption was 49.6 per cent, and that of commercial establishments was 16.9 per cent. The contribution of the industrial category (which comes to 1.1 per cent of total consumers) was 26.6 per cent.

An amount of Rs.19,818.41 crore was collected as revenue from the sale of power to various categories in 2023-24. Revenue from domestic, industrial and commercial sectors was 37.9 per cent, 31.6 per cent and 24.4 per cent, respectively. The details of category-wise power consumption and revenue collected in 2023-24 are furnished in **Appendix 11.2.2**.

**Figure 11.2.2** Transmission and Distribution (T&D) loss (2019-20 – 2023-24), in per cent



Source: KSEBL

### Impact of Aggregate Technical and Commercial (AT & C) Losses

Kerala has achieved commendable success in reducing Transmission and Distribution (T&D) losses in recent years. This indicates efficient power management and infrastructure upkeep. The T&D loss decreased from 12.1 per cent in 2019-20 to 9.2 per cent in 2022-23. However, due to the significant increase in peak demand, T&D loss increased to 9.7 per cent in 2023-24. The impact of AT&C loss reduction during the last five years is shown in **Appendix 11.2.3**, and **Figure 11.2.2** illustrates the T&D loss from 2019-20 to 2023-24.

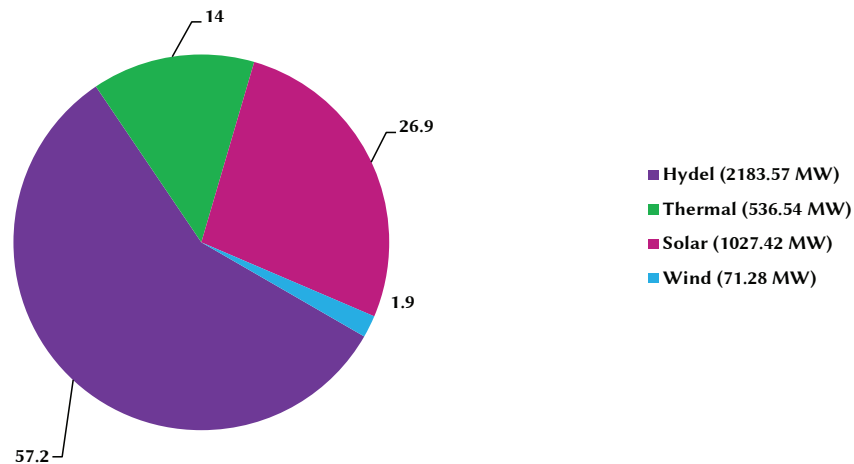
### Generation

The power generation landscape in the State includes hydroelectric, thermal, wind and solar plants. Total installed capacity of power in the State as on March 31, 2024 is 3,818.82 MW, of

which, hydel power contributed the major share of 2,183.57 MW (57.2 per cent); while 1,027.4 MW was contributed by solar power (26.9 per cent), 536.54 MW (14.0 per cent) from thermal and 71.3 MW from wind (1.9 per cent). **Appendix 11.2.4** gives the details of energy source and its installed capacity during the last five years, while sector-wise details are presented in **Appendix 11.2.5**. **Figure 11.2.3** highlights the total installed capacity of Kerala from hydel, thermal, and renewable sources.

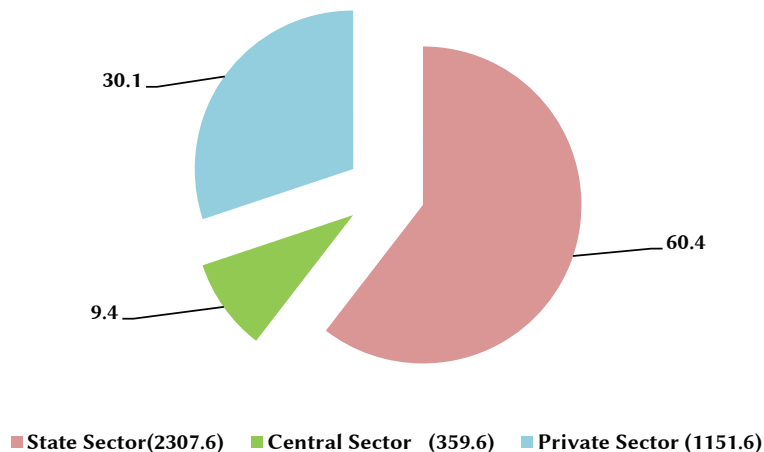
Of the total installed capacity of 3,818.8 MW in 2023-24, the contribution of State sector is 2307.6 MW (60.4 per cent), central sector is 359.6 MW (9.4 per cent), and private sector is 1151.6 MW (30.1 per cent). **Figure 11.2.4** shows sector-wise details on installed capacity and the details of surplus power during the last five years are shown in **Appendix 11.2.6**.

**Figure 11.2.3** Total Installed capacity (MW) in Kerala in 2023-24 (in per cent)



Source: KSEBL

**Figure 11.2.4** Total Installed capacity (MW) in Kerala in 2023-24, sector wise (in per cent)



Source: KSEBL

The total installed capacity of the Kerala State Electricity Board Limited, as on 31.03.2024, is 2,307.6 MW. This is generated by 41 hydel stations of capacity 2,096.4 MW, two thermal plants of 160 MW, solar plants of 49.2 MW, and one wind farm of 2.0 MW. Due to the high production costs associated with power generation, KSEB does not rely on thermal plants for daily electricity needs. Details are shown in **Table 11.2.4**.

**Table 11.2.4** KSEB Internal Generation

Sl. No.	Particulars	Capacity as on 31.3.2024 (MW)	Total Internal Generation in 2023-24 (MU)
1	2	3	4
1	Hydel	2,096.4	5,663.6
2	Thermal	160	0
3	Solar	49.2	51.6
4	Wind	2.0	1.2
<b>Total</b>		<b>2,307.6</b>	<b>5,716.4</b>

Source: KSEBL

The details of nine ongoing hydroelectric Generation projects with installed capacity of 203.5 MW executed by KSEB are given in **Appendix 11.2.7**, and the list of existing Small Hydro Projects owned by KSEBL is presented in **Appendix 11.2.8**.

### Transmission

Kerala has 431 transmission substations with 14,724.2 circuit km lines having 26,365.7 MVA total transformation capacity, of which 6 stations (1,813.9 Ckm) are owned by Power Grid Corporation of India (PGCIL), as on March 31, 2024.

In 2023-24, seven EHT (Extra High Tension) substations including one 400 kV and six 110 kV substations were commissioned, which added an additional 297.1 circuit km of transmission lines with 890.7 MVA capacity. The commissioning of Kerala's first 400 kV gas insulated substation at Kottayam was another important achievement in the Transmission sector. Additionally, the commissioning of two 500 MVA interconnecting transformers at Kochi and Palakkad along with downstream works increased the State's import capacity by nearly 1000 MW, elevating it to a total of 4620 MW.

### Transgrid 2.0

The ambitious Transgrid 2.0 project aimed at enhancing transmission capacity to meet future demand, improve reliability and quality of power transmitted, and to reduce losses. All 12 substations targeted in the first phase of the Transgrid 2.0 project (2017-23) have been commissioned, with around 1,746 circuit km of lines completed.

Out of the total 7 new substations in 2023-24, one was completed as part of Transgrid 2.0 project.

Kerala's transmission infrastructure as on March 31, 2024 and details on substations and lines completed in 2022-23 are given in **Appendix 11.2.9** and **Appendix 11.2.10**.

### Distribution

The distribution network as on March 31, 2024 has 70,072 circuit km of 11 kV & 22 kV lines, 3,10,191 circuit km of LT lines, and 89,620 distribution transformers with step down capacity of 11,905 MVA.

In the distribution sector, 1,297 kms of HT lines and 4,078 kms of LT lines were constructed, and 2,355 new distribution transformers were installed in 2023-24. The number of new service connections during the year was 3,38,864. The target and achievement of the distribution infrastructure during 2023-24 are given in **Appendix 11.2.11**.

### Electrical Accidents

A total number of 362 electrical accidents that affected humans or animals were reported in the State in 2023-24. Of the total accidents that occurred, about 56 per cent were related to human fatalities. Details are shown in **Table 11.2.5**.

Palakkad recorded the highest number of electrocutions in 2023-24. The district saw 54 electrical accidents. This is followed by Thrissur (49). The district with the least number was Kasaragod (8). **Appendix 11.2.12** gives a comparison of electrical accidents in the State for the last 5 years and district wise details are given in **Appendix 11.2.13**.



**Table 11.2.5** Electrical Accidents– Human/Animals affected in 2023-24, in Number

Sl. No.	Reasons	Human		Animals		Total
		Fatal	Non-Fatal	Fatal	Non-Fatal	
1	Snapping of conductors	8	9	10	0	27
2	Accidental contact with live electric wire/equipment	96	39	13	0	148
3	Violation /neglect of safety measures/lack of supervision	13	31	0	0	44
4	Defective appliances/apparatus /tools	29	7	7	0	43
5	Inadequate/lack of maintenance	0	1	7	0	8
6	Unauthorised work	29	4	3	0	36
7	Others(Temporary extensions, P&T crossings ,misuse etc)	30	18	8	0	56
<b>Total*</b>		<b>205</b>	<b>109</b>	<b>48</b>	<b>0</b>	<b>362</b>

\* Figures indicates the number of human/animal affected and not number of accidents

Source: Department of Electrical Inspectorate

### Performance of Power Sector Agencies in 2023-24

Power development activities in the State are carried out mainly through four agencies, namely, Kerala State Electricity Board Limited (KSEBL), Agency for Non-conventional Energy and Rural Technology (ANERT), Electrical Inspectorate, and Energy Management Centre (EMC).

#### Kerala State Electricity Board Limited (KSEBL)

Kerala State Electricity Board Limited is a power utility company incorporated under the Companies Act 1956 (Central Act 1 of 1956). It is fully owned by the Government of Kerala, under the provisions of Section 131 of the Electricity Act 2003 by re-vesting (under sub section (2) of Section 131 and 133 of the Act) the functions, properties, interest, rights, liabilities, proceedings and personnel with the State Government from the erstwhile Kerala State Electricity Board. It is responsible for the generation, transmission, and distribution of electricity in the State, with the specific mandate to provide electricity at affordable prices for domestic, agricultural, and industrial use.

Major Achievements of KSEB in 2023-24 are as follows:

- Projects Commissioned in 2023-24 –(i) 6 MW Peruvannamoozhi Small Hydro Project (ii) Kerala’s first 400 kV Gas insulated substation at Kottayam (iii) two 500 MVA interconnecting transformers at the 400 kv substations of Power Grid Corporation of India Ltd in Kochi and Palakkad
- Achieved capacity addition of 6 MW through

synchronising Peruvannamoozhi Small Hydro Project to grid

- A capacity addition of 244.34 MW to solar capacity in the State, of which 49.24 MW plants are owned by KSEB.
- In the distribution sector, 1,297 kms of HT lines were constructed; 4078 km of LT lines were added
- Completed electrification of 18,637 BPL households and 15 tribal colonies
- Electrification of 238 Particularly Vulnerable Tribal Group (PVTG) households was completed under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN), programme to address gaps in power supply in PVTG villages, habitations, and households
- A total number of 4,193 street lights were installed under the streetlight programme “NILAAVU”.
- Ground-mounted solar plants were installed at eight sites with a total capacity of 1.3 MW serving 5,300 agriculture pumps, under PM KUSUM.
- Works amounting to Rs.754.00 crore have been completed in Dyuthi 2 in 2023-24.
- 151 grid-connected solar plants with a capacity of 1.3 MW and 13,841 plants with capacity 53.6 MW were commissioned under Phase-I (Non-subsidy scheme) and Phase-II (Subsidy scheme) respectively, of the Soura Project.
- The Anti Power Theft Squad (APTS) conducted 32,062 inspections.
- Implemented Cloud Telephony Services for consumers to register complaints, request services, and obtain billing information via call and WhatsApp.

- Introduced Spot Billing Machines with POS (Point of Sale) feature facilitating consumers to pay electricity charges at their doorstep.
- Implemented automated voice call back facility “VOICE BLAST” to provide disconnection alerts to consumers one day before their disconnection date.
- Launched “KEMapp” (Kerala E-mobility Application) for managing EV charging stations
- Achieved ISGF Innovation Awards 2024 for developing “KEMapp” in the e mobility sector and Kerala State Energy Conservation Award 2023 for outstanding performance in the field of energy conservation.

### **Agency for Non-Conventional Energy and Rural Technology (ANERT)**

Agency for Non-conventional Energy and Rural Technology (ANERT) is an autonomous body under the Power Department, GoK. ANERT is the nodal agency for the implementation and propagation of non-conventional sources of energy, rural technologies and promoting the idea of Carbon neutral governance for government institutions with renewable energy and electric-mobility in the State. It is also the nodal agency for the Ministry of New and Renewable Energy Sources (MNRE), GoI, to carry out the Central Government programmes in Kerala. Major achievements of ANERT are as follows:

#### **I. Roof Solar Projects**

- Solar City Project:- Under the Solar City project, funded by Smart City, a total capacity of 17.1 MW has been installed in 514 public buildings in Thiruvananthapuram corporation area. This initiative has provided employment to around 68,800 people.
- Solar electrification of unelectrified tribal hamlets: - Programme implemented in 3 hamlets in Palakkad district. Hybrid power plants featuring 1 kW capacity solar panels and 500-watt capacity wind turbines were installed in each of the houses to electrify 60 families and also installed 20 solar street lights in this area.
- RESCO Project:- Installed solar power plants (600 kW capacity) in four institutions under the Kerala Agricultural University under RESCO project.
- Green Income Project:- 632 Life Mission houses were solarised under the Green Income Project, envisaged to provide subsidised grid-connected solar power plants to economically weaker families. Out of these, 379 beneficiaries are houses headed by women.

- Installed 10 MT capacity Solar Cold Storage System at Velamthavalam and Kambalathara Agro Processing Unit in Perumatti Panchayat market in Palakkad district
- Solarisation of Anganawadis:- solar power plants with a capacity of 2 kW each have been set up in 151 anganwadis in Chittoor constituency in Palakkad district.
- A total of 1.5 MW of SPV Power Plants have been installed in various Government Institutions and Local Self Governments as part of implementing Renewable Energy Projects as Deposit Work. These projects include 1.3 MW Ongrid System, 38.5 kW Offgrid System, 130.5 kW Hybrid Systems, and a total of 270 solar street lights have also been installed.

#### **II. e-Mobility Projects**

- A total number of 194 vehicles have been provided in 22 departments and 50 offices under Lease Contract of E-Car Project to Govt Departments.
- Commissioned 19 Public EV fast charging stations across the State.
- 2 Public EV charging stations were installed at Government institutions with the support of Energy Efficiency Service Limited (EESL) under the Ministry of Power, GoI.
- Installed 4 nos of Solar Powered EV Charging Stations in Govt. Institutions and Metro Stations near National Highways all over the State.

**III. PM KUSUM) Project:** ANERT aims to solarize 1 lakh agricultural pumps, generating approximately 570 MU of additional energy under the Pradhan Mantri Kisan Urja Suraksha Evam Utthan Mahabhiyan (PM KUSUM) Project. In 2023-24, a total number of 676 pumps, generating 2,481 kW were installed in 5 districts under this project.

#### **Energy Management Centre (EMC)**

Energy Management Centre (EMC) is the State-designated agency of the Bureau of Energy Efficiency, MoP, GoI for promoting/ implementing energy conservation activities in order to enhance efficient energy management in the State. EMC also promotes small/mini/micro hydel schemes. The Small Hydro Promotion (SHP) Cell constituted by GoK under the Power Department is also attached to EMC, to give impetus for the development of SHPs through private participation. Major achievements in 2023-24 are given below:

- Commissioned Projects; Mukkudam Small Hydro Project (4 MW) in Idukki district and Ezhamkadav (350 kW) Small Hydro Project in Kannur district
- The efforts of EMC paved the way for the State to achieve second position in the Energy Efficiency Index at the National level.
- Various energy conservation activities of EMC resulted in saving 623 MU of electricity in the State.
- A total number of 611 Energy Audits were carried out in various hospitals, government buildings, PWD rest houses, and MSME units.
- Initiated a mass pilot project called “Sustainable Transport for Rural Entrepreneurs through Electric Cycles (STREE) scheme”, a project for the promotion of electric bicycles for upliftment of women in rural areas.
- Launched cool roof project, a project to harness the potential of cool roofing technologies as a means to mitigate the heat in buildings
- Conducted Kerala State Students’ Energy Congress -2024 as part of the International Energy Festival of Kerala 2024.
- Launched Energy Clubs in schools to inculcate energy conservation habits in student’s community and a total number of 6,639 schools had registered in the PMS (Programme Management System) portal.
- Launched “Centre for Energy Studies (CES)” in technical educational institutions across the State with an aim to shape the ideas of young minds in technical institutions across Kerala, fostering a collaborative ecosystem for transformative energy solutions. The project currently includes 34 institutions from 11 districts, comprising 32 engineering colleges and 2 polytechnic colleges.
- The Energy Meter Calibration Lab of EMC calibrated a total of 4,451 different types of energy meters

- Organized 1623 awareness / training programmes of which 24 programmes were conducted for women.

### Department of Electrical Inspectorate

The Department of Electrical Inspectorate and Meter Testing and Standards Laboratory (MTSL) is functioning under the Department of Power. Safety inspections are carried out and sanction for energisation for all HT/EHT and other medium voltage installations in the State are issued by the Inspectorate. The motto of the Meter Testing and Standards Laboratory (MTSL) is to provide testing and calibration of various types of electrical equipment. The Department also conducts enquiries into all electrical accidents occurring in the State.

#### Achievements in 2023-24

- Number of electrical accidents from installations has been reduced through the massive awareness programmes of the department
- An amount of Rs 5.7 crore has been received as testing fee from Meter Testing and Standards Laboratory and Regional Labs.
- Eight Regional Meter Testing Laboratories got NABL accreditation for electro technical calibration in energy parameters.
- The Department has made revenue of Rs 98.6 crore in 2023-24.

### Financial Achievement of the sector in 2023-24

The Budget outlay and expenditure of all the agencies under the department of Power in 2023-24 and 2024-25 (up to 15 October 2024) are shown in **Table 11.2.6**. An amount of Rs.1,033.1 crore (89.2 per cent) had been incurred as expenditure against budgeted outlay of Rs.1,158.1 crore in 2023-24.

**Table 11.2.6** Outlay and expenditure in the Annual Plan 2023-24 and Annual Plan 2024-25, Rs crore

Sl. No	Department/Agency	Annual Plan 2023-24			Annual Plan 2024-25		
		Outlay	Exp	per cent	Outlay	Exp*	per cent
1	KSEBL	1,094.6	1,013.5	92.6	1,088.8	1.2	0.1
2	ANERT	49.0	15.5	31.5	50.2	8.2	16.3
3	EMC	9.1	1.8	19.9	6.6	0	0
4	Department of Electrical Inspectorate	5.4	2.3	41.9	5.2	0.7	13.0
	Total	1,158.1	1,033.1	89.2	1,150.8	10.1	0.9

\* up to October 15, 2024  
Source: Plan space Kerala

### **Consumer Grievance Redressal Forums (CGRF)**

Three CGRF have been constituted by KSEB as per regulations of the State Electricity Regulatory Commission. The forum has independent powers to issue orders in respect of grievances presented before the forum by consumers. A total number of 335 petitions were disposed of by the Forums during 2023-24.

### **Kerala State Electricity Regulatory Commission (KSERC)**

The Kerala State Electricity Regulatory Commission is a quasi-judicial statutory organisation responsible for maintaining a fair, transparent, and objective regulatory system in the power sector of the State. The major function of the Commission is to determine the tariffs for generation, supply, transmission, and retail sale of electricity in the State. It is also vested with other functions such as approval of power purchase agreements of distribution licensees in the State, resolving disputes among licensees/generating companies, issues relating to tariff and determination of compensation as per the provisions of the Electricity Act, 2003.

### **Electricity Ombudsman**

Electricity Ombudsman is a statutory authority appointed by the Commission under sub-section (6) of Section 42 of the Electricity Act, 2003, to settle grievances of consumers, aggrieved by non-redressal of their grievances by the Consumer Grievance Redressal Forum.

### **Challenges of the sector**

- Increasing demand for energy: - Internal capacity of the State is sufficient to meet only 30 per cent of requirement. Hence there is a deficiency of 500-1000 MW during peak hours. This is a major challenge to be addressed.
- Kerala has potential for generating energy from renewable sources including solar energy. However, integration of renewable energy generated with the power grid (without affecting stability) and its storage are issues that require attention in the near future.
- The shortage of charging stations is a factor inhibiting the adoption of electric vehicles.

### **Way Forward**

Strategic management of power supply during peak demand periods and extreme weather conditions needs greater attention. Enhancement

of internal generation capacity of the State, timely execution of Renewable Energy projects and strategy for purchase of electricity are required for balancing the supply and demand for electricity. The State needs to move towards a research and development-based approach to identify and harness energy sources available within the State. This is particularly important as the State works to become carbon neutral by 2050 and complete the switch to renewable energy by 2040.



## 11.3 COMMUNICATION

### Telecommunication

Telecommunication has supported the socio economic development of India and has played a pivotal role to narrow down the rural-urban digital divide. It has linkages to the Sustainable Development Goals (SDGs) of the United Nations Agenda for Sustainable Development targeted by 2030. The telecom sector exhibited a robust growth in recent years because of strong supportive policies and increased consumer demand. The telecom industry in India is the second largest in the world with a subscriber base of 1.20 billion as of March, 2024 (Wireless + Wire line subscribers) (*Source: The Indian Telecom Services Performance Indicators, March 2024, Telecom Regulatory Authority of India*)

Tele-density, which denotes the number of telephones per 100 population, is an important indicator of telecom penetration. India has an overall tele density of 85.7 per cent as of March, 2024, of this, tele density of the rural market which is untapped, stands at 59.2 per cent while tele-density of the urban market is 133.7 per cent (*Source: The Indian Telecom Services Performance Indicators, March 2024, Telecom Regulatory Authority of India*)

Total telephone connections in Kerala as on March 2024 is 4.37 crore constituting 3.64 per cent of the total telephone connections in India. The number of wire line connections in Kerala has witnessed a slight increase from 13.81 lakh in March 2023 to 15.4 lakh in March 2024, registering a growth

of 11.5 per cent over previous year, while mobile connections (Wireless) has reduced to 4 crore from 4.24 crore in the same period. The tele-density Kerala is 121.7 per cent as on March 2024, of this, rural tele-density stands at 239.6 per cent and urban tele-density at 87.6 per cent. Kerala service area has the highest Rural Tele-density followed by Goa service area of 234.3 (*Source: The Indian Telecom Services Performance Indicators, March 2023 and 2024, Telecom Regulatory Authority of India*)

The Government of Kerala has given importance to growth of internet and broadband. Internet traffic has accelerated. Internet connections in Kerala has increased from 89.00 million in March 2023 to 93.73 million in March 2024, registering a growth of 5.3 per cent over the same period last year. Number of internet subscriber per 100 population in Kerala has witnessed increase in this period. The number of internet subscriber per 100 population in the rural area was 171.2 in March 2023, which rose to 197.7 in March 2024. Similarly, subscribers in the urban area have increased from 62.1 to 63.7 in the same period. (*Source: The Indian Telecom Services Performance Indicators, March 2023 and 2024, Telecom Regulatory Authority of India*)

### Telephone Subscriber Base

The Indian telecom sector is the second largest in the world in terms of the number of subscribers. The sector has witnessed exponential growth over the last few years as a result of factors including,

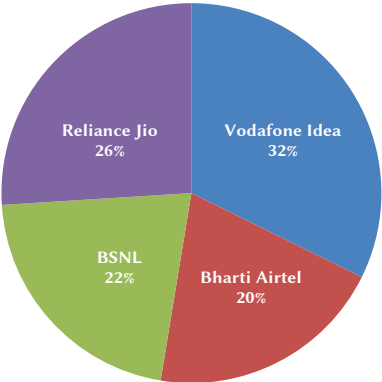
affordable tariffs, wider service availability, rolling out of new facilities and services such as 3G, 4G and 5G, evolving consumption patterns of subscribers and conducive regulatory environment.

In India, the urban telephone subscription increased to 665.38 million in March, 2024, which was 653.71 million at the end of March, 2023, and the rural subscription increased from 518.63 million in March 2023 to 533.90 million in March 2024. The annual growth rates of urban and rural telephone subscription base are 1.8 per cent and 2.9 per cent respectively. The overall tele-density in India has increased to 85.7 per cent at the end of March, 2024 which was 84.5 in March 2023. The Urban Tele-density decreased from 133.8 per cent in March 2023 to 133.7 per cent in March 2024. The Rural Tele-density has also increased from 57.7 per cent in March 2023 to 59.2 per cent in March 2024.

The total number of wireless subscribers in Kerala as on March,2024 is 4,22,57,239, of which Vodafone Idea (VI) has the largest number of subscribers with 1,36,45,704 followed by Reliance Jio with 1,09,83,541 subscribers. BSNL has 90,49,332 subscribers and Bharti Airtel (including Tata tele services) has 85,78,649 while Reliance communications has only 13 subscribers. The market share of various wireless service providers is given in **Figure 11.3.1**.

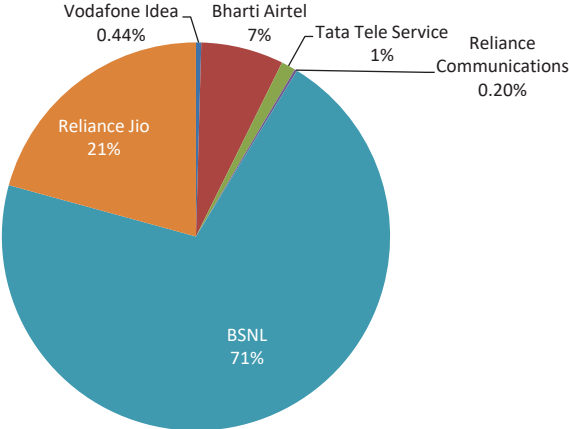
Total number of wire line subscribers in the State as on March, 2024 is 15,39,233. BSNL has largest wire line subscriber base of 10,86,029 connections, followed by Reliance Jio with 3,19,207 subscribers. Reliance communications is the telecom service provider with least subscriber base of 3,045 connections. The wire line market share of service providers is given in **Figure 11.3.2**.

**Figure 11.3.1** Market share of wireless service providers (Top four service provider), as on 31.03.2024



Source: Press Release, March, 2024, TRAI

**Figure 11.3.2** Market share of wire-line service providers, as on 31.03.2024



Source: Press Release, March, 2024, TRAI

## Internet Infrastructure

In the modern era, internet connectivity is as important as transport and energy facilities for industrial growth. In this age of the fourth industrial revolution, it is essential to ensure that quality data is being transferred quickly, as the State strives to become a knowledge economy and an innovation society. It was with this in view that Kerala announced internet as a basic right to its citizens, thus becoming the first State in India to do so. Kerala State Wide Area Network (KSWAN), Kerala Fibre Optic Network (K-FON) are notable initiatives of the Government towards the creation of modern, high-tech infrastructure for access to internet.

Core infrastructure for e-governance in the State consists of Kerala State Wide Area Network (KSWAN), Secretariat Wide Area Network, State Data Centre, State Service Delivery Gateway and public Wi-Fi project. KSWAN is the backbone of the State Information Infrastructure (SII), connecting Thiruvananthapuram, Kochi and Kozhikode and extending to 14 Districts and 152 block Panchayats and 63 Mini Service Stations/revenue towers of the State. The network will also connect 4,000 offices of Government departments through wireless and a large number through leased lines and Local Area Network. The major achievement of KSWAN is seamless integration with the State Data Centres (SDC1 and SDC2), providing various Government to Government (G2G), Government to citizens'(G2C) through a secure intranet.

### K-FON-The People's Internet

Kerala Fibre Optic Network (K-FON) is the flagship project of the State Government aiming to obviate the digital divide. The project is a complementary infrastructure to the existing telecom ecosystem in the State and is based on the principles of non-discriminatory treatment, as per the recommendations of TRAI. It essentially acts as an information super-highway through the creation of a robust core and middle-mile infrastructure. In due course, this model can lead the market forces to act and increase competition in providing better connectivity services to the citizens and will function as a strong foundation for all G2G, G2C, and B2C interactions. KIIFB has been approved an amount of Rs 1061.73 crore to the project K-FON in 2017-18. An amount of Rs 102.00 crore has been provided for activities coming under K-FON in the Budget 2023-24.

The phase I of the project is envisaged to provide internet connections to 30,000 Government institutions with a total fibre route length of 30,000 km and 375 point-of-presence (POP). The phase I of the project is nearing completion and 51,617 connections have been provided as on August 31, 2024. It is reported that up to November 30, 2024, 5,989 BPL families successfully received free internet connectivity through K-FON. As part of business plan, K-FON targeted 10,000 km Dark Fibre Connectivity and completed 6,996.41 km as on November 31, 2024. K-FON has already secured Infrastructure Provider (IP-1) registration and Internet Service Provider (ISP-B) licence for initiating the service part, from the Department of Telecommunications, Government of India.

### Internet subscriber data

The total number of internet subscribers in India stood at 954.40 million at the end of March 2024. The number of subscribers accessing Wireless internet connection constitutes the major chunk with over 914.13 million subscribers contributing to 95.8 per cent of the total number of internet subscribers while the wire line subscriber base is at 40.27 million which forms 4.2 per cent of the total number of internet subscribers (*Source*: The Indian Telecom Services Performance Indicators, March 2024, Telecom Regulatory Authority of India).

Kerala has 22,632 telephone towers and 1,14,326 Base Transceiver Stations (BTS). Reliance Jio has the largest service provider with 48,132 Base transceiver station, followed by Vodafone Idea 32,585 BTS. BSNL has only 12,179 BTS. Kerala Telecom circle serves the whole of Kerala State and the Union Territory of Lakshadweep and part of Puducherry (Mahe). The circle has 11 major Secondary Switching Areas (SSAs) and one minor SSA of Lakshadweep. 810 telephone exchanges are working under the Circle with an equipped capacity of 11,30,029 Direct Exchange Lines. Number of working connection under the circle is 97,49,296 (89,02,545 Mobile and 8,46,751 landline connections).The District-wise details of telephone network of BSNL Kerala as of August, 2024 are given in **Appendix 11.3.1**.

### Postal Network

Kerala Postal Circle includes the entire State of Kerala, the Union Territory of Lakshadweep Islands, and Mahe under the Union Territory of Puducherry. In Kerala, every village has at least one post office. As of August, 2024, there are



5,062 Post offices in the Circle, of which 1,508 are Departmental Post offices and the remaining 3,554 are Extra Departmental Post offices (Branch Post Offices). On an average, each post office in the State serves an area of 7.7 sq.km and a population of 6,613 as against the national average of 21.21 sq.km and a population of 7,175 people. 82.2 per cent of these Post offices are in the rural areas. The District-wise distribution of the post offices in Kerala as of August, 2024 is given in **Table 11.3.1**.

Given the vast reach of the network in the State, continuous efforts are being made to increase access to postal facilities in newly developed urban/rural areas by opening new post offices or by upgrading existing Extra Departmental

Post Offices (EDBOs) to full time post offices. Details of details the number of Post offices in the State over years and rural-urban divide, District/category-wise post office and District-wise details of area and population served by one Post Office in 2023-24 under the circle are given in **Appendix 11.3.2, 11.3.3, 11.3.4 and 11.3.5**.

Mail network in the State has been revamped with 14 speed post processing centres under 5 national hubs to facilitate technology induction for the purpose of monitoring and providing track and trace facilities from the point of booking to delivery thereby increasing the quality of service. In the category of registered mails too, track and trace facility are now offered to customers. As part of a

**Table 11.3.1** District-wise distribution of post offices, as of August, 2024

Sl. no.	Name of District/Union Territory	Number of Post Offices
1	Kasaragod	231
2	Kannur	382
3	Wayanad	163
4	Kozhikode	406
5	Malappuram	438
6	Palakkad	455
7	Thrissur	484
8	Ernakulam	391
9	Idukki	296
10	Kottayam	406
11	Alappuzha	300
12	Pathanamthitta	314
13	Kollam	368
14	Thiruvananthapuram	414
15	UT of Lakshadweep	10
16	UT of Puducherry (Mahe only)	4
<b>Total</b>		<b>5,062</b>

Source: Chief Post Master General, Kerala Circle, Thiruvananthapuram

**Table 11.3.2** e-based and value-added services of Kerala Postal Circle

Sl. No.	Type of Service	Functions
1	'e post'	Service to send a communication speedily to the destination avoiding physical transmission but retaining the last mile reach through the Postman. As on August 31st, 2024, 1344 post offices have been provided with this facility.
2	Many to One	This facilitates sending of same ePost message from many senders to one recipient on recipient's email box
3	One to Many	It facilitates sending of same ePost message from a sender to multiple recipients on recipient's email inbox

4	eMO	This service was introduced in 2008 for remitting money to and from addressees within the country. All the Head Post offices and departmental sub post offices in the circle are offering this service
5	e-payment	The service enables collection of bills including utility bills on behalf of various service providers from all the computerised post offices and payment centrally to the client organisation as per the periodicity desired by them. This service is available in all Head Post Offices and Sub Post Offices in Kerala Postal Circle.
6	International Speed Post or EMS	This is a facility that is available from India to 99 countries.
7	Direct Post	Direct Post is a product which allows establishments/firms to reach their present or prospective clients through targeted marketing. Any pamphlet, brochure, or hand bills can be sent as unaddressed mail to them under Direct Post and they will be delivered in areas where the target customers reside, based on a selection of locations by the post offices in consultation with the customer.
8	Parcel and logistic Services	Parcel business in India Post primarily focuses on accountable parcel services mainly Speed Post Parcel, Registered Parcel. Business parcel is a premium surface service to suit the requirement of business customers for an economical reliable distribution solution. Business parcel is available throughout the country. There are 35 parcel packaging units and 6 logistic post centres are functioning across the circle.

Source: Chief Post Master General, Kerala Circle, Thiruvananthapuram

national policy, the Circle has also revamped the network for processing ordinary mails to ensure better quality of service in this sector. The e-based and value-added services offered by Kerala postal Circle is given in **Table 11.3.2**.

**Table 11.3.3** Revenue earned from various postal services in Kerala Postal Circle, Rs in Lakh

Sl. No.	Category	Revenue
1	Parcel	2,125.89
2	International Speed Post	1,951.68
3	Media Post	12.35
4	Direct Post	16.82
5	e-post	14.81
6	e-payment	4.90
7	Logistics	8.64
8	Business post	82.57
9	Retail Post	27.07
10	Cable TV	17.36
11	National Pension System (NPS)	0.11
12	Sale of Publication	0.67
13	Bill mail service	1.86
14	Common Service Centres (CSC) Services	3.06
<b>Total</b>		<b>4,267.79</b>

Source: Chief Post Master General, Kerala Circle, Thiruvananthapuram

The Revenue earned from various postal services as on August 31, 2024 are given in **Table 11.3.3**.

Total revenue earned through various postal services is Rs 4,267.79 lakh. Out of this, Rs 2,125.89 lakh (49.8 per cent) revenue earned from parcel services followed by International Speed Post (Rs 1,951.68 lakh).

### Philately

As part of the efforts to promote philately as a hobby, various measures are being adopted by the Kerala Postal Circle. There are 45 “My Stamp Centres” in Kerala Postal Circle. Philately revenue in 2023-24 was Rs 1.57 crore and revenue earned up to 31 August 2024 is Rs 39.53 lakh.

District-level Philatelic exhibition PALMPEX 2024 was conducted at Palakkad District from January 10 to 14, 2024 and conducted District-level Philatelic exhibition PERYIARPEX 2024 at Ernakulum District from November 6 to 7, 2024.

### India Post Payment Bank (IPPB)

India Post Payment Bank (IPPB) is the first payments bank in India to be added in Schedule 2 of RBI Act 1934, thus obtaining the status of Scheduled Bank. With the launch of Aadhaar Enabled Payment System (AEPS) services, IPPB has become the single largest platform in the country for providing interoperable banking services to the customers of any bank by leveraging the last mile unprecedented reach of the Postal

network. Accounts opened were 81,609 IPPB from April 1, 2024 to August 31, 2024. Out of this, 51,018 are male account holders and 30,591 are female account holders.

### **Life Insurance**

India Post provides insurance coverage to the citizens through Postal Life Insurance (PLI) and Rural Postal Life Insurance (RPLI). Postal Life Insurance is an insurance scheme offered to employees of the Central and State Governments, Defence Personnel, Local Governments, State PSUs and scheduled/commercial banks. Now, this has been extended to the teaching/non-teaching staff in all private educational institutions and Professionals. Kerala Postal Circle has initiated a special campaign to empower the women, by way of insuring their lives with Rural Life Insurance. The numbers of women policyholders are more than the number of male policyholders (Total number of male policyholders in Kerala Circle in 2023-24 and up to August 31, 2024 is 1,19,325 and that of female policyholders is 1,38,451).

## 11.4 DRINKING WATER

The availability of safe and reliable water and the reduction of the risk and impact of water-related disasters are critical for social wellbeing, economic stability, and sustainable development. With more areas than before facing water shortage and drought, saving water and using it more efficiently is an urgent policy objective.

The United Nations World Water Development Report 2024: Water for Prosperity and Peace highlights the wider significance of water for our lives and livelihoods. It explores water's capacity to unite people and serve as a tool for peace, sustainable development, climate action and regional integration. Food security, human health, urban and rural settlements, energy production, industrial development, employment and economic growth, and ecosystems are all water-dependent and thus vulnerable to the impacts of climate change.

The National Institution for Transforming India (NITI) Aayog has developed the Composite Water Management Index (CWMI) to enable effective water management in Indian States. A report by NITI Aayog, CWMI- 2019, says that India's urban population is expected to reach 600 million by 2030, and fulfilling its water needs will be a great challenge. According to the report, India is the home to 17 per cent of the world population, but has only 4 per cent of the world's fresh water resources.

Kerala is perceived to have a higher water demand

than the national average because of established social norms and a demand for better hygiene and sanitation. According to Census 2011, 62 per cent of the population uses wells as their main drinking water source, while 29 per cent of the population has access to piped water-supply. In terms of accessibility, 78 per cent households have a water source within the premises and 14 per cent households use water sources near the premises. State sanitation coverage, based on Census 2011, showed that 67 per cent households had toilets and 95 per cent had a toilet facility within the premises. As on August 31, 2024, 68.33 per cent population of Kerala had been covered with piped water supply (including public taps) of Kerala Water Authority (KWA).

Drinking water sector is given much importance in Kerala as water remains pivotal for sustainable development and is linked to several local and global challenges. Apart from the scarcity of water, there are many other challenges in providing a safe, adequate and reliable water supply in many parts of the world. Water conservation is essential for sustaining a healthy ecosystem and promoting sustainable development. It is imperative to reduce water usage, while also prioritising its reuse and recycling. The 14th Five Year Plan Working Group on Drinking Water and Sewerage aims to outline a clear roadmap for the development of water and sanitation sector in the State as well as to improve its position with respect to the Composite Water Management Index (CWMI) ranking. Specific targets are identified under drinking water

supply, sewerage, water conservation and revenue improvement during the 14th Five Year Plan Period.

The Kerala Water Authority (KWA) and Kerala Rural Water Supply and Sanitation Agency (KRWSA) are the major implementing agencies in drinking water and sanitation sector. Local governments also play an important role.

### **Kerala Water Authority (KWA)**

KWA was established in 1984 under the Kerala Water Supply and Waste Water Ordinance, 1984 by converting the Public Health Engineering Department (PHED) for the development and regulation of water supply and waste water collection and disposal in Kerala. Its major functional units are operation and maintenance, projects, project planning and development, quality control, consultancy and sewerage verticals.

The KWA has an elaborate water quality control setup with a State Referral Institute at Kochi and has 14 District labs and 71 sub divisional labs. KWA labs (84) have obtained NABL (National Accreditation Board for Laboratories) recognition conforming ISO/IEC/17025:2017 standards.

### **Sewerage**

KWA has the mandate for collection and disposal of waste water. The same has been carried out only in Thiruvananthapuram and in Kochi Corporations to some extent. Presently, the main activities taken up under this head include enhancement of undersized lines to the desired size, repairing damaged manholes so as to avoid overflow of sewage and providing sewerage facility to areas by minor extensions where no other source of sewerage disposal system exist. In order to overcome the threat of environmental damages, adequate attention is essential for strengthening the existing sewerage system. The need for more focused attention in sewerage sector is essential. However, issues related to funds, public protest against sewage plants and pump houses, delay in getting land and sanctions for road cutting have to be addressed before taking up sewerage projects. KWA envisages new small-scale projects sufficient for 2 to 3 ward clusters. Latest technologies incorporating the reuse of treated effluent as specified by National Green Tribunal (NGT) is proposed to be used in these projects. Maintenance and up gradation of the existing plant and sewerage network is also a necessity. For small schemes,

land is to be made available and awareness is to be created among the public regarding the necessity by the local bodies for sewerage/septage work to be taken up.

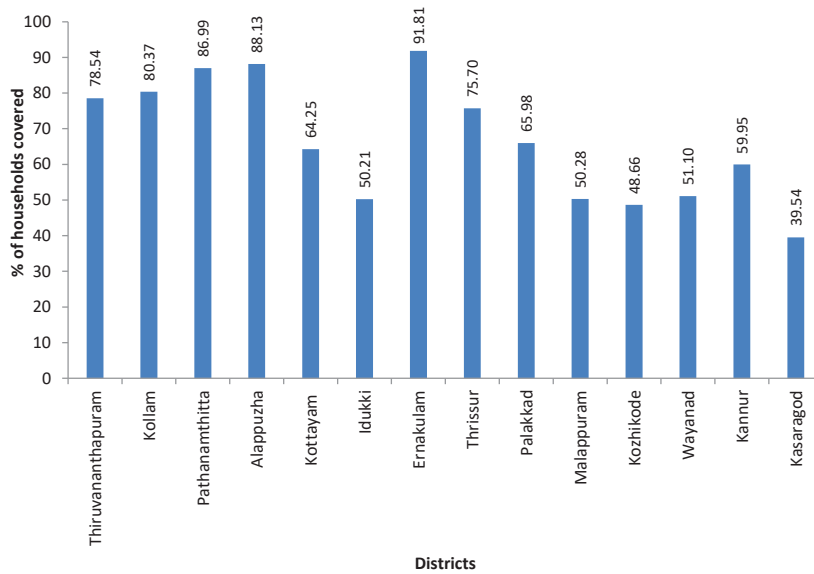
During the period from April 2023 to August 2024, 21 works which include replacing the old sewer lines, extension of sewerage network, rehabilitation of old manholes and construction of new manholes were completed. The total expenditure incurred in 2023-24 was Rs 2211.96 lakh.

### **Water Supply Coverage**

KWA, operates and maintains 923 Water Supply Schemes producing 3332 MLD in operation as on September 13, 2024. KWA, through its 44.66 lakh connections and 1.08 lakh public taps provides water supply to nearly 2.54 crore people in Kerala. The average per capita availability of piped water is 94.76 litres per capita per day (the lpcd is varying in different habitations in all the districts). It has made remarkable progress in the rural and urban water supply sectors, commissioning various Water Supply Schemes implemented with the help of Central/ State Government grants and Schemes (JJM, NABARD, State Plan, National Rural Drinking Water Programme (NRDWP), KIIFB, AMRUT, RKI). Projects worth more than Rs 19,700 crore are in various stages of implementation. On completion of these projects 1,400 MLD (million litres per day) of water will be additionally available for distribution in the next three years. In 2023-24, 13 new works have been sanctioned under AMRUT 1.0 amounting to Rs 63.42 crore and 26 projects amounting to Rs 564.08 crore have been started in 2023-24 under AMRUT 2.0. Three projects under State Plan, 2 projects under NABARD, 1 project under RKI and 2 water supply projects and 1 replacement work under KIIFB were completed in 2023-24. As on August 31, 2024, 68.33 per cent population of Kerala has been covered with piped water supply (including public taps) from the existing KWA schemes ( 64.54 per cent in ruraland 81.13 per cent in urban).

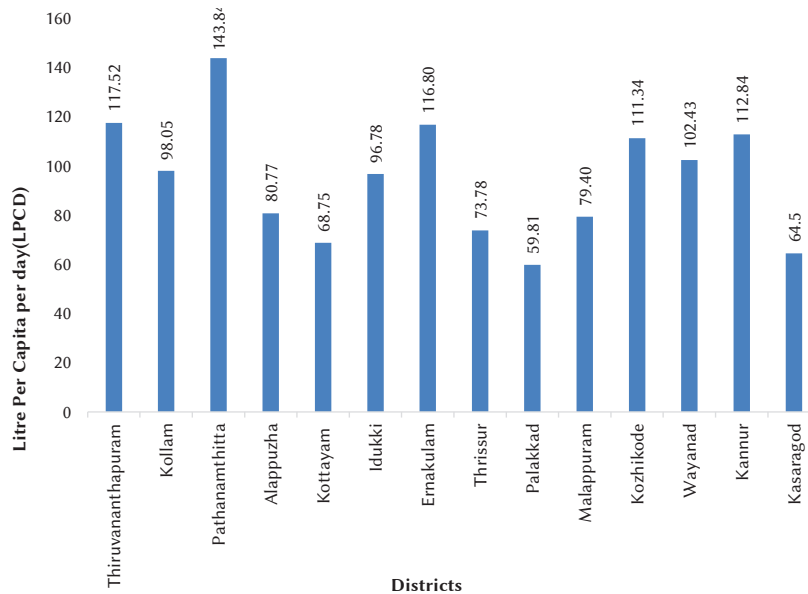
District-wise percentage of households covered by water supply schemes as on August 31, 2024 is shown in **Figure 11.4.1**. Ernakulam District with coverage of 91.81 per cent population shows highest coverage among 14 districts of Kerala, followed by Alappuzha District (88.13 per cent).

**Figure 11.4.1** District wise Proportion of Households covered by Water Supply Schemes as on August 31, 2024



Source: KWA

**Figure 11.4.2** District wise per capita water availability as on August 31, 2024



Source: KWA

In Kasaragod, the coverage is the least (39.54 per cent). Details are given in (Appendix 11.4.1). District-wise and category-wise analysis shows that Ernakulam has the highest number of water supply schemes (96) and Wayanad has the least (23). Kozhikode has the highest number of urban water supply schemes (15) while Pathanamthitta, Palakkad and Wayanad have the lowest number (2) as on August 31, 2024 (Appendix 11.4.2).

KWA distributes water through house service connections (HSC) and street taps. The total number of domestic, non-domestic (including special connections), and industrial connections is 42,72,284; 1,92,555 and 2,150 respectively as on August 31, 2024. Out of the total 1,08,688 street tap connections, 73,524 are in Panchayats, 23,352 in Municipalities, and 11,812 in Corporations (Appendix 11.4.3) as on August 31, 2024. The total

number of rural water supply schemes of KWA transferred to local bodies as on March 31, 2024 is 700 and the total population coverage in all the 14 Districts is 11,04,360. District-wise details of water supply schemes transferred to Local Governments are given in (Appendix 11.4.4). As per District-wise water availability data as on August 31, 2024 shown in Figure 11.4.2, Pathanamthitta District has the highest availability (143.84 lpcd) and Palakkad has the lowest availability (59.81 lpcd) (Appendix 11.4.5).

### Revenue

The major income for KWA is from the sale of water and Kerala is the only State in the country with 100 per cent metered water connections. The water tariff is uniform across the State with block tariff structure (increasing rate with increasing consumption). The total revenue collected in 2022-23 was Rs 806.21 crore against the demand including fine of Rs 1035.41 crore and that in 2023-24 was Rs 1165.7 crore against the demand including fine of Rs 1694.34 crore. As per the current tariff, the minimum rate for domestic connections is Rs 14.41/KL upto 5000 liters, for non-domestic connections is Rs 26.54/KL upto 10,000 liters, for industrial connections is Rs 54.10/KL and for bulk supply Rs 16.62/KL.

Out of 45.75 lakh consumers (including street taps), 42.72 lakh connections come under domestic category (93.37%) and 1.94 lakh consumers belong to non-domestic/industrial/special categories. Moreover, KWA is providing water through 1.08 lakh street taps. KWA is supplying 15,000 litres of drinking water per month free of cost to about 6.03 lakh BPL families in the State which cost Rs 57.30 crore in 2023. In 2023-24 and 2024-25 (up to August 31, 2024) revenue from water charges of domestic, non-domestic and industrial schemes was Rs 1,03,127 lakh and Rs 42,434 lakh respectively and that from street taps was Rs 13,447 lakh and Rs 4,313 lakh respectively (Appendix 11.4.6).

### State Plan Schemes

#### 1. Addressing the issues of water supply in rural areas:

To address the water supply challenges in rural areas, several programmes and schemes have been implemented. The two major schemes include: NABARD Assisted Rural Water Supply Schemes

(Rural Infrastructure Development Fund) and scheme for rural water supply. With the loan assistance from NABARD, KWA implements water supply schemes in the rural areas of Kerala. Out of the total 14 projects sanctioned, 2 projects (1) WSS to Mangattidam Zone III in Mangattidam Panchayath of Thalassery Taluk of Kannur District and (2) WSS to Nedumpuram, Niranam, Kadapra and Peringara Panchayath of Pathanamthitta district were completed during 2023-24.

As on April 1, 2020, only about 34 per cent of rural households have piped water supply. More emphasis has been given to improve the water supply coverage in rural areas with the launch of Jal Jeevan Mission which aims to provide piped water supply to all households within two years. New rural schemes, completion of ongoing rural schemes, and revamping of existing schemes are being implemented under rural water supply scheme. During the period from April 2023 to August 2024, five projects have been completed and Rs 1438.22 lakh was expended in 2023-24.

#### 2. Addressing the issues of quality of service and efficiency in implementation of water supply schemes:

There is a growing need to improve the quality of water services delivered by existing water supply schemes, including ensuring reliable access to clean water and optimizing the operational efficiency of these schemes to minimize waste and maximize resource utilization.

The major schemes include renovation of existing civil structures owned by KWA, innovative technologies and modern management practices, human resource development, research & development and quality control, water supply scheme to specified institutions/locations and optimisation of production and transmission. The major aim of renovation of existing civil structures is to renovate the structures which are in damaged condition because of lack of timely repair, protection and renovation. During the period from April 2023 to August 2024, 34 works which include maintenance of office buildings, guest houses, tanks and pump houses located in various districts have been completed.

Innovative technologies and modern management practices aim at improving network coverage, reducing non-revenue water (NRW) in water

supply system which in turn creates an efficient water supply system with minimum O&M expenses and maximum revenue generation. During the period from April 2023 to August 2024, 9 works were completed which included the installation of solar panels in the roof top of KWA building, automation of pump houses, installation of surveillance camera and flow meters. Optimisation of production and transmission ensures uninterrupted water supply, reduction of water loss from leakage and breakage and energy conservation. As many as 86 works were completed in 2023-24 and 2024-25 (as on August 31, 2024) which include renovation of old water treatment plants, pipe replacement of existing WSS, pipe line extensions and replacement of obsolete pumps and motors. The performances of the schemes were improved and the output was enhanced by such works. The total expenditure in 2023-24 was Rs 2713.85 lakh.

Human Resource Development (HRD), Research and Development (R&D), and Quality Control are all integral functions that contribute to the enhancement and advancement of overall performance. For the timely execution of large projects and maintenance of new high-tech systems, the engineers and other staff need to be updated and equipped with modern project management practices and tools. In 2023-24, 2794 officials were trained. Thirty-six candidates had cleared plumbing license examination conducted in 2023-24.

Water Supply Scheme to specified institutions/ locations is designed to ensure a continuous water supply to designated institutions and locations, including Medical Colleges, Taluk Hospitals, District Hospitals, rural schools, and other educational institutions. It also covers the provision of water to government institutions such as Civil Station compounds, prisons, and correction homes. In 2023-24, one work was completed viz. providing water connection to Mahatma Ayyankali LIFE Bhavana samuchayam at Venganoor Panchayath, under Water Works section Vandithadam.

### **3. Addressing the issues of Urban Water Supply Schemes:**

Kerala Water Authority is the major service provider both in urban and rural areas. The major schemes include rehabilitation and

improvement work of urban water supply scheme, ADB Assisted Kerala Urban Water Supply Improvement Project (KUWSIP). Rehabilitation and Improvement Work of Urban Water Supply Scheme is to achieve 100 per cent coverage in urban areas, taking up of new schemes in uncovered Urban Local Bodies (ULBs) and laying distribution systems in schemes where production components are completed. Seven works in 2023-24 and 7 works in 2024-25 (as on August 31, 2024) were completed and the total expenditure in 2023-24 was Rs 2663.02 lakh.

ADB Assisted Kerala Urban Water Supply Improvement Project (KUWSIP) aims at improving the water supply in Kochi and Thiruvananthapuram Corporations by rehabilitating the old production components and the supply networks. The project envisages achieving 24 x 7 water supply in the above areas by considerable reduction of Non-Revenue Water (NRW) and overall improvement of efficiency.

### **4. Addressing the issues of Water conservation:**

Traditional knowledge and water conservation techniques will help in source protection, augmentation as well as creation of new sources. The objective of works undertaken in source improvement and water conservation is to ensure that sufficient water is available at the source in summer and drought season and enhance storage capacity of water sources. In 2023-24, several works for strengthening the source and increasing the storage capacity were undertaken. By this activity, the water stress in summer could be mitigated to a large extent. Five works were completed in 2023-24 and for that an expenditure of Rs 174 lakh has been made.

Drought relief activities and unforeseen emergency interventions are undertaken under the scheme 'Drinking water-Drought mitigation'. Besides natural calamities, emergency situations of calamitous proportions such as damages to properties in case of large diameter pipe bursts, damages to water supply installations and water supply to emergency relief camps during natural calamities are also taken up under this scheme. Pipeline extensions to drought-hit areas, additional pumping and capacity enhancement during drought period are also included. Works completed (35 in numbers) and an expenditure of Rs 648.89 lakh was made out of the budgeted outlay of Rs 1000.00 lakh in 2023-24.



## 5. Addressing the issues of water quality and ensuring safety in operations

To address water quality concerns and ensure operational safety, key strategies include: conducting regular water quality monitoring, implementing effective treatment processes, maintaining the integrity of infrastructure, educating employees on safe water handling practices, and actively managing potential contamination sources through source control measures. The schemes include infrastructure development and surveillance activities under quality control wing of KWA, energy efficiency improvement, optimization of electromechanical items, safety audit and ensuring safety in operation of WTPs and pumphouses.

Surveillance and monitoring of the quality of water supplied through various water supply schemes is being carried out by the Quality Control Wing of KWA. The quality of water in river sources, wells,

private samples etc are also been tested in the labs under the Quality Control Wing. All the 14 districts have district level laboratories and have obtained NABL accreditation. In 2023-24, nine works have been completed.

Pump houses and water treatment plants are vital infrastructure for ensuring human and environmental health. They play a crucial role in providing society with clean, safe water. Defects in operation, structural instability, chemical exposure, and work fatigue are all potential risks. ISO certifications for plants require modern practices involving proper attire and safety equipments. As an effort to increase the safety, Personal Protection Equipments are to be procured and provided to workplaces. Installation of CCTV cameras in WTPs and pumphouses of KWA are also recommended to ensure safety. In the year 2023-24 and 2024-25(as on August 31, 2024) eight works have been completed.

### Box 11.4.1 Major Digital Initiatives of KWA

- **LSGD Work Tracking system:** The Local Self Government Department (LSGD) work tracking system meant for tracking the life cycle of work orders provides real-time status updation for each task and generates reports for administrative review and decision-making. It also maintains historical records of completed works.
- **Palm- Held Machines:** Billing application to be loaded in the palm held machines are being developed by K DISC and is nearing completion.
- **e-Tapp** added an option to provide a non-feasibility certificate to water connection applicants.
- **BPL Application:** New online application launched for inviting BPL applications from eligible consumers. Around 10 lakh consumers applied through this new application this year.
- **eAbacus:** Many changes in sewerage reports, revenue recovery reports and BPL reports have been incorporated as per request from Revenue Monitoring Cell (RMC) and field officers. Centralized Billing for all Government Departments has been implemented.
- **e-Payment system:** Bharat Bill Payment System(BBPS) which is directly integrated with National Payment Corporation of India (NPCI) has been done. This enables consumers to pay water charges through UPI in real time.
- **GIS related:**
  1. **KWA Asset Mapping and Monitoring:** KWA is implementing GIS to map and monitor its extensive water distribution network. This includes mapping of pipe lines and other assets, which enhances the accuracy of the water distribution data. This system aids in tracking of overall asset management, improving the efficiency of operations. About 2000 KM of pipeline data has been collected.
  2. **PM Gati Shakti-** National Master Plan: GIS cell is currently handling the uploading of GIS data in PM Gati Shakti as the nodal office.

**AQUALOOM:** The existing consumer complaint redressal system – AQUALOOM used for registering complaints has been revamped to include the complete workflow from registering to status check facility. By using this system, fast action and solution on complaints are achieved. More than two lakhs complaints received in AQUALOOM so far. From this, 95% complaints has been resolved.

Source: Kerala Water Authority (KWA)

## **Enterprise Resource Planning (ERP), E-governance, GIS and Information Management**

This scheme aims to develop a well-equipped web-based management system in KWA. In 2023-24, KWA stepped into major milestones in the IT roadmap of the organisation. The remarkable achievements are briefed in **Box 11.4.1**.

### **KIIFB Projects**

Government of Kerala (GoK) had accorded sanction for 77 drinking water projects of KWA under KIIFB. Approval has been given for funding of 77 projects for an amount of Rs 5398.4 crore. This includes 66 water supply projects amounting to Rs 4968.14 crore and replacement of transmission mains in 11 circles (Thiruvananthapuram, Kollam, Pathanamthitta, Kottayam, Muvattupuzha, Kochi, Thrissur, Palakkad, Malappuram, Kozhikode and Kannur) for an amount of Rs 430.23 crore. Of this, 23 water supply projects amounting to Rs 779.29 crore and 48 replacement works amounting to Rs 151.67 crore have so far been completed.

### **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**

#### **AMRUT 1.0**

Under AMRUT 1.0, works to the tune of Rs 1376.62 crores (204 works) in Water Supply and Rs 246.18 crores (131 works) in Sewerage sector have been sanctioned, out of which 167 Water Supply projects and 103 Sewerage projects amounting to Rs 978.62 crore have been completed. Balance works are in progress.

75 MLD WTP at Aruvikkara, 5 MLD Sewage Treatment Plant at Thiruvananthapuram Medical college, 20 MLD WTP at Peechi, 45 MLD WTP at Malampuzha in Palakkad district, 5 MLD STP at Elamkulam in Kochi, etc are the major works completed under AMRUT 1.0. 100 MLD WTP at Vasoorchira and 12 MLD Sewerage Treatment Plant at Kureepuzha in Kollam district are nearing completion. All works are proposed to be completed in December 2024.

#### **AMRUT 2.0**

Government of India (GoI) has launched AMRUT 2.0 for providing universal piped water supply with household water tap connections. AMRUT

2.0 target is to provide universal coverage of Water Supply in all 4800 statutory towns and 100 per cent Sewerage/Septage management in 500 AMRUT cities. In Kerala, 93 ULBs are to be provided with universal coverage of water supply and nine AMRUT cities sewerage/septage management with total outlay of around Rs 3500 crore. Out of which Rs 2449.56 crore is for water supply and Rs 902.16 crore for sewerage/septage management and the balance amount is assigned for rejuvenation of water bodies and developing green spaces and park projects. Administrative Sanction (AS) has been received for first and second tranche for an amount of Rs 1798.11 crore for 187 water supply projects under various ULBs. Also under sewerage sector, for improving sewerage facilities, AS has been received for Rs 492.87 crore, for 26 works in four corporations viz. Thiruvananthapuram, Kollam, Kochi and Kozhikode. The project period is 5 years from 2021-22 to 2025-26. (*For more details see chapter on Local Governments and Decentralised Planning*)

### **Rebuild Kerala Initiative (RKI)**

Under Rebuild Kerala Initiative (RKI), 17 water supply projects have been sanctioned for an amount of Rs 303.75 crore. They include construction of new reservoirs, distribution system, new water connections and rehabilitation of existing distribution system, new intake well and Water Treatment Plant under water supply sector. Preparation of Detailed Project Report (DPR) for rehabilitation of existing system and providing sewerage/septage management system for Thiruvannthapuram Corporation, energy optimisation and replacing the inefficient pumping system, Topographical Survey in 28 Selected ULBs and 7 new ULBs for DER Preparation, Automation of Rural Pump houses, Networking in Kochi -Elamkulam STP etc. are also included under RKI works.

Among the above RKI works, Water Supply Scheme(WSS) to TV Puram Panchayath in Kottayam district, WSS to Erumeli Panchayth in Kottayam District, WSS to Cheranalloor panchaytah in Kochi, construction of dilution tank for septage treatment at Chakkamkandam and study on energy optimization and replacing the inefficient pumping system and DER preparation works have been completed. All other works are in different stages of execution.

### Japan International Cooperation Agency (JICA) Assisted Kerala Water Supply Project.

JICA assisted Kerala water supply project envisages the implementation of five water supply schemes in Thiruvananthapuram, Meenad, Cherthala, Kozhikode and Pattuvam.

All the five projects have been commissioned and water supply is ensured to the beneficiaries. The distribution networks envisaged for Thiruvananthapuram, Cherthala and Pattuvam have been completely laid. The rehabilitation works of two WTPs at Thiruvananthapuram are also completed. For Kozhikode and Meenad Schemes, all components except a part of distribution system have been completed and schemes partially commissioned. The project will benefit a population of about 41 lakh in 5 districts viz, Thiruvananthapuram, Kollam, Alappuzha, Kozhikode and Kannur.

### Jal Jeevan Mission (JJM)

Jal Jeevan Mission (JJM) is a project of Government of India envisioned to provide safe and adequate drinking water through individual Functional Household Tap Connections (FHTC) within two years to all households in rural India. The mission aims to ensure that every rural household has drinking water supply in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural

communities. In Kerala, the share of Central and State Governments is 50:50. Out of the 50 per cent State share, 15 per cent is to be borne by the Panchayat and 10 per cent should be ensured as beneficiary contribution. The financial progress of Jal Jeevan Mission (JJM) since its inception is shown in **Table 11.4.1**.

The total fund utilized under JJM including the State matching share during the period from 2019-20 to 2024-25 was Rs 10727.87 crore. In 2023-24, the total fund utilized under JJM including the State matching share was Rs 2,913.94 crore. Kerala provided 3,52,208 rural household connections under JJM in 2023-24. Under JJM 20,38,569 FHTCs were provided till date (September 30, 2024).

### Jalanidhi

Kerala Rural Water Supply and Sanitation Agency (KRWSA) was constituted as a special purpose vehicle to implement Jalanidhi, a World Bank Aided project. KRWSA has successfully implemented two phases of Jalanidhi project, ie, Jalanidhi Phase-1 during 2000-2008 and Phase-2 during 2012-2019. The Gram Panchayats have a key role in implementing community based water supply projects under Jalanidhi. KRWSA has also established a wide network of NGOs in mobilising communities towards implementing the participatory, community driven water supply and sanitation facilities owned and managed by them. This model of scheme implementation

**Table 11.4.1** Financial Progress of JJM as on November 11, 2024 (Rs. in crores)

Year	JJM allocation*	Opening Balance	Release by GoI (central share)	Release by GoK (state share)	Total funds available	Expenditure (central share)	Expenditure (state share)	Total expenditure (central and state share)
2019-20	497.52	---	101.29	101.29	202.58	62.26	57.23	119.49
2020-21	808.84	77.69	303.18	303.18	684.05	304.29	311.25	615.54
2021-22	3609.18	61.08	1353.44	1353.44	2767.96	957.44	1059.57	2017.01
2022-23	4413.08	750.95	2206.56	1616.28	4573.78	1740.74	1740.79	3481.53
2023-24	2653.40	1090.17	671.18	1207.15	2968.50	1465.41	1448.53	2913.94
2024-25	3853.23	54.56	974.68	571.16	1600.40	790.18	790.18	1580.36
<b>Total</b>	<b>15835.25</b>		<b>5610.33</b>	<b>5152.5</b>		<b>5320.32</b>	<b>5407.55</b>	<b>10727.87</b>

Source: Kerala Water Authority(KWA)

\*Only allocation based on GoI allocation. But not fully released

under Jananidhi has demonstrated successfully an equitable, inclusive and decentralised delivery system mainly benefiting the SC, ST and BPL category of rural households in Kerala.

KRWSA is also the nodal agency of the State Government for the implementation of rain water harvesting programme in the State. Rain Centre functioning as part of KRWSA was constituted in 2004 to promote rain water harvesting (RWH) and ground water recharge (GWR) activities in the State. The programme is well accepted by the people in the State, especially those who are living in hilly, coastal and remote areas with limited access to potable water. Several Grama Panchayats, particularly those in hilly and coastal regions, are actively adopting rainwater harvesting as a technological solution to address their drinking water challenges. As on August 31, 2024, KRWSA completed 11,616 rain water harvesting structures of 10,000 litre capacity and 2,936 open well recharge structures under the plan head. Presently KRWSA is also an implementing Agency for the central flagship programme “Jal Jeevan Mission”. The concept and implementation procedures followed in Jal Jeevan Mission are very much similar to the Jananidhi model implemented in Kerala.

District wise details of water supply connections of Jananidhi as on August 31, 2024 are given in **Table 11.4.2**.

**Table 11.4.2** District-wise details of Water Supply Connections of Jananidhi as on August 31, 2024

Sl.No.	District	Domestic Connections
1	Thiruvananthapuram	4,572
2	Kollam	22,663
3	Pathanamthitta	5,977
4	Alappuzha	0
5	Kottayam	55,879
6	Idukki	41,503
7	Ernakulam	2,173
8	Thrissur	66,589
9	Palakkad	50,771
10	Malappuram	95,583
11	Kozhikode	51,110
12	Wayanad	40,875

13	Kannur	24,416
14	Kasaragod	22,968
<b>TOTAL</b>		<b>4,85,079</b>

Source: KRWSA

### Project Achievements

Jalanidhi has made remarkable achievements in the fields of project preparation, design, quality of entry, implementation arrangements, monitoring and evaluation, compliance with environmental and social safeguards, fiduciary management and procurement. KRWSA had implemented 5884 schemes in Phase-1&2 projects covering 227 GPs benefiting 4.52 lakh households- 1.04 lakh individual latrines, 24,194 latrine conversion, 96,703 environment management plan units (soak pits, compost pits, vermi composting units etc ) and installation of 1,916 bio gas units. The schemes in Phase 1 have been operational for more than 20 years. KRWSA also popularized rain water harvesting programme in the state by constructing nearly 40,000 rain water harvesting structures both under plan scheme and Jananidhi Phase 1 and 2 put together.

Considering the district-wise rural population covered by the water supply schemes of Jananidhi, Thrissur has the highest (26.32 per cent) coverage. Kozhikode has the highest number of schemes (1,052) while Alappuzha has no scheme. A total of 23,51,625 rural population are covered by 5,903 schemes of Jananidhi (as on August 31, 2024). Out of the total 4,85,079 water supply domestic connections as on August 31, 2024 Malappuram has the highest number 95,583 followed by Thrissur with 66,589 connections. As per Jananidhi project guidelines, after commissioning of schemes, entire operation and maintenance management has to be done by beneficiary groups. Hence, water rates vary from scheme to scheme, as decided by the respective scheme management committee. The average cost per household per month charged for 10,000 litres is Rs 100 in most of the schemes. The lpcd water availability of water supply schemes of Jananidhi in all the Districts is 70 lpcd.

In order to ensure sustainability of investments made, Government of Kerala has introduced a project named “Sustainability support to community managed water supply schemes” to reinstate all partially or fully defunct community driven schemes to functional schemes and

allocated budget provision from 2018 onwards. KRWSA could reinstate 1,303 schemes as on August 31, 2024 under this project. Restoration works are ongoing in another 353 schemes.

Conversion of domestic wells into protected and sustainable drinking water sources is highly

important to protect the traditional water sources to ensure future water security. The dug wells are excellent means of ground water recharge and if properly protected and recharged wells can serve as a reliable source of drinking water and at the same time replenish the decreasing ground water table. A total of 398 domestic wells have been

#### **Box 11.4.2 Interventions of Jananidhi in Grey Water Management**

##### **1. Grey Water Management in Marayoor Grama Panchayath, Idukki District**

Jananidhi has initiated a programme to provide technical support to Gram Panchayats (GPs) for establishing greywater treatment and management systems in tribal hostels, residential schools, and colonies. The objective is to treat greywater using physical and biological methods, employing cost-effective and less sophisticated technologies acceptable to the beneficiaries.

Collaborating with Grama Panchayats, Jananidhi identified specific areas or “Hotspots” for intervention. In 2022-2023, KRWSA’s Idukki Regional Unit identified Kanthalloor and Marayur Grama Panchayats for the pilot implementation. Marayoor Grama Panchayat, particularly the Babu Nagar colony, became a focus area. Initially planning a comprehensive greywater management system with a sewage treatment plant for all households, the high cost prompted a shift to an individual household level approach under the Swachh Bharat Gramin programme, using the “Magic Pit” technology.

Despite initial challenges and drainage issues in the colony, the proposal was discussed and approved by the Marayoor Grama Panchayat. The construction of Magic Pits for around sixty households commenced in November 2023, concluding within the month. Extensive awareness programmes and hands-on training were conducted, resulting in a positive response from the households. Residents are now content with the technical aspects and construction quality, addressing their greywater issues effectively. Marayoor Grama Panchayat is now expressing the need for more systems in vulnerable areas and proposing the scaling up of the programme.

##### **2. Grey Water Management in Tribal Hostels of Wayanad district-**

A significant step towards this endeavour has been the installation of a Grey water treatment and management system in the hostel attached with the Rajiv Gandhi Memorial Residential Higher Secondary School, situated in the Noolpuzha Grama Panchayat of Wayanad District. Equipped with a canteen facility, the hostel faced challenges related to wastewater generated from bathrooms, the kitchen, and the canteen. This wastewater was previously drained into a nearby canal, adversely affecting the health of inhabitants and contributing to waterborne diseases. Furthermore, it caused pollution in nearby water bodies, prompting local residents to raise concerns and protests against the unaddressed wastewater issues.

In response to this critical situation, KRWSA has proposed the implementation of a Decentralized Wastewater Treatment System (DEWATS). The hostel and canteen collectively generate 20,000 liters of wastewater per day. The system involves the collection of wastewater from the residential hostel and canteen in a settler tank. Subsequently, it is conveyed to an anaerobic baffled reactor (ABR) and then to an anaerobic filter (AF). The treated water then passes through a horizontal plant gravel filter (HPGF) before being collected in a chamber. An automatic pumping system is installed to irrigate plants and vegetables cultivated in the vicinity. The DEWATS unit, with dimensions of 19 meters in length and 3 meters in width, boasts a capacity of 15 m<sup>3</sup>/day.

This holistic approach not only addresses the immediate environmental concerns but also empowers the local community by involving them in the ongoing maintenance of the wastewater treatment system.

Source: KRWSA/Jananidhi

protected and converted into sustainable drinking water sources with rain water recharge system as on August 31, 2024.

One of the major issues facing the community managed small water supply schemes is the absence of a mechanism to regularly test and monitor water quality. Being a public water supply, though small in capacity, needs regular monitoring and timely mitigation in case of water quality issues. Absence of waste water collection, treatment and disposal is emerging as a major threat to public health in the State. The grey water collected from the households can be treated and reused for gardening and other non – domestic purposes. The reuse of grey water in the region of implementation will solve many problems related to water scarcity and will lead to the saving of financial resources which in turn helps to support the water economy. As on August 31, 2024, 65 water quality mitigation units out of 90 planned have been commissioned, along with 2 grey water management systems out of 9 that were undertaken. In 2022-2023, KRWSA has implemented institutional grey water in two tribal hostels. Among this, one completed viz. Grey Water Management in Tribal Hostels-Noolpuzha Grama Panchayat of Wayanadu District and one in Edavaka Grama Panchayat is in final stage of completion. Moreover one community grey water management in Marayoor Grama Panchayath, Idukki District has also been completed. Interventions of Jananidhi in grey water management is shown in **Box 11.4.2**.

KRWSA have achieved a milestone by implementing a solar-based pumping system in community-managed water supply schemes. This innovative system has been successfully piloted in the tribal areas of Noolpuzha Grama panchayat in Wayanad district, specifically in Alathur and Rampilly regions, both inhabited by tribal communities.

Water literacy promotion programme is the only way to promote water conservation and water quality improvement in our state. The state government as well as Local-Self Governments have given high priority for water conservation. Water literacy campaign should start from school. Jalasree clubs organize a variety of activities including campaigns, surveys, camps, field trips, and rallies, all focussed on water conservation. The club also engage in practical water quality testing in

homes and surrounding areas, further reinforcing the importance of safe drinking water and hygiene. The Jalasree Club focuses on the development of life skills and mobilisation of parents, communities, governments and institutions to work together to improve ground water level by water conservation techniques and also to improve hygiene and environmental sanitation by promoting best practices. Presently KRWSA with the help of Jal Jeevan Mission and Implementation Support Agencies (ISAs) has formed 686 Jalasree clubs in schools.

Although KWA is actively engaged in sanitation efforts across various areas, KRWSA is also making significant contributions to sanitation activities. District-wise achievements of sanitation activities of Phase 1 and 2 show that Malappuram District has 26,385 meters drainage coverage which is the highest among 14 districts and Kottayam has the highest number of biogas plants (557) as on August 31, 2024(**Appendix 11.4.7**). Total number of Ground Water Recharge (GWR) structures as on August 31, 2024 is 2,912. Most numbers of GWR structures are in Kottayam (988). Similarly, total number of rain water harvesting (RWH) tanks installed by KRWSA in the State is 35,006 as on August 31, 2024. The highest number is in Idukki (10,647) and the lowest is in Wayanad (251) (**Appendix 11.4.8**). As per KRWSA data, as on August 31, 2024, out of 5,903 schemes, 5,144 small water supply schemes, 39 large/bulk water supply schemes and 4 multi-grama panchayath schemes are functional and the schemes cover 4,85,079 households (**Appendix 11.4.9**).

### Way Forward

Increasing urbanisation and changing climatic trends exert immense pressure on water resources. Water conservation, efficiency improvement, wastewater treatment, reuse and recycling of water are paramount in ensuring water security. As the population continues to grow, and migration of population in stressed urban centres continues, the demand for water will put additional strains on over-allocated freshwater resources. Unplanned and unrestricted expansion of urban centres must be curtailed. Leaks in the water distribution systems as well as in homes and businesses must be minimised. Water conservation needs to be promoted among all water users.



## 11.5 HOUSING

Housing is critical to a State's economic, social and civic progress. It is both a basic necessity and a fundamental human right. Access to affordable and appropriate housing yields significant benefits, such as improved health outcomes, enhanced educational opportunities, and increased economic prospects. Improving housing conditions is often regarded as a crucial step in alleviating poverty, with broader societal impacts, including reducing inequality and fostering resilience to economic and environmental challenges. Kerala has made significant strides in providing housing for the economically disadvantaged. Even before introducing numerous centrally sponsored housing schemes, Kerala implemented successful initiatives to offer affordable housing for marginalised populations.

Over the past five years, the Government of Kerala has placed particular emphasis on expanding housing facilities for people experiencing homelessness, while maintaining quality and standards. A comprehensive housing program known as LIFE Mission has been launched to provide improved housing options for people experiencing poverty.

### **Livelihood, Inclusion and Financial Empowerment (LIFE) Mission**

The LIFE project, started in 2016, stands out as a comprehensive housing initiative with a bold mission to alleviate the housing crisis. It goes beyond addressing housing needs, aiming to provide its beneficiaries access to various welfare

and social security programmes. This holistic rehabilitation programme for the landless and the houseless leverages various government programmes to ensure their social and financial stability and skill enhancement for improved livelihood. A unique feature of the project is the involvement of Local Self-Governments (LSG), which play a critical role in the planning and implementation of housing schemes within the State. Each LSG in the State is mandated to allocate a minimum of 20 per cent of its plan funds to the housing sector.

LIFE's primary goals encompassed two key elements: (a) facilitating the construction of secure and respectable homes for all families without land or housing within the State, and (b) achieving this target through the pooling of resources from diverse channels, including Corporate Social Responsibility (CSR) funds, philanthropic financial support, and all other potential funding sources.

Under the LIFE project, those who have signed the agreement are provided with financial assistance of Rs 4.00 lakh in four instalments, based on the progress of the construction of their houses. ST beneficiaries living in remote ST hamlets are provided Rs 6.00 lakh in five installments.

The activities of the LIFE Mission were structured in three phases. The first phase was dedicated to completing houses that were only partially built or left incomplete. In this segment, the Mission



has made a significant achievement, completing 52,680 houses out of the 54,116 incomplete houses identified in the State (97.3 per cent). Of the total dwellings completed, 42,850 houses have been completed in rural areas and 9,830 in urban areas. During the first phase, 19,153 SC beneficiaries and 17,400 ST beneficiaries had completed house construction, marking a successful start to the LIFE Mission.

In the second phase of the LIFE Mission, financial assistance was provided for constructing houses for individuals who owned land but did not have a house. In LIFE Phase II, 1,04,047 beneficiaries were found eligible, and 97,886 houses were completed (94.07 per cent). As other housing schemes have been converged into LIFE, the achievement of the LIFE Mission in Phase II additionally includes houses under Pradhan Mantri Awas Yojana (Urban), Pradhan Mantri Awas Yojana (Grameen), houses completed by Scheduled Castes Department, Scheduled Tribes Department, Fisheries Department and Minorities Department. The SC, ST, Fisheries, and Minority departments targeted 21,386, 10,692, 6,009, and 2,363 houses, respectively, and these targets were fully achieved. Further, the SC/ST and Fisheries Departments have provided additional lists of landholding houseless individuals, and 27,373 houses were completed from this list. Under PMAY Grameen, the target was 35,136 houses, of which 33,933 have been completed. The number of houses completed in the PMAY Urban segment, as on August 31, 2024, was 83,261.

The third phase of the LIFE Mission was a significant step towards rehabilitating landless and houseless individuals in Kerala. Approximately 3.4 lakh individuals were identified as landless-homeless. After comprehensive verification, 1,57,775 beneficiaries were confirmed eligible. Among those provided with land, 25,720 beneficiaries have completed house construction. From an additional list of landless houseless from the SC/ST and Fisheries Departments, 1,538 houses have been completed.

In 2020, additional applications were invited in all categories, to include those that had been missed in previous identification drives, or had since become eligible. From this LIFE 2020 list, 41,774 houses for the homeless with land, and 401 houses for the landless homeless have been completed. Potential beneficiaries identified through the

Extreme Poverty Eradication Programme were also considered at this time. In the Extreme Poverty Eradication Programme (EPEP), 64,006 families have been identified as extremely poor. Out of these, 7,484 beneficiaries were identified as landless homeless, and 8,629 beneficiaries were identified as homeless. Under the EPEP homeless category, 2,071 houses were completed, and in the EPEP landless houseless category, 104 houses were completed.

The Mission also aims to rehabilitate landless and houseless beneficiaries in housing complexes. To date, 926 housing units have been constructed under LIFE Towers, with 380 in rural areas and 546 in urban areas. Of these, 857 units (354 in rural and 503 in urban) are currently occupied.

Overall, the LIFE Mission has successfully facilitated the construction of 4,08,117 houses including LIFE Tower units across the State as on August 31, 2024, including 1,10,930 for Scheduled Caste beneficiaries and 42,363 for Scheduled Tribe beneficiaries.

District-wise details of houses constructed till 31 August 2024 are given in **Table 11.5.1**.

Given the high population density and escalating demand for land, identifying suitable land for landless, homeless beneficiaries has become increasingly challenging. To address this, the State has launched the *Manasodithiri Mannu* campaign, encouraging philanthropic land contributions to construct homes for the landless and homeless. So far, 3,208.7 cents of land have been offered, with 1,809.8 cents registered. Of the registered land, 1,480.1 cents are in rural areas, while 329.7 cents are in urban areas. Some of the sponsorship programmes are shown in **Box 11.5.1**.

The LIFE Mission in Kerala has successfully integrated its efforts with employment generation programmes implemented in the State. While constructing homes under the LIFE Mission, beneficiaries can access 90 person-days of labour through programmes like the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in rural areas and the Ayyankali Urban Employment Guarantee Scheme (AUEGS) in urban areas. Additionally, Kudumbashree has taken a significant step by establishing women's construction units to assist the Mission in completing housing at a reduced cost.

**Table 11.5.1** Details of houses constructed by the LIFE Mission as on 31.08.2024

District	Phase 1	Phase II	Phase III	PMAY (U)	PMAY (R)#	SC Dept.	ST Dept.	Fisheries Dept	Minority Dept.	Additional List SC/ST/Fisher/es Homeless with land	Additional List SC/ST/Fisher/es Homeless Landless	LIFE 2020 (Homeless with land)	LIFE 2020 (Houseless landless)	Rehabilitated by flat	EFP homeless	EFP homeless landless	Total
Thiruvananthapuram	6,050	15,616	1,675	11,335	5,241	2,399	351	2,007	152	1,536	81	3,344	164	24	165	8	50,148
Kollam	3,618	8,546	4,634	6,739	2,959	1,986	152	824	107	2,331	12	3,426	0	37	139	0	35,510
Pathanamthitta	1,176	2,047	929	1,746	1,393	1,195	42	25	75	1,162	76	1,599	4	0	55	7	11,531
Alappuzha	2,728	9,487	1,389	5,068	1,813	1,324	89	822	193	2,022	36	3,955	60	0	105	0	29,091
Kottayam	1,102	4,301	2,021	2,540	946	959	61	104	81	720	139	2,476	1	40	35	3	15,529
Idukki	3,138	10,232	1,429	1,853	1,808	855	940	71	97	1,711	108	753	16	246	124	8	23,389
Ernakulam	1,059	5,769	2,595	11,386	1,334	1,965	107	420	79	2,211	160	3,764	35	101	146	31	31,162
Thrissur	2,997	5,193	2,493	8,191	2,725	2,264	50	180	118	1,152	193	3,326	39	34	144	11	29,110
Palakkad	7,628	14,650	2,910	6,415	4,780	2,812	526	53	127	2,416	110	2,732	0	0	128	12	45,299
Malappuram	2,735	6,719	2,557	10,858	3,870	2,158	3,497	509	678	5,191	319	8,938	21	400	297	3	48,750
Kozhikode	6,484	5,144	644	6,881	2,313	1,340	330	398	124	1,836	149	2,907	0	0	291	0	28,841
Wayanad	8,440	4,056	793	3,105	2,178	948	2,533	0	218	2,009	0	610	1	0	159	6	25,056
Kannur	2,645	2,540	698	5,202	1,098	558	917	372	176	1,345	89	3,061	56	44	253	13	19,067
Kasaragod	2,880	3,586	953	1,942	1,475	623	1,097	224	138	1,731	66	883	4	0	30	2	15,634
<b>Total</b>	<b>52,680</b>	<b>97,886</b>	<b>25,720</b>	<b>83,261</b>	<b>33,933</b>	<b>21,386</b>	<b>10,692</b>	<b>6,009</b>	<b>2,363</b>	<b>27,373</b>	<b>1,538</b>	<b>41,774</b>	<b>401</b>	<b>926</b>	<b>2,071</b>	<b>104</b>	<b>408,117</b>

Source: LIFE Mission, # PMAY (Rural) figures are sourced from PMAY dashboard

### Box 11.5.1 Sponsorship Projects- Best Practices in LIFE MISSION

#### *Chittilappilly Bhavana Padhathi:*

The K. Chittilappilly Foundation has entered into a Memorandum of Understanding (MoU) with the Government to provide financial assistance totalling Rs 25 crore, offering up to Rs 2.5 lakh per family to support land purchases for 1,000 landless families. Through this initiative, 1,000 beneficiaries have successfully purchased and registered land. Efforts are underway to formalise an additional agreement with the K. Chittilappilly Foundation to extend financial assistance for land purchases to another 1,000 landless families among the EPEP beneficiaries.

#### *LIONS LIFE Village*

The State Government has launched a unique initiative to broaden the reach of LIFE Mission projects among philanthropists and voluntary organisations. In response, Lions International District 318-A, a voluntary organisation, has committed to constructing 100 houses for LIFE beneficiaries. The Government has issued an order allowing 100 homeless individuals from the LIFE beneficiary list to receive housing support under the Lions International District 318-A sponsorship. The houses will be built on land provided by Chirayinkeezhu Block Panchayat and Kilimanoor Block Panchayat in Thiruvananthapuram district, as well as Kadakkal Grama Panchayat and Paravur Municipality in Kollam district. Lions International will comprehensively cover the construction costs.

Source: LIFE Mission

A significant challenge LIFE beneficiaries face is the high cost of construction materials. To address this issue, the LIFE Mission has engaged in discussions with various vendors and arranged for the distribution of materials at rates that are 20-60 per cent lower than the maximum retail price (MRP). This initiative encompasses electrical fittings, wiring materials, paint, ceramic materials, tap fittings, water tanks, and cement, resulting in substantial savings for LIFE beneficiaries. Also, in association with ANERT, Rooftop Solar Plants are being installed in LIFE houses as part of the 'Green Energy Income Project'.

Legal restrictions on land use in various locations pose a significant obstacle to implementing the scheme. For instance, some beneficiaries own land in the Coastal Regulation Zone (CRZ) or wetland areas, where construction is prohibited. The Mission is actively working on facilitating legal amendments to address this issue.

Another challenge is Central funding. The support from Union Government housing programmes needs to be more robust to meet the housing requirements of the economically disadvantaged population in Kerala. In PMAY-(G), unit assistance of a house fixed by MoRD is only Rs 1.2 lakh, which is shared between Union and State governments in the ratio of 60:40 (Rs 72,000 + Rs 48,000). As the State Government integrates this programme with LIFE Mission, assistance per unit has been enhanced to Rs 4 lakh. The balance amount of Rs 2.8 lakh is shared between Grama, Block and District Panchayats in the ratio of 25:40:35.

In PMAY (U), the Beneficiary Led Construction's (BLC (N)) central share is Rs 1.5 lakh per dwelling unit, and State and urban LSGs must together contribute Rs 2.5 lakh. Under the Affordable Housing Project (AHP), the average cost per dwelling unit is Rs 10.5 lakh, and the Central share of the component is only Rs 1.5 lakh.

The LIFE Mission has made considerable progress in delivering safe and secure housing and sustainable livelihood opportunities for Kerala's homeless and landless population. To achieve this objective, the Mission has established a unique and pioneering model for housing provision to disadvantaged groups by aligning and integrating various institutional mechanisms and programs. This innovative approach has gained national and international recognition as an effective strategy for achieving universal housing for people without homes, representing a crucial advancement toward sustainable development goals in this sector.

#### **Other Housing Programmes**

While housing for the homeless and landless is addressed through the LIFE Mission, housing for low-income groups, employees, women, and trans people is addressed through various departments and agencies.

The Housing Department implements several housing schemes in the State through exclusive agencies in the sector. These are:

- i. Kerala State Housing Board,
- ii. Housing (Technical Cell) Department (Housing Commissionerate), and
- iii. Kerala State Nirmithi Kendra.

## **I. Kerala State Housing Board**

Kerala State Housing Board (KSHB), one of the major implementing agencies in the housing sector under the Government of Kerala, has provided residential facilities to prospective beneficiaries through its public housing schemes. In 2023-24, the Kerala State Housing Board implemented schemes such as the Grihasree housing scheme, Working Women's Hostel, EWS/LIG housing scheme, and Aswas rental housing scheme near Medical Colleges.

Under the Grihasree housing scheme, 1,444 houses have been constructed since 2018-19, with 151 houses constructed in 2023-24. KSHB also constructed 13 Working Women's Hostels, as of March 31, 2024. Working Women's Hostels have been completed in Mananthavady, Wayanad district (3 storey, 169 beds) and Madhur, Kasaragod district (3 storey, 109 beds). Working Women's Hostels at Mattanoor, Kannur district and Vazhathope, Idukki district are in the implementation stage. Under the Aswas rental housing scheme to provide accommodation to the patients and by-standers of medical colleges at an affordable rate, the construction of rental houses near Alappuzha and Kannur Medical Colleges has begun. A building in Thrissur (2 storey, 75 beds) has been completed and inaugurated.

To provide accommodation for economically weaker groups, KSHB has completed the construction of 36 apartments in Pattuvam, Kannur and 11 independent houses in Thrikkaipetta, Wayanad district. The construction of 36 apartments in Mukkam, Kozhikode, is progressing.

KSHB is earnestly trying to address the housing needs of economically weaker sections that are not eligible for houses under the LIFE Mission. One such innovative scheme is *Thanteyidam*, inaugurated at State-level on January 9, 2024.

*'Thanteyidam'* (My own space) is an innovative scheme implemented by the Government of Kerala through the Kerala State Housing Board (KSHB). The scheme aims at providing housing to homeless children in welfare homes run by the government or by non-government organisations who have to leave the institutions when they reach 18 years of age. The KSHB implements the scheme in collaboration with the Department of Women and Child Development. The scheme

caters to the housing needs of beneficiaries not listed in any of the housing schemes of central or state governments. The most striking feature of this scheme is that while identifying beneficiaries, priority is given to women, especially the survivors of POCSO. From 2022-23 onwards, this scheme follows a unique mode of implementation. Beneficiaries identified by the Women and Child Development Department are given houses/flats constructed by KSHB under its scheme for economically weaker sections (EWS)/ low-income groups (LIG). In both the Budget 2023-24 and 2024-25, Rs 200.00 crore has been earmarked each year for the *Thanteyidam* project.

Under the Rental Housing Schemes (RHS), housing for government employees are under construction. KSHB has completed and inaugurated the construction of 12 units of flats in Kozhikode, which will now be rented out to government employees at affordable rates.

## **II. Housing (Technical Cell) Department (Housing Commissionerate)**

The Housing (Technical cell) Department acts as the State-level technical cell and nodal department to coordinate and support housing activities of Kerala State. This department was formed in 1980 to plan and coordinate activities in the housing sector and achieve technical excellence in housing solutions.

This department is primarily engaged in providing data support and technical guidance, reviewing policies and programmes, setting housing targets, facilitating decision-making in the housing sector, extending technical and other support related to housing to all agencies working in this area, and providing assistance for emerging needs and technologies in the housing sector. The department has made pioneering attempts to create spatially-oriented information systems in the housing sector. In 2023-24 under the planning scheme 'Development and hosting of mobile application 'e-Griha', the web/mobile application was developed in the first phase. The information related to various housing schemes currently being implemented in the State, their eligibility criteria, and the details of housing loans provided by various public sector and private banks were included in the application. The provision for online monitoring of the various projects of the Kerala State Housing Board was also included. The project's second phase will be developed in

2024-25. It has been decided to create an interface between consultants, contractors, and agencies for the execution of projects spanning from invitation of tender to project completion. Geofencing technology, time and attendance tracking, and equipment and asset management will also be included.

### III. Kerala State Nirmithi Kendra

Kerala State Nirmithi Kendra (KESNIK), established in 1989, is an accredited agency under the Housing Department, Government of Kerala. It is involved in a variety of activities in the housing sector, such as

- undertaking construction projects,
- imparting training for skill development in construction technologies and related trades to unemployed youths, the general public and technocrats,
- production of cost-effective and environment-friendly building materials,
- selling of building materials at subsidised rates through *Kalavara*,
- undertaking human resource development programmes in the field of housing, conducting research and development activities in housing and allied fields,
- and providing facilities for building material testing for quality assurance in construction works through its testing labs.

KESNIK is a government agency that executes construction projects for both government and private clients.

In 2023-24, KESNIK organised 21 vocational training programmes to develop skills in the construction sector, benefitting 270 beneficiaries. These training programmes mainly focused on the unemployed youth. In the last few years, the majority of trainees were women.

KESNIK *Kalavaras* sell building materials to BPL and LIFE Mission beneficiaries subsidised by 15 per cent for the construction and repair of houses in Government housing schemes. KESNIK has set up production centres in various parts of the State to supply superior quality building materials to the public. As per demand and trend, various products are being produced in these production centres. Testing labs are set up under KESNIK at various parts of the State to ensure the quality of materials used for building construction, both from

government organisations and agencies, as well as from private institutions.

KESNIK also conducted a four-month certificate course for 40 students at Thiruvananthapuram and Kozhikode, under the programme 'Finishing school for skill improvement for Civil and Architecture engineering graduates' to improve their professional skills.

KESNIK has set up a housing guidance cell in its regional offices to guide the public about cost-effective and good quality construction of houses.

As an academic initiative, the Government of Kerala established the Laurie Baker International School of Habitat Studies (LaBISHaS) in KESNIK. The institute conducts academic courses, research activities, and short-term training programmes on subjects including cost-effective and environment-friendly (CEEF) construction techniques, and other habitat-related topics.

College of Architecture Thiruvananthapuram (CAT) is one of the largest architecture and design schools in the city. CAT- LaBISHaS Design Lab (CLDL) was established in 2018 as a joint venture to develop detailed architectural designs and to provide guidance for construction. The details of 3D Printing Technology are given in **Box 11.5.2**.

### IV. Kerala State Co-operative Housing Federation

The Kerala State Co-operative Housing Federation Ltd is the apex body for financing primary co-operative housing societies in the State to construct houses at the minimum possible cost on easy repayment terms for its members. The main sources of funds for the Federation are (i) share capital contribution from member societies and the Government of Kerala, and (ii) borrowings from LIC, National Housing Bank, and other commercial banks.

The Kerala State Co-operative Housing Federation provides home loans to economically weaker sections (EWS) and middle-income groups (MIG), and for repair/maintenance. From 2019-20 to 2024-25 (up to August 31, 2024), the Federation has sanctioned housing loans to 6,105 beneficiaries and an amount of Rs 32,095.54 lakh has been disbursed as loans. Details are given in **Appendix 11.5.1**.

### Box 11.5.2 3D Printing Technology

KESNIK has completed the construction of the State's first 3D printed building--AMAZE-28"--to discover and disseminate innovative technologies in the field of construction, using 3D Printing technology indigenously developed by Tvasta, an incubation company formed by IIT Chennai, the Union Ministry of Housing and Urban Affairs. Several technical workshops were conducted in the KESNIK campus to increase awareness of this new technology.

In 3D Printing construction, instead of using ink like the traditional printers, construction materials are printed layer-upon-layer. This is also why 3D Printing goes by the name additive manufacturing or additive construction. It can be carried out both onsite and offsite. It involves a layer-by-layer deposition of concrete based on a digital design, enabling the construction of complex shapes and structures with great precision. This method has the potential to revolutionise the construction industry by reducing construction time, waste, and also the cost of labour.

Source: Kerala State Nirmithi Kendra

### V. Housing Finance

Finance is a crucial instrument in providing affordable housing for a long period. Finance for housing includes loans from banks, subsidies, and grants from Centrally Sponsored Schemes, State Schemes, and shares of Local Governments.

All the major scheduled banks under the RBI rules provide housing loans through various bank schemes. Banks offer loans through various government housing schemes to economically weaker sections, lower-income, middle-income, and high-income groups. The financial institutions which provide loans for house construction along with the government agencies in the State are nationalised banks, Kerala Gramin Bank, private sector commercial banks, Kerala State Co-operative Bank, Kerala State Co-operative Agriculture and Rural Development Bank Limited (KSCARD), small finance banks like HOUSEFED, HUDCO, and HDFC. The interest rates of housing loans change according to the announcements by the GoI and the Reserve Bank of India.

### Way forward

The Government's approach to housing is rights-based. The thrust of public action should continue to be to provide adequate housing to vulnerable sections and facilitate the socially and economically weaker sections and low-income groups to own affordable housing. Considering the importance of housing on well-being and upward social and economic mobility, housing provision to the poor should be supplemented with basic services, infrastructure facilities and opportunities for employment, income generation, and livelihood improvement.

In light of environmental degradation and extreme climatic events, sustainability concerns must be incorporated into the choice of land for housing, material use, building technologies, and building process. There is a growing need to find alternative building materials and techniques that take care of environmental concerns.



## 11.6 REBUILD KERALA DEVELOPMENT PROGRAMME

### Rebuild Kerala Initiative

Kerala Government has implemented RKI Programmes (RKIP) to rejuvenate the flood-damaged State. Since 1924, Kerala has faced its most severe floods in 2018 and 2019. Flood and subsequent landslides had directly affected one sixth of Kerala's population. RKI was launched in this backdrop, which aims "to bring about a perceptible change in the lives and livelihoods of its citizens by adopting higher standards of infrastructure for recovery and reconstruction and to build ecological and technical safeguards so that the restructured assets could better withstand floods in the future. RKI envisages the Kerala's vision for recovery and move towards Nava Keralam. RKI envisions a green and resilient Kerala through sustainable infrastructure, improving living standards, and major development projects designed to protect people and assets from future disasters and ensure long-term resilience. RKI addresses all the key drivers of the floods and other natural disasters, including the impacts of climate change and future disasters.

### Goals of the RKDP

The Rebuild Kerala Development Programme works towards the following set of goals:

- It aims to rebuild Kerala in a way that ensures higher standards of infrastructure, assets and livelihoods for resilience against any future disasters.
- To build individual, community and institutional resilience towards natural hazards while

fostering equitable, inclusive and participatory reconstruction that builds itself back better.

The RKDP focuses on improving sectoral mainstreaming of disaster risk reduction measures and to strengthen disaster-risk management capabilities across State. The priority sectors of RKIP include Integrated Water Resource Management, Water Supply, Sanitation, Urban focus, Roads and Bridges, Transportation, Forestry, Agriculture, Animal Husbandry and Dairy Development, Fisheries, Livelihoods, Land and Health. In addition to it, there are four cross-cutting sectors viz., disaster risk management and resilience, environment and climate change, strengthening institutional efficiency and resilience and open data.

### Financing of Rebuild Kerala Development Programme (RKDP)

The Rebuild Kerala Development Programmes (RKDP) estimated a total requirement of Rs 36,500 crore for period 2019 to 2027. For timely implementation of the RKI projects, Government of Kerala has earmarked Plan funds of Rs 1,000 crore each in 2019-20 and 2020-21, Rs 1,830 crore in 2021-22, Rs 1,600 crore in 2022-23, Rs 904.83 crore in 2023-24 and Rs 1,000 crore in 2024-25. Funds are being released based on the requirement specified by Departments or implementing agencies. Rs 1,00,000 lakh was allocated in the State budget in 2024-25, of which Rs 52,067.97 lakh (52.07 per



**Table 11.6.1.** Outlay and Expenditure of projects under RKI, 2024-25, Rs in lakh.

Sl. No.	Scheme Name	Budget Outlay	Expenditure (as on 31-07-2024)	Expenditure (in per cent)
1	Roads of Local Self Government (RKI)	12875.54	4517.14	35.1
2	Livelihood Support (RKI)	21,45.92	21.45	1.0
3	PWD Roads and Bridges (RKI)	35,502.15	11,508.40	32.4
4	Public Buildings-Major repairs and reconstruction (RKI)	11,583.69	10,742.48	92.7
5	Water Supply (RKI)	6437.77	1803.05	28.0
6	Disaster Preparedness	13,220.51	6924.64	52.4
7	Sanitation (RKI)	1287.55	456.13	35.4
8	KfW AM Grants	946.87	94.68	10.0
9	Roads and Bridges (RKI)	16,000	16000	100.0
<b>Total</b>		<b>1,00,000</b>	<b>52,067.97</b>	<b>52.1</b>

Source: RKI, 2024

cent) was recorded as expenditure. The details of outlay and expenditure of projects under RKI are given in **Table 11.6.1**. As of 31.07.2024, an amount of Rs 4,91,996.09 lakh has been expended for various activities under RKI. The scheme-wise details of outlay and expenditure from 2019-20 up to 31.07.2024 are provided in **Appendix 11.6.1**.

Government of Kerala finance the Rebuild Kerala Development Programme through the initiatives as under.

- The State Budget comprised of plan and non-plan allocations. This include assistance from multilateral agencies including World Bank, Asian Infrastructure Investment Bank (AIIB) and Asian Development Bank (ADB), and other bilateral agencies such as the German Development Bank (KfW), French Development Agency (AFD) and Japan International Cooperation Agency (JICA).
- Deployment of Flexi-Fund under the Central Government Schemes
- Mobilisation of fund through Chief Minister's Distress Relief Fund (CMDRF)
- NABARD Funding through NABARD Infrastructure Development Assistance (NIDA).
- HUDCO and other means of loans
- Private and non-traditional sources of institutional and retail financing including Masala bonds, Diaspora bonds and various other private sector financial sources.

### Partnership with the World Bank

The Government of Kerala, along with the support of the Government of India, signed a loan

agreement of 250 Million USD with the World Bank for the First Resilient Kerala Program. This program marks the first ever Partnership of the World Bank with a State in India. The Resilient Kerala Development Program aims to enhance the State's institutional and financial capacity to protect the livelihoods and assets of poor and vulnerable sections of the society. This new programme is part of the Central Government's support to the Rebuild Kerala Development Programme.

The First Resilient Kerala Programme aims to support the State as under:

- To improve river basin planning and water infrastructural operations and management, including water supply and sanitation services.
- To promote resilient and sustainable agriculture that is enhanced with risk insurance.
- To improve the resilience of the main road networks.
- To unify and maintain land records in high-risk areas
- To promote risk-based urban planning and strengthen expenditure planning by local municipal bodies.
- To strengthen Kerala's fiscal and public financial management capacity.

The World Bank has been continuously supporting Kerala through various other projects including Dam Rehabilitation and Improvement Project (DRIP), Phase 2 of the National Cyclone Risk Mitigation Project, National Hydrology Project and the Kerala Local Government and Service Delivery Project. Additionally, the Bank has been

working with the Government of India and the Government of Kerala since the floods occurred. The Bank supported the State to identify policies, institutions and systems for the State's resilience to risks associated with disaster and climate change.

### **Progress of schemes under RKI**

There are 110 projects under RKI implemented from 2019-20 to 2024-25, for which Administrative Sanction was accorded for an amount of Rs 8,681.83 crore. The details of these projects are provided in **Appendix 11.6.3**. There are 26 projects completed under RKI, and 12 projects nearing completion. The details of completed projects are provided in **Appendix 11.6.2**.

### **Key Policies**

RKI has facilitated the policy formulation and policy development for key departments and the following policies have been framed and approved:

- The State Government entrusted the Rebuild Kerala Initiative (RKI) with the task of planning and implementing a rebuilding strategy for the State and issued comprehensive guidelines for the operational strategy and institutional framework for RKI.
  - To strengthen fiscal sustainability, the Government of Kerala has: (a) issued a Government Order increasing the valuation of land as per the Kerala Stamp Act by a hundred percent (100 per cent); (b) issued a Government Order whereby valuation of buildings will be enhanced; and (c) issued a Government Order designating KIIFB to act as the nodal agency for mobilising private retail finance for resilient recovery efforts through a Diaspora Bond.
  - The Government of Kerala has issued a Government Order delegating the Department of Agriculture to develop, plan and budget the based on agro ecological zones and agro ecological units in accordance with the State's fourth year program (2020-21) of the 13th Five Year Plan (2017-2022).
  - The Government of Kerala has (a) adopted a performance-based management contract model for the core road network, incorporating design and performance standards and disaster-related emergency response module; and (b) initiated institutional streamlining in the road sector through the liquidation of certain non-essential road sector agencies and the transfer of their mandate and assets to the Public Works Department and developing a new Centre of Excellence in the road sector by restructuring the Kerala Highway Research Institute.
- The Government of Kerala has adopted a State Sanitation and Waste Management Strategy, incorporating cost-effective septage and waste management models. The Government of Kerala has (a) issued Government Orders banning the manufacture, storage, transport, and usage of single-use plastic items to reduce plastic waste; (b) approved an integrated solid waste management strategy for sustainable management of solid waste by local self-governments; and (c) a draft Liquid Waste Management Policy for the State has been prepared and submitted to the Government for approval after stakeholder consultation.
  - The Government of Kerala has instituted sustainable risk-informed urban planning and multiyear municipal infrastructure planning through (i) approval of the draft amendment of the Town and Country Planning (TCP) Act by the Council of Ministers and (ii) the issuance of a Government Order on revision of annual planning guidelines to finance priority multiyear municipal infrastructure projects.
  - As part of the Resilient Kerala Development Programme For Results (PForR), for which RKI is the Project Management Unit (PMU), the GoK has taken up the below initiatives.
    - **Adoption of a Debt Management Plan:** To strengthen the Government of Kerala's ability to deal with contingent liabilities due to natural disasters and disease outbreaks, the Department of Finance has commenced formulating a debt management plan and establishment of a debt management unit to scale down the State's debt-to-GSDP ratio to a sustainable path.
    - **Unified database:** As part of developing a comprehensive Disaster Risk Financing (DRF) framework that strengthens the financial resilience of the Government and the communities, Government of Kerala is developing a unified database of vulnerable households and a payment platform which triggers post-disaster safety net payments to the bank account of eligible beneficiaries on time.
    - **Forward Works Program:** The Government of Kerala aims to implement a Forward Works Programme (FWP) for the maintenance of around 6,000 km of road (Core Road Network) in the Pamba Basin using data, such as the condition and evaluation of the road surveyed, which is fed into the Road Maintenance

Management System (RMMS). Accordingly, the Government of Kerala plans to allocate a budget for the maintenance of roads as per the Forward Works Programme (FWP).

- **One Health Approach:** An integrated One Health Approach to diagnose, track, and respond to disease outbreaks is being implemented State-wide to reduce adverse population and animal health impacts of zoonotic diseases.
- **Disaster Risk Financing and Insurance:** To improve the disaster risk financing and insurance capacity of the State Government and vulnerable households in Kerala, the Government of Kerala aims to mobilise market-based resources as a disaster risk financing instrument to complement the State Disaster Response Fund (SDRF) and the Chief Minister's Distress Relief Fund (CMDRF). Additionally, approximately 33,922 farmers from the Pamba basin districts have also been registered under the State crop insurance scheme
- **Risk-informed Urban Master Plans:** The Department of Country and Town Planning (LSGD-CTP) and Kerala Institute for Local Administration (KILA) in coordination with Kerala State Disaster Management Authority (KSDMA) has down-scaled the climatic models and provided the information to all Urban Local Bodies (ULBs) of the State. Further, the Government of Kerala has developed and notified the guidelines for RIMPs for developing effective Risk Informed Master Plans (RIMPs) and Disaster Climate Action Tracker (DCAT) tool for incentivising the ULBs in the form of performance grants. Training modules have been prepared for the ULBs and trainings are expected to be conducted soon
- **Flood forecasting and integrated reservoir operation systems:** The Water Resources Department has developed a Flood Forecasting and Integrated Reservoir Operation Systems for the Pamba basin for giving early flood warnings to the public through the KSDMA.

## 11.7 KERALA INFRASTRUCTURE INVESTMENT FUND BOARD (KIIFB)

Kerala Infrastructure Investment Fund Board (KIIFB) was set up in 1999 as an agency to mobilise funds for capital expenditure on behalf of the Kerala Government. The formation of KIIFB marked a significant milestone in Kerala's infrastructure development journey. The Board was conceptualised under the Kerala Infrastructure Investment Fund (KIIF) Act with the primary objective of mobilising funds and facilitating investments in critical infrastructure projects across the State. The enacted KIIF Act was amended in 2016 to revamp the structure and undertake large infrastructure projects. With its formation, Kerala gained a dedicated institution focused on catalysing infrastructure growth by bridging the funding gap and leveraging public and private resources.

KIIFB facilitates physical and social infrastructure including major land acquisitions that are integral to development, using financial instruments approved by Securities & Exchange Board of India (SEBI) and Reserve Bank of India (RBI). It joins hands with State/Central public sector agencies to have them on board as Special Purpose Vehicles (SPVs) to support the Administrative Departments in developing infrastructure.

### Spectrum of Projects

The Kerala Infrastructure Investment Fund was established with the main objective of providing investment for projects in the State of Kerala in sectors including Transport, Health and Family Welfare, Water Supply and Sanitation, Energy, Social & Commercial Infrastructure, IT and

Telecommunication. The major projects in the State funded by KIIFB include Kerala Fibre Optic Network, Petrochemical and Pharma Park – Kochi (Land Acquisition-LA), West Coast Canal, Coastal and Hill Highway, Wayanad Twin-tube Tunnel, Transgrid 2.0, Life Science Park, Thiruvananthapuram (Phase II-LA) , Hi Tech School Programme, Integrated Urban Regeneration and Water Transport System (IURWTS) Cochin.

By investing in infrastructure, KIIFB aims to stimulate economic growth in the State. Well-developed infrastructure can attract investments, create job opportunities, and improve the overall quality of life for the residents of Kerala. KIIFB places a strong emphasis on sustainable development by supporting projects that promote environmental conservation and social inclusivity. This is reflected in its initiatives in renewable energy, water management, and urban development.

KIIFB undertook various infrastructure development projects as well as projects exclusively for land acquisition. As of August 31, 2024, KIIFB has approved Rs 86,170.24 crore for 1,103 infrastructure projects in sectors including healthcare, education, roads and transportation, irrigation and water supply, power, ports, inland navigation, drainage and solid waste management and also for 7 land acquisition projects which includes PWD (NHAI), Industrial Parks (3 Projects), taking over the land from Hindustan

**Table 11.7.1** Consolidated details of KIIFB Approved Projects/outlay, as on March 31, 2024, Rs in crore

Sl.No.	Type of Project	2022-23		2023-24		Total (2016-24)	
		Number	Outlay	Number	Outlay	Number	Outlay
1	Infrastructure Projects	94	8392.75	50	2541.66	1103	66,143.49
2	Projects under Land Acquisition Pool	0.00	0.00	0	0.00	7	20,000.00
	<b>Total</b>	<b>94</b>	<b>8392.75</b>	<b>50</b>	<b>2541.66</b>	<b>1110</b>	<b>86,143.49</b>

Source: KIIFB

Newsprint Limited and Kochi-Bangalore Industrial Corridor and Gift City. Under the land acquisition pool, 7 massive land acquisition projects worth Rs 20,000 crore have been approved. In 2023-24, KIIFB had approved 50 infrastructure projects worth Rs 2,541.66 crore. Consolidated details of project approved by KIIFB, as on March 31, 2024, are shown in **Table 11.7.1**. The department-wise status of projects approved by KIIFB as on March 31, 2024 are given in **Appendix 11.7.1**.

The projects funded through KIIFB are at various stages of development in 140 constituencies of the State. Among these, 500 projects worth Rs 32,379.33 crore, as of March 31, 2024, are under the Public Works Department (PWD). This amount had increased to Rs 32,404.64 crore by August 31, 2024. The major projects under the PWD include the Hill Highway, the Coastal Highway, and the Anakkampoyil – Kalladi – Meppadi (AM) Tunnel Road project. The AM Tunnel Road is an 8.735 km long four-lane tunnel, with approach roads on both sides for providing connectivity between Anakkampoyil in the Kozhikode District and Meppadi in Wayanad District in Kerala. The tunnel will provide a reliable, safe, all-weather alternative to the Thamaraserry Ghat road. KIIFB has approved an amount of Rs 2,134.50 crore for this project.

The industrial policy released by Department of Industries include measures to bring a meaningful change in the industrial climate of the State. As part of the development of Kochi – Bangalore Industrial Corridor (KBIC), Kerala Industrial Infrastructure Development Corporation (KINFRA) has initiated land acquisition for development of industrial infrastructure at Palakkad and Kannur at a cost of Rs 12,710.00 crore. An amount of Rs 840.00 crore has been approved for ‘Global Industrial Finance Trade (GIFT) City’ (Land Acquisition) as part of Kochi - Bangalore Industrial Corridor (KBIC) at Angamally in the Ernakulam District.

Major share of KIIFB fund has been set aside for the roads and road transport sector, which is Rs 39,749.32 crore as of March 31, 2024. The Board has accorded sanction for Rs 23,947.65 crore for various road/bridge projects including the Anakkampoyil – Kalladi – Meppadi Tunnel Road Project. It has also sanctioned projects for the construction of Alappuzha Mobility Hub Phase I and KSRTC Bus Terminal Complex in Alappuzha. The details of KIIFB approved projects for the Road and Road Transport Sector is shown in **Table 11.7.2**.

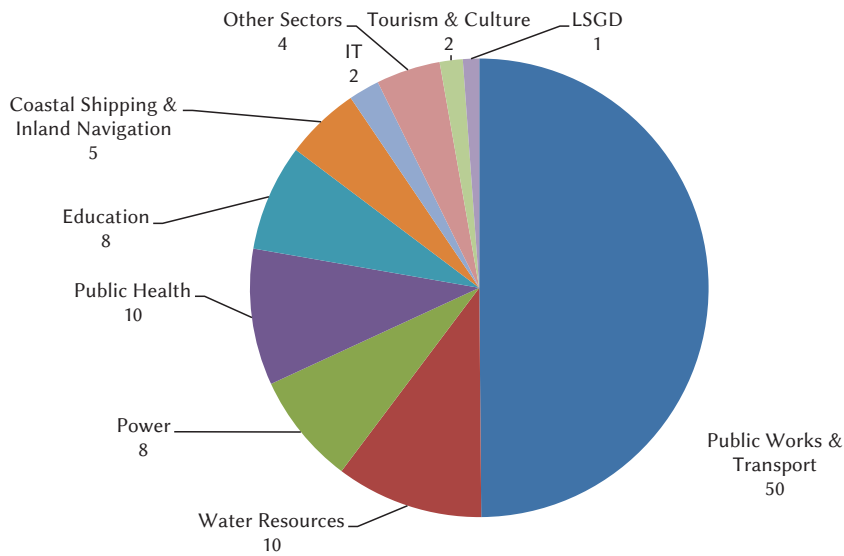
**Table 11.7.2** KIIFB approved projects in Road and Road Transport Sector, as on March 31, 2024, Rs in crore

Sl. No	Name of Project	Amount
1	Coastal Highway	2,849.61
2	Hill Highway	3,447.57
3	Anakkampoyil – Kalladi – Meppadi (AM) Tunnel Road	2,134.50
4	Other Road/Bridge Projects	23,947.65
5	Road Transport Projects	600.98
6	Land Acquisition for NH Development	6,769.01
	<b>Total</b>	<b>39,749.32</b>

Source: KIIFB

Huge land acquisition costs posed major hurdle to the highway development in the State and this has been resolved to a great extent with State Government bearing a part of the land acquisition cost through KIIFB. Out of the total approved outlay of Rs 6,769.01 crore, an amount of Rs 5,580.74 crore has been transferred to the National Highway Authority of India (NHAI) for land acquisition as on March 31, 2024. KIIFB has approved a total of Rs 3,447.57 crore for the Hill Highway project and some stretches of Hill highway in Thiruvananthapuram, Kollam, and Kasaragode Districts have already been completed by Kerala Road Fund Board (KRFB).

**Figure 11.7.1** Sector-wise KIIFB funding for projects, as on March 31, 2024, in per cent



Source: KIIFB

Water resources (Rs 6,875.35 crore) and Health and Family Welfare (including Ayush) (Rs 6364.71 crore) sectors follow the Road and Road Transport sector in terms of the share of allocation of KIIFB funds. Construction of groyne field project at various locations in Alappuzha is one of the important projects undertaken in water resources sector, costing Rs 338.95 crore. In addition to that, construction of regulator cum bridge, replacement of transmission mains and drinking water projects have been taken up under KIIFB. The board has sanctioned Urban Regeneration and Integrated Water Transport System in Kochi for Rs 566.51 crore. Details of KIIFB funding for approved projects under various sectors is illustrated in **Figure 11.7.1**.

Kerala State Electricity Board Limited (KSEBL) initiated the plan for Transgrid 2.0 with a mission to enhance the reliability and security of electricity transmission system and to reduce system losses. KIIFB allocated Rs 5,200 crore for the Transgrid 2.0 plan. It is expected that the implementation of the projects will bring about a reduction in peak load system loss of about 107.8 MW and corresponding annual energy savings of 522 Million Unit (MU). Construction of Substations at Kothamangalam, Kaloor, Chalakkudy and Thalassery has been completed.

KIIFB has approved Rs 6,364.71 crore for health and family welfare, including projects in Ayush.

This is 9.6 per cent of the total projects approved by the KIIFB. It includes projects for development of 55 Hospitals across the State, including Taluk Hospitals, General Hospitals, District Hospitals, Medical Colleges and Speciality hospitals like Cochin Cancer Centre and Speciality Hospital at Mattannur. An amount of Rs 69.06 crore has been approved for the establishment of International Research Institute of Ayush (Phase 1). In addition to this, construction of 10 bedded isolation wards in 140 Legislative Assembly Constituencies is also approved for Rs 236.30 crore.

KIIFB approved an amount of Rs 4,978.54 crore to the education sector, of which Rs 3,136.03 crore is earmarked for the General Education sector and Rs 1,842.51 crore has been set aside for projects in Higher Education sector. In the General Education sector, an amount of Rs 710.53 has been earmarked for the up gradation of one school in each constituency under the Protection of Public Education (PPE) Mission. Projects to the tune of Rs 1639.90 crore have been approved for Betterment of infrastructure facilities in schools. An amount of Rs 493.50 crore has been spent for the completion of Hi-Tech Classroom in the education sector.

In the Higher Education Sector, the project for the renovation of 55 Arts and Science Colleges has been approved by KIIFB. Out of these, 5 colleges will be developed as part of the development of

heritage college scheme. Among the 5 universities taken up for development, Cochin University of Science and Technology (CUSAT) receives the major share of Rs 241.72 crore for upgrading it as the Centre of Excellence in Academics and Research.

The K-FON (Kerala Fiber Optic Network) project, approved by the KIIFB in 2017-18 with project cost of Rs 1061.73 crore, has progressed at a fast pace. The first phase of the project has been completed. The project is conceived to provide better network connectivity to rural area and will setup a State-wide core optical fibre network capable of efficient service delivery, assured Quality of Service (QoS), reliability, redundancy and security for meeting future bandwidth demands. It provides access to all service providers and will connect more than 33,000 Government institutions and provide free internet to economically backward families and subsidised internet service for others. KIIFB is also funding in the IT sector for the development of two IT Parks at Kalamassery and Kazhakootam at a total outlay of Rs 351.13 crore.

KIIFB has been funding 40 projects worth Rs 874.24 crore in the Sports and Youth Affairs sector, including the multipurpose stadiums in 14 Districts, Panchayat stadiums, and construction sports facility centre in G.V. Raja centre of

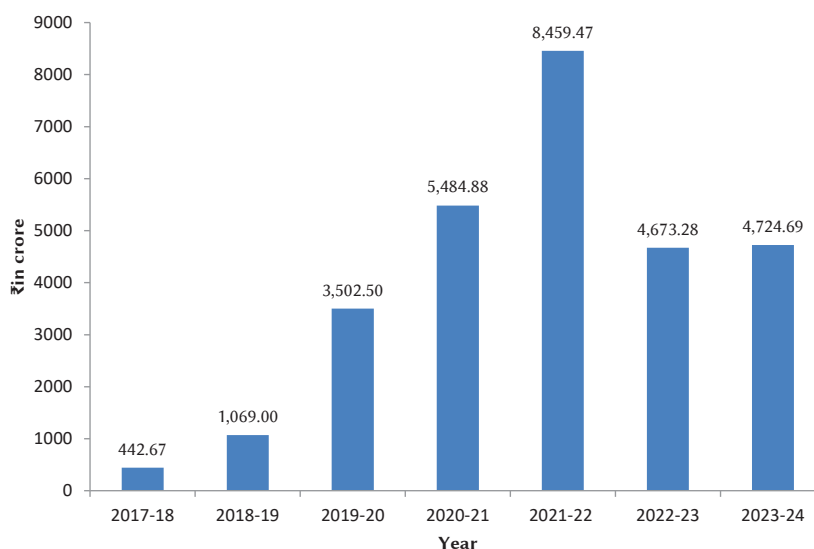
excellence. As of March, 2024, KIIFB has approved tourism projects worth Rs 583.97 crore which includes rejuvenation of Akkulam Lake and its Watershed at a cost of Rs 117.51 crore, Alappuzha heritage Project (Rs 94.36 crore), 20 tourism destination project (Alappuzha and Kannur) and Thalassery heritage project (Rs 78.16 crore). It also funds projects in the Cultural sector (Rs 489.11 crore) including construction of 9 theatre complexes and 7 cultural complexes and development and the expansion of Chitranjali studio into a film city.

### Performance of Project Implementation

KIIFB has completed projects worth Rs 16,472.93 crore as on March 31, 2024. Out of the 1,103 approved projects, 672 projects have been tendered and 625 projects have either been awarded or started by March 31, 2024. By August 31, 2024, the number of projects tendered increased to 677 and the number of projected awarded or started increased to 626.

In 2023-24, KIIFB has released Rs 4,724.69 crore for infrastructure projects and land acquisition. In 2022-23, the total disbursement for these purposes was Rs 4,673.28 crore. The total disbursements towards various KIIFB approved projects including land acquisition have reached Rs 28,356.49 crore as of March 31, 2024. The details of fund disbursement is provided in **Table 11.7.3**.

**Figure 11.7.2** Annual amount disbursed by KIIFB, as on March, 31, 2024, Rs in crore



Source: KIIFB

**Table 11.7.3** Disbursement of KIIFB Approved Projects under Infrastructure Projects and Land Acquisition pool from 2016-17 to 2023-24, Rs in crore

Sl. No	Projects	No. of projects	Amount approved*	Amount disbursed*
1	Infrastructure Projects	1,103	66,170.24	18,743.01
2	Projects under Land Acquisition Pool	7	20,000.00	9,613.48
<b>Total</b>		<b>1,110</b>	<b>86,170.24</b>	<b>28,356.49</b>

\* as on 31.08.2024

\*\* as on 31.03.2024

Source: KIIFB

KIIFB has disbursed an amount of Rs 9,613.48 crore till March 31, 2024 exclusively on land acquisition projects which constitutes 33.9 per cent of the total disbursement of which, Rs 5,580.74 was for National Highways. Apart from Rs 855.12 crore for the Transgrid 2.0 in 5 locations, KIIFB also funds an amount of Rs 1,479.23 crore for the development of Petro Chemical Park & Industrial Park by takeover of land from Hindustan Newsprint Limited, and for Life Science Park in Thiruvananthapuram. Total amount disbursed by KIIFB as on March 31, 2024 is given in **Figure 11.1.2**.

Investing in infrastructure is a key driver of economic growth and KIIFB's infrastructure initiatives have been instrumental in boosting State's efforts in this direction. Sustaining this push for infrastructure is sure to elevate the State into a higher growth trajectory.





## 11.8 SPECIAL DEVELOPMENT PACKAGES

### **KASARAGOD DEVELOPMENT PACKAGE**

The Kasaragod Development Package envisions comprehensive development of the District through multi-sector infrastructure developments. Government of Kerala has appointed Dr. P. Prabhakaran commission to prepare an integrated development Plan for Kasaragod. The commission identified various backward sectors and areas and put forth a package accordingly. The package has a total outlay of Rs 11,123 crore covering various sectors, of which, Rs 2,525 crore is proposed as Government of Kerala's share, Rs 756 crore as Government of India's share, Rs 543 crore as external agencies share, Rs 7,264 crore as Central PSUs share and Rs 35 crore as a share from other sources.

The projects under Kasaragod Development Package commenced in 2013-14, Rs 92,695 lakh has been allocated in the State Budget for the implementation of Kasaragod Development Package up to 2024-25. From 2013-14 to September 2024, a total number of 675 projects with an outlay of Rs 90,288 lakh were sanctioned under the package, of which, 504 projects have been completed and 171 projects are in various stages of completion.

The Kasaragod Development Package envisages comprehensive development of all sectors, including physical and social infrastructure. During 2023-24, 141 projects were sanctioned in various sectors, such as Agriculture, Animal Husbandry, Harbour Engineering, Health, Industries, School Education, Social Justice, Sports and Tourism.

During the period from 2022-23 to August 31, 2024, the major thrust was given to infrastructure development in health and education. In the health sector, projects aimed at upgrading Primary Health Centres (PHCs), Family Health Centres (FHCs), and Community Health Centres (CHCs). These upgrades include new building constructions, state-of-the-art equipment and machinery, electrical and electronic accessories, sewage treatment plants, and secure compound walls. As a result, the public are availing improved amenities and enhanced healthcare services, particularly in rural areas. In education, major projects for upgrading infrastructure in Government schools include adequate classrooms, laboratory spaces, sanitation facilities, dining options, assembly halls, and secure compound walls. These initiatives would ensure a conducive learning environment.

In the irrigation and water conservation sector, major projects include the construction of regulators, rubber check dams, check dams, Vented Cross Bars (VCBs), ring check dams, sheet check dams, and rejuvenation of rivers. These projects aimed at raising groundwater-level, improvement of irrigation facilities, water conservation and to bring more areas under cultivation in the district. In the Social Justice sector, for the welfare of women and children, the construction of 38 smart anganwadi were initiated with the financial support of Women and Child Development Department and concerned LSGIs.

The Government constituted a District-Level Committee (DLC) consisting of 16 members

under the chairmanship of the District Collector for granting administrative sanction for projects below Rs 5 crore under Kasaragod Development Package. At the State-level, the State-Level Empowered Committee (SLEC) under the chairmanship of Chief Secretary and State Planning Board review the implementation progress of the projects on a regular basis. The physical and financial status of implementation of Kasaragod Development Package is given in **Table 11.8.1** and **11.8.2**.

**Table 11.8.1** Kasaragod Development Package – Financial Progress as on September 30, 2024.

Financial year	Budget Outlay (in lakh)	A.S amount (in lakh)	Expenditure (in lakh)
2013-14	2,500	2,790.67	2,390.81
2014-15	7,500	9,332.94	6,210.80
2015-16	8,500	9,751.49	5,711.93
2016-17	8,798	14,299.84	8,243.30
2017-18	9,000	7,629.72	3,307.33
2018-19	9,500	7,882.22	275.27
2019-20	9,065	9,048.73	2,102.91
2020-21	7,500	7,500.00	4,932.17
2021-22	7,832	7,892.57	6,480.64
2022-23	7,500	7,477.77	5,305.78
2023-24	7,500	6,315.74	7,172.12
2024-25	7,500	366.33	1,918.32
<b>Total</b>	<b>92,695</b>	<b>90,288.01</b>	<b>54,051.39</b>

Source : District Administration Kasaragod

**Table 11.8.2** Kasaragod Development Package – Physical Progress, as on September 30, 2024.

Financial year	Project Sanctioned	Project Completed	On-going Projects
2013-14	28	28	0
2014-15	24	23	1
2015-16	76	75	1
2016-17	81	80	1
2017-18	62	58	4
2018-19	78	74	4
2019-20	54	49	5
2020-21	69	58	11
2021-22	62	41	21
2022-23	60	14	46

2023-24	61	3	58
2024-25	20	1	19
<b>Total</b>	<b>675</b>	<b>504</b>	<b>171</b>

Source : District Administration Kasaragod

### SABARIMALA MASTER PLAN

The Sabarimala Master Plan approved in 2007 aims to develop the Sabarimala temple and the surrounding region located mostly in the Periyar forest reserve. In addition, the Master Plan aims at ensuring environmental sustainability while providing a pleasant experience for pilgrims. The pilgrim's comfort, sanitation and safety are the three major concerns. The projects have been initiated to provide sustainable basic infrastructure facilities to the pilgrims, protect livelihood security of the people and safeguard the environment. Pampa, Sannidhanam, and Nilakkal are the key areas that need to be developed.

A High Power Committee has been constituted by the Hon'ble High Court of Kerala to coordinate, implement and monitor the various projects of the Master Plan. The Sabarimala Master Plan has completed key projects including *Darshan Complex*, Godown for Storage of *Prasadam* Articles, a sewage treatment plant, a food hall for 5,000 pilgrims, and water storage tanks. Ongoing projects include police infrastructure and a bio-gas plant. The upcoming Plan will focus on pedestrian walkways, administrative buildings, a rescue bridge, establishment of ropeway for conveyance of materials from Pampa to Sannidhanam, and water supply improvements. For conducting various infrastructure activities, Rs 3,000 lakh was allocated in 2023-24.

### IDUKKI DEVELOPMENT PACKAGE

The Kerala Government has introduced the Idukki Development Package, aimed at addressing the developmental challenges faced by the Idukki District. This initiative seeks to promote balanced and holistic growth, focusing on social, economic, and environmental sustainability.

The package is designed to leverage the district's unique geographic and tropical conditions, along with its rich natural resources. Key sectors targeted for development include:

- Agriculture and Dairy Development.
- Tourism.
- Empowerment of Backward Classes.
- Power.

- Irrigation.
- Soil and Water Management.

Recognising the demographic and geographic diversity of Idukki, the package prioritises the expansion of social infrastructure. It aims to enhance access to education, healthcare, and various social initiatives for underprivileged communities.

This comprehensive development strategy represents a significant step towards achieving sustainable progress in Idukki and ensuring that growth benefits all segments of the population.

The Government of Kerala has issued a detailed guideline for the smooth functioning of the projects under the Idukki Development Package. An amount of Rs 75 crore is being earmarked year on year basis since 2022-23. The Government has constituted a District-Level Committee (DLC) under the chairmanship of the District Collector for issuing administrative sanction for projects below Rs 5 crore under Package. At the State-level, the State-Level Empowered Committee (SLEC) under the chairmanship of the Chief Secretary and State Planning Board reviews the progress of the implementation of projects under the package regularly. The SLEC is also entrusted with the approval of the project having financial outlay of more than Rs 5 crore. A District-Level Technical Committee headed by the District Collector is authorised to issue technical sanction for the work under the Idukki development package without financial limit.

Since the commencement of the package, ten projects worth Rs 36.3 crore have been sanctioned. In the initial years, priority was given to the education, water conservation, and tourism sectors, in the light of their vital roles in promoting sustainable development and improving the quality of life in the region. Key initiatives included establishing an Ayurvedic medical hospital, creating model Anganwadis in tribal areas, enhancing staff quarters, and advancing dairy development. Throughout this period, there was a strong focus on completing essential soil conservation projects to protect agricultural land and promote water conservation. Additionally, significant progress was made in developing education and tourism. All the sanctioned projects under the package are in progress.

## **WAYANAD DEVELOPMENT PACKAGE**

Wayanad package is a special development package for comprehensive development of Wayanad. The development programmes mainly focus on agriculture, tourism, social and physical infrastructure, including road networks, health facilities. An integrated approach is ensuring forward and backward linkages, filling of critical gaps, ensuring better price and market for farming community, income and livelihood, quality service delivery, eco-restoration, and research and development. Since 2022-23, Rs 75 crore has been earmarked year on year basis. The District Collector is the Coordinator and the District Development Commissioner is the Special Officer of the projects ensuring implementation of the projects.

The Government has constituted a District-Level Committee (DLC) under the chairmanship of the District Collector for issuing administrative sanction for projects below Rs 5 crore under the Package. At the State-level, the State-Level Empowered Committee (SLEC) under the chairmanship of the Chief Secretary and State Planning Board reviews the progress of implementation of projects under the package regularly. The SLEC is also entrusted with the approval of the project having a financial outlay of more than Rs 5 crore. A District-Level Technical Committee headed by the District Collector is authorised to issue technical sanction for the work under the Wayanad package without financial limit. Since the commencement of the package, 17 works worth Rs 68.58 crore have been sanctioned. In the Agriculture sector, the projects are envisaged for increasing the production of crops and providing early weather alerts. In the education sector, projects have been taken up for increasing the infrastructure facility and establishment of an online examination centre for competitive exams and higher studies. Two projects are implemented under the package to address human animal conflict. In the tribal sector, projects are focusing on increasing the hostel facilities of tribal children. In the health sector, the project for modernising the cancer care treatment in the district has been undertaken. Tourism promotion and dairy development are also given importance. All the works are in various stages of progress and have been reviewed at the district and State-level. The package will specifically address the unique needs of the area in the light of the landslide in Wayanad.



CHAPTER

12

LOCAL GOVERNMENTS  
AND DECENTRALISED  
PLANNING



# LOCAL GOVERNMENTS AND DECENTRALISED PLANNING

*In an era of globalisation, decentralisation is the principal countervailing trend to ensure that the growth process is pro-poor, pro-women, pro-nature, and pro-jobs. As market integration and technological innovation render the national frontiers more permeable, it is crucial to put in place and strengthen systems of negotiation, regulation, and decentralised governance<sup>1</sup>.*

Kerala has faced multiple challenges in the 13th Five-Year Plan period in the form of extreme weather events, the pandemic, fiscal stress, and other setbacks including adverse policy moves by the Central Government. This, coupled with global events, has detrimentally impacted the State's economy. Almost all the growth-propelling sectors were severely hit. The 14th Five Year Plan aims to revive the lost momentum of growth and push the economy to a higher growth trajectory by applying state-of-the-art science and technology in the productive sectors, imparting modern skill sets to the youth, and improving higher education and fostering innovation and entrepreneurship. This is envisaged as a broad strategy to help the State evolve into a knowledge society and economy. Given the magnitude of transformation required to revive the economy, it is essential to energise grassroots institutions, particularly Local Governments. Local Governments, the primary interface of citizen's interaction with the government, have a quintessential role in the State's economic revival.

This new situation has necessitated added emphasis on specific vital sectors. Besides facilitating employment generation in the secondary and service sectors, Local Self-Governments (LSGs) must promote scientific natural resource management, and inclusive development. Other major interventions include poverty eradication, enhancing the quality of service delivery, and ensuring social security of all marginalised sections of the society.

The Government of Kerala has unified four Missions: Haritha Keralam (Green Kerala), Livelihood Inclusion Financial Empowerment (LIFE), Aardram (dealing with health), and *Pothu Vidyabhyasa Samrakshana Yajnam* (dealing with school education, now renamed Vidya Kiranam) into a single *Nava Kerala Karma Paddhathi 2* (New Kerala Action Plan, or NKKP) to harness the efforts of different development agencies and LSGs to accomplish the above objectives.

This chapter deals with the objectives and priority areas for Local Self-Governments in the 14th Five Year Plan concerning Plan formulation and projectisation, and includes significant initiatives undertaken by the Government in the initial years of the Five-Year Plan to attain these objectives, and the Plan performance of the Local Governments.

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<sup>1</sup>UNDP. (n.d.). *Decentralisation in India: Challenges and Opportunities. Discussion paper*



**Priorities in the 14th Five-Year Plan:** As stated earlier, the main objectives of the State in the 14th Five-Year Plan is to accelerate the growth of productive forces of the economy based on science, technology, modern skills and innovation as well as to improve strengths in social investment, social welfare, social and gender justice to ensure inclusive and sustainable growth, guaranteeing better standards of living for the people. LSGs en route to achieving better economic growth will foster entrepreneurship development and establish community-level facilitation and incubation centres by harnessing resources from various sectors, particularly the cooperative sector, for establishing infrastructure facilities and different supply and value chain management systems. The approach to the 14th Plan had the following priorities for LSGs:

- Innovative programmes will be devised to create employment opportunities and tap into potential employment opportunities within and outside the country through massive skilling and placement programmes.
- LSGs will strengthen and diversify citizen service delivery and a host of vital services will be provided at the doorsteps of people whose mobility is constrained or reduced due to ageing, illness, disability and other limiting factors.
- The natural disasters that ravaged the State perceptibly due to climate change must be scientifically studied to evolve mechanisms to mitigate them efficiently. LSGs will formulate long-term and short-term action plans to build resilience to climate change.
- LSGs will focus on developing projects that align with the goals and outcomes of the Sustainable Development Goals declared by the UN. In this process, LSGs will translate the SDGs to Local Action Programmes and monitor the progress of accomplishment of these objectives at the micro level.
- LSGs will squarely address issues related to growing urbanisation in the 14th Plan. In this regard, LSGs will encourage households to adopt efficient solid waste management techniques and establish adequate infrastructure facilities for recycling and reuse. More importantly, the issues of liquid waste management will be addressed by soliciting the cooperation of communities and employing state-of-the-art technologies.
- During the 14th Plan period, the Government aims to wipe out extreme poverty in the State.

Eradication of extreme poverty was an essential assurance of the Government, for which the Extreme Poverty Sub-Plan has been devised.

- In addition to the above, social justice, gender equality, and ensuring the quality of health and education services are the other key focus areas for LSGs, in the 14th Plan.

### **Major initiatives in the 14th plan**

In line with the priorities of the 14th FYP, the Government has initiated the following programmes to equip LSGs to formulate and implement projects in key focus areas. Detailed guidelines were issued to facilitate this process at the local-level by specifying mandatory allocations, suggesting probable integration of resources, and issuing specific guidelines to attain the desired targets.

#### **1. Local Economic Development-LED Plan:**

Regarding local economic development, LSGs had previously concentrated on providing subsidy assistance and revolving funds to employment-generating enterprises, providing training, helping construct basic infrastructure, etc. However, realising that the attempts to build a conducive entrepreneurship-promoting ecosystem at the State-level is inevitable for employment generation, projects to foster entrepreneurship development and employment generation have been initiated. LSGs now provide financial assistance and advisory support to entrepreneurs. Provisions for interest subsidy for loans, transfer of technology fund, technology upgradation fund, innovation fund, incubation fund, crisis management fund and seed support scheme have been devised to support the development of enterprises in LSGs.

LSGs can also support establishing connectivity and access to enterprises that generate adequate direct employment. New institutional arrangements like an entrepreneurship and employment development council, technical committees, and help desks have been set up locally to clear the hassles of establishing enterprises for innovators and entrepreneurs. It is anticipated that the LSGs will now transform into a single-window clearance mechanism and facilitation centre for entrepreneurship development. All the functional components of entrepreneurship development, skilling, self-employment, and employment generation would be integrated locally. This is a breakthrough in local governance in Kerala, as LSGs are geared to enter new domains of

development with these new systems in place. The Government of Kerala had declared 2022-23 as the year of entrepreneurship to start one lakh micro, small, and medium enterprises (MSME) in the State. This campaign attracted significant attention, and within 245 days, the target was achieved. In 2022-23, 119839 new MSMEs were established in the State with an employment generation of 300049. In 2023-24, another one lakh enterprises have been started (1,03,596 enterprises) with an employment generation of 2,18,179. For this, 1,153 professionally qualified interns were recruited through the Centre for Management Development and were assigned to the LSGs (one each in every Grama Panchayat and one each in every 20 Wards in the Municipality or Corporation ).The interns, coordinated by the Industrial Extension Officers of District Industries Centres/ Taluk Industries Centres, would assist the entrepreneurs in applying for licenses, subsidies and loans, preparing bankable projects, procuring technologies, etc., with the help of various agencies and departments. The interns are assigned specific targets for identifying and registering new enterprises in their LSGs. In addition, help desks to provide solutions to the public and entrepreneurs have been established in 1034 LSGs across the State. The Industries Department has formed MSME clinics, assisted by 168 empanelled subject matter experts to advise entrepreneurs on marketing, finance, GST, export/import, banking, licenses and approvals, legal, and technical aspects. Further, the 59 Taluk Industries Centres have been converted into Enterprise Facilitation Centres for which professionally qualified resource persons have been appointed. In line with the broader strategy adopted for the One Lakh Enterprises Scheme, the Department of Industries and the Department of Local Self Government have jointly undertaken a scheme called the One Local Body One Product (OLOP) scheme. As part of the scheme, a detailed list of products based on the availability of resources at each LSG has been prepared through a feasibility study conducted by the District Industries Centres at each district. Since Kerala is endowed with rich natural resources, structured production and marketing of products identified under the OLOP scheme would aid in identifying global markets for local products and ensuring fair prices for them. It is expected that farmers and entrepreneurs who are engaged in the value addition of these products would get significantly high returns. All these initiatives would be complemented and

strengthened by the new institutional mechanisms at the LSGs to support entrepreneurship.

## **2. Malinyamuktham campaign for waste management:**

In 2017, the Haritha Keralam Mission was launched as one of the developmental missions under the *Nava Keralam Karma Padatbi*. Sustainable and scientific waste management was one of the major goals of the mission. In 2022, the *Navakeralam Vrithiyulla Keralam* State Action Plan was rolled out to make the State garbage and litter-free by 2025. It integrated the annual pre-monsoon cleaning drive and, similar existing initiatives. The Brahmapuram incident and the subsequent High Court intervention lent significant momentum to the Government's waste management endeavours.

The *Malinyamuktham Navakeralam* campaign was launched to further intensify the efforts, with an accelerated deadline of March 2024. Phase I of the campaign (March 15 - June 5, 2023) focused on ensuring 100 per cent segregation of all waste at source, complete door-to-door collection of non-biodegradable waste, scientific processing of all biodegradable waste, cleanliness and hygiene of all public spaces and removal of garbage heaps, and the cleaning up of all water bodies and restoration of their ecological flow.

Phase II of the campaign, which drew to a close on November 30, 2023 primarily aimed at ensuring the essential infrastructure and systems to handle the increased incoming waste resulting from Phase I activities and institutionalising the improvements. Phase III, till March 31, 2024, emphasised sustaining the progress attained while establishing a robust system for processing domestic hazardous waste, sanitary waste, construction and demolition waste. Efforts were also directed towards activities like dumpsite bioremediation, scientific disposal of inerts and rejects from the processing facilities, etc.

As part of streamlining the waste collection and segregation system, 19112 mini-Material Collection Facilities (mini-MCFs), 1233 Material Collection Facilities (MCFs), and 197 Resource Recovery Facilities (RRFs) have been established across the State. Projects for further expanding the above infrastructure have been taken up by LSGs and are currently in the implementation phase. State and district-level technical committees have been formed to expedite the technical sanctioning process for waste management projects.

Haritha Karma Senas (HKS), Kudumbashree's micro-enterprises, spearhead the doorstep collection of non-biodegradable plastic from households and establishments. Waste collected by the HKS is sorted by them at MCFs and further separated and processed at RRFs. The plastic waste sorted and separated at these facilities is recycled, sent to cement kilns or energy plants, or used in road works. Instructions have been issued to all LSGs regarding the use of shredded plastic in local road works.

With the Government issuing an order making user fee payment mandatory, LSGs have significantly expanded the coverage of households and commercial establishments. As many as 422 LSGs have achieved over 90 per cent coverage of households and institutions, while 298 LSGs have achieved 75-90 per cent coverage of households and institutions in their area. Since the campaign's inception, there has been a substantial increase in the volume of waste reaching MCFs and RRFs. Clean Kerala Company and 41 private agencies have been entrusted with the task of collecting waste from the MCFs/RRFs in a timely manner for onward linkage.

To achieve 100 per cent scientific processing of biodegradable waste at source, the campaign has facilitated the setting up of individual and community-level composting solutions. At the individual level, more than 70 per cent of the households across the State use one or the other composting method to manage organic waste. At the community level, 634 biogas plants, 488 vermi-compost plants, 144 windrow compost plants and 1,412 *thumburmuzhi* plants, including 3,949 *thumburmuzhi* bins, have been set up. Across the State, 43 poultry waste rendering plants have become functional in a public-private-partnership model. Effective management of poultry waste has helped address a range of issues, including water pollution and a rise in the street dog population in the State.

To ensure clean and hygienic public spaces, Garbage Vulnerable Points (GVPs) have been identified, geo-tagged, and cleared and are constantly monitored to curb further dumping. A total of 2,928 garbage dumps on land, 485 garbage dumps in water bodies and 2,736 roadside garbage dumps were identified in the state. So far, 96 per cent progress in clearing of GVPs has been reported. Citizen involvement is actively

encouraged through rewards for reporting littering or dumping in public spaces and water bodies. All districts have formed enforcement squads to ensure ground-level compliance with waste management rules.

LSGs have been directed to conduct periodic social audits of their campaign-related projects, emphasising transparency and accountability. *Haritha Sabbas* serve as platforms for citizens to take stock of and critically evaluate the progress of the activities carried out during the campaign. On Children's Day, Children's *Haritha Sabbas* were held in all LSGs to nurture the participation of students in waste management. Children were encouraged to assess the existing facilities and raise questions to local body officials and people's representatives.

The Suchitwa Mission has deployed the services of young professionals to support and strengthen the waste management projects of LSGs. The National Service Scheme is proactive in bringing in student participation. The NSS has identified 3,000 GVPs and is transforming them into beautiful green spaces named *sneharamams*, committed to keeping them clean and well-maintained.

The Government has introduced a policy for the effective management of construction and demolition waste in line with the Construction & Demolition Waste Rules of 2016. Based on it, LSGs have started setting up C&D waste collection centres. The Kerala Solid Waste Management Project (KSWMP) has identified potential locations throughout the State for setting up C&D storage facilities.

Model Plastic Waste Management By-laws for LSGs have been issued, based on which all Grama Panchayats and Urban LSGs have formulated their plastic waste management by-laws. These by-laws aim to prevent contamination of water bodies and channels from the accumulation of plastic waste, maintain government offices and other public institutions plastic-free, etc.

The Kerala Panchayat Raj (Amendment) Ordinance, 2023 and the Kerala Municipality (Amendment) Ordinance, 2023 have been passed to empower LSGs to carry out their waste management functions effectively. The ordinances introduce substantial fines for violations of waste management rules. They place responsibility on organisers of events with 100 or more attendees

to segregate waste at the source and deliver it to the designated agency for proper disposal. Additionally, they include tax exemptions and welfare programmes for residents in proximity to centralised waste treatment centres.

The Government is actively formulating pivotal policy interventions, including a scrapping policy aimed at engaging with the informal sector of scrap collectors and dealers and a policy on private-public partnerships to facilitate and accelerate collaboration with private-sector partners in waste management. The Green Enterprises initiative aims to enhance the State's business environment and foster entrepreneurship in the waste management sector. A collaborative framework, involving various stakeholder departments, institutions, and agencies, is being established to support and guide promising initiatives in this field.

Efforts are underway to establish guidelines for the management of hair waste and e-waste. The operationalisation of Extended Producer Responsibility (EPR) is also in progress. Moreover, the Government is working on developing a protocol for the efficient management of material collection and sorting infrastructure. The policy governing the licensing of pig farmers is also being reviewed as pig farmers have become crucial endpoints for institutional food waste.

The tourism sector is a top revenue earner for the State, and special focus is given to preserving the aesthetic beauty and cleanliness of tourist destinations. A comprehensive mapping of all major tourist destinations in the State has been conducted, assessing their existing waste management facilities. Gaps identified in these facilities will be addressed to transform these destinations into zero-waste zones in the near future.

The slogan 'My Waste is My Responsibility' is being widely propagated through direct personal and public contact, mass media and social media to attain the goal of garbage-free Kerala. It has also been insisted that the public meetings of LSGs should be preceded by taking an oath expressing the commitment to properly handle waste, reduce the use of plastic and abstain from littering public places.

### **3. Extreme Poverty Eradication Programme**

As part of the Government's resolve to eradicate extreme poverty in the State, the task of identifying the extremely poor was completed with people's participation. Out of the 64,006 families identified as extremely poor in the State, around 50 per cent have been lifted out of extreme poverty through the concerted efforts of the various development departments and LSGs. Specific Micro-Plans to provide food, shelter, livelihood, entitlement, and medical assistance were formulated based on the status of impoverishment and other key information collected from each identified household. The Micro-Plans are being zealously implemented by development departments under the leadership of LSGs. Details are given in section 13.1, Indicators of Poverty.

### **4. Urbanisation**

In the wake of increasing urbanisation in the State, development issues related to urbanisation have been given special emphasis in the 14th Five-Year Plan. The National Commission on Population has estimated that Kerala's urban population will touch 96 per cent in 2036, double the national and global urbanisation rates. In this context, the Government of Kerala has set up an Urban Commission, which is drafting an urban policy to guide development in urban areas.

Each city's geographical, historical, and social peculiarity must be considered in the planning process. The guidelines for preparing annual plans of urban LSGs also clearly outline the key areas to focus on while preparing local plans. They include the preparation of parking grounds, road safety, modernisation and beautification of urban centres and junctions, setting up of parks, playgrounds and other grounds for exhibitions and fairs, slum development, rejuvenation of ponds and other water bodies, public toilets, space for street vendors, etc. LSGs are actively taking up many such activities to ensure ease of living and a better standard of living for the citizens in urban areas.

The 15th Union Finance Commission has recommended that 60 per cent of the grants to rural LSGs and urban LSGs in non-Million-Plus cities should be tied to supporting and strengthening the delivery of two categories of basic services: (a) sanitation, maintenance of ODF status (for rural local bodies), solid waste management and attainment of star ratings as developed by MoHUA (for non-million plus cities/

Category-II Cities/Towns; (b) drinking water, rainwater harvesting and water recycling (both for rural local bodies and urban local bodies). The FC has recommended that for cities with a million-plus population (Million-Plus cities), 100 per cent of the grants are performance-linked through the Million-Plus Cities Challenge Fund (MCF). LSGs must now use these provisions by integrating them with the various Missions for urban development.

### **5. Disaster Management Plans**

Over the last few years, frequent natural disasters such as floods, coastal erosion, droughts, and landslides have been affecting the State, posing serious challenges to the livelihood security of common people and overall economic development. To mitigate the impact of such disasters and to improve disaster preparedness, all Grama Panchayats and urban LSGs in the State prepared local disaster management plans in 2019-20, for the first time in the country. The disaster management plan of LSGs includes: a) profile of the LSG, b) hazard and vulnerability profile, c) capacity and resources of the LSG, d) response plan, and e) preparedness, mitigation, and community resilience plan. It has been insisted that LSGs include disaster management and mitigation projects in their annual plans, considering the level of susceptibility to natural disasters and the existing capacity to tackle them. In view of the intensity, frequency, and uncertainty of natural disasters ravaging the State, the Disaster Management Plan of LSGs is a novel and appropriate measure taken by the Government. This not only disseminates the importance of building resilience but also sensitises the community to plausible pathways to achieve it. To a considerable extent, Kerala has successfully created general awareness of the need to address climate-related issues.

### **6. Tourism**

The 14th Five Year Plan has placed a strong emphasis on tourism to revive the economy from the effects of the pandemic. In view of this, programmes, Destination Challenge, Responsible Tourism and Sustainable Tangible Responsible Experiential Ethnic Tourism Hubs (STREET) are being implemented by LSGs in collaboration with the tourism department. The STREET project intends to bring in tourism initiatives that suit the culture and geography of the region. These include green streets, cultural streets, ethnic cuisine/food streets, village life experience/experiential tourism streets, agri-tourism, water, and arts streets. By encouraging civic administrations to locate and

develop at least one travel destination within their boundary, the Destination Challenge strives to explore locations that have tourism potential but have remained unnoticed or ignored. Maintaining such locations by implementing income-generating activities would lead to better local economic development. The initiatives to insist on responsible tourism reduce the environmental impact of the influx of tourists and activities thereof. One of the components is to introduce travellers to rustic spots in Kerala to ensure income for the residents of such locations. For this, the Department of Tourism will bear 60 per cent (subject to a maximum of Rs 50 lakh – of the total project cost, while the LSGs will have to contribute the remaining amount, either from their own funds or through sponsorships. Besides identifying at least one destination under each LSG, the initiative envisions linking tourism activities with various LSG projects, giving impetus to domestic tourism, which has gained popularity after the pandemic.

In 2023, Kanthalloor village panchayat in Idukki district bagged the prestigious ‘Gold’ award from the Government of India for the best rural tourism projects. In 2024, Kerala’s Responsible Tourism (RT) initiatives have placed the State in the national spotlight for the second consecutive year, receiving two prestigious awards on World Tourism Day for the Best RT Village and the Best Agri-tourism Village for the initiatives at Kadalundi and Kumarakom, respectively.

### **7. Local Action Plans on Climate Change**

The preparation of Local Action Plans for Climate Change (LAPCC) has been completed by 217 LSGs in Pathanamthitta, Alappuzha, Kottayam, and Idukki districts. These districts in the Pampa river basin had experienced substantial adversities during the floods of 2018, 2019, and 2021. The initiative is part of the Rebuild Kerala Development Programme (RKDP), the State’s flagship initiative for rebuilding Kerala into a resilient, green, vibrant, and inclusive region. LAPCC is primarily an action plan prepared by LSGs to address the locally relevant impacts of climate change. They also outline pathways to reduce the carbon footprint of the regional body and pursue sustainable development goals (SDGs).

#### **DCAT Project**

As part of the Rebuild Kerala Initiative, the Government of Kerala has signed an agreement with the World Bank for the period 2021-2026.

Based on this, the Program for Results (PforR) funding programme supported by the World Bank in coordination with various international agencies focuses on LSGs of Kerala. KILA has been given the responsibility of Disbursement Linked Indicators four and five (DLI 4 and 5). DLI 5 of the Rebuild Kerala Initiative (RKI) requires LSGs to integrate climate and risk information into their planning process and annual plans.

KILA constituted a DCAT (Disaster risk reduction and Climate Action Tracker) Core Team to lead the PforR Program and deployed project staff to work at LSG-level in Pathanamthitta, Alappuzha, Kottayam, and Idukki to assist LSGs to achieve these goals. KILA also developed the DCAT tool for steering and capacitating the LSGs to achieving the goals and targets of DLI 5, and to monitor progress. The initial phase of training was conducted for all the LSGs in the project region. Further, thematic and region-specific training and assistance will be provided by KILA to support the LSGs in excelling in climate action and disaster risk reduction.

## 8. Thozhil Sabha

*Thozhil Sabha* has been launched as part of Kerala's initiative to provide the youth with opportunities for employment and entrepreneurship. *Thozhil Sabha* is a micro-level platform to identify job seekers on a Ward-basis, organise them using the Gram Sabha model, and enable job planning on an LSG-basis. *Thozhil Sabha* is the platform to bring employment and entrepreneurship schemes, and programmes of departments and Government agencies directly to job seekers and a new generation of entrepreneurs. The objective of the *Thozhil Sabha* is to guide educated job seekers of Kerala to find jobs inside and outside Kerala, and India, by imparting training as part of the Knowledge Economy Mission under K-DISC. Kudumbashree's new entrepreneurial movement called She-Starts is also be projected in *Thozhil Sabhas* to enable entrepreneurship activities in collaboration with LSGs.

**9. Health Sector:** The involvement of LSGs in healthcare at the primary level has witnessed dramatic improvement after the launch of the Aadram Mission. LSGs contribute to improving and maintaining Primary Health Centre (PHC) and Sub-Centre buildings, purchasing drugs and medical equipment, employing doctors, nurses, and paramedical staff on contract, and supplementing

the honorarium of ASHA (Accredited Social Health Activist) workers. They also provide the bridge between the health department and civil society organisations such as palliative organisations, voluntary food programmes, and Kudumbashree health volunteers. They have an important role in geriatric care, support persons with disabilities, and finance special schools for children with cognitive disabilities. They are in charge of the prevention of vector and waterborne infectious diseases. Given high level of involvement of LSGs in health and related sectors, it was only natural that they played an important role in the fight against COVID-19. Since all the institutions delivering primary care have been transferred to Grama Panchayats and Block Panchayats, LSGs play a crucial leadership role in managing and coordinating the primary care services under its jurisdiction.

LSGs address direct health issues and other social determinants of health like environmental sanitation, drinking water, provision of nutrients, housing, etc. LSGs coordinate all related departments, agencies, missions, and NGOs. The population's health status report (HSR) is prepared by LSGs with the technical support of the FHC team. The HSR and is analysed and the prioritisation of health issues is done before preparing health and related projects. The Government has made earnest efforts to strengthen the healthcare system and take it to the grassroots-level by starting public health and wellness centres apart from upgrading the existing public health facilities like the Primary Health Centres, Taluk Hospitals, and District Hospitals. In addition, the prevention of lifestyle diseases, setting up screening clinics, care for the elderly, palliative care, etc, were given prime importance. Medical camps were started across LSGs to contain the spread of communicable diseases.

The Sustainable Development Goals (SDGs) aim to eliminate all forms of malnutrition by 2030. However, despite significant improvements in economic growth and reduction in poverty, under-nutrition remains chronic and pervasive, as indicated by an inadequate reduction in outcomes and trend reversals, even in regions where better nutritional outcomes were once achieved. Kerala is one of India's better-performing States in terms of malnutrition indicators. According to the latest National Family Health Survey (NFHS-5), in Kerala, 23.4 per cent of children under five are

stunted, 15.8 per cent experience wasting, and 19.7 per cent are underweight. The national averages are 35.5 per cent, 19.3 per cent and 32.1 per cent, respectively. The State also experienced an overall improvement in the underlying and immediate determinants of nutrition in the 15 years covered by NFHS-3, 4, and 5.

LSGs play a crucial role in the implementation and coordination of nutrition interventions in Kerala. A detailed policy guideline is in place, enabling the active involvement of LSGs in scheme implementation. This includes guidelines to strengthen the supplementary nutrition programme, provide therapeutic diet for severely malnourished children, infrastructure development of Anganwadi Centres, parental and premarital counselling, development of smart Anganwadi Centres, transportation, development of special Anganwadi Centres for children with disabilities, preparation of 'nutrigarden' to ensure the availability of vegetables, the commencement of baby gym and yoga training courses, anaemia screening camps, etc.

**10. Elderly care:** One of the features of Kerala's decentralised planning is that the LSGs must mandatorily earmark 5 per cent of the sum total of the share of General sector funds, Scheduled Caste Sub-Plan (SCSP) and Tribal Sub-Plan (TSP) towards the implementation of aged and palliative care projects. While palliative care projects are not meant only for the elderly, a majority of the beneficiaries are elderly. Medical camps for senior citizens, construction and maintenance of Pakalveedu, distribution of food kits and medicines, construction of waiting room for senior citizens in PHC, provision of ayurvedic medicine and specialty clinic for senior citizens, projects for providing wheelchair, cots etc, renovation of old age homes and dementia care centres, dementia screening camps, and construction of a ward for senior citizens in the district hospitals, are some of the projects in the sector. In addition, Pakalveedu, Saymprabha homes and other old age homes, second innings home, are some of the examples of specific programmes for accommodating the elderly and their emotional and social upliftment.

### 11. Pain and palliative care

The State declared its Policy on Palliative care in 2008, which was later revised in 2019. It was decided to implement palliative care under all LSGs, with the involvement of local

health institutions, voluntary organisations, and individuals.

Palliative care is meant to provide support not only to those suffering from terminal and long-term illness such as cancer, heart-lung-kidney disease, paralysis, and those in need of assistance from others (including the elderly and the disabled), but also to their family members who are their caregivers. Palliative care thus focuses on managing pain and providing emotional support to the patient as well as the family.

Each LSG is required to have a primary home care unit for palliative care. Though more units are envisaged if the population of the LSG is high, this usually does not happen due to the costs involved. The Policy envisages that palliative care at the local-level will be provided by a group comprising of the doctor at the health centre, health workers, palliative care nurse, ASHA worker, representatives of voluntary organizations engaged in providing home-based care, volunteers, NSS/NCC/SPC/Red Cross, members of the local educational institutions, etc. However, at present, home visits are usually done by the palliative nurse and the ASHA worker, sometimes accompanied by Ward members. The Policy also envisages the involvement of the Ayurveda, Homeo and Sidha doctors in palliative care activities.

### 12. Women and children

To address the issues faced by women, as well as to initiate development specifically for women and to raise gender equity, the Woman Component Plan has been implemented by LSGs. As part of this, the Gender Resource Centre coordinates activities at the District, Block, and Gram Panchayat-levels. Gender desk and *jagratha samiti* are some of the other initiatives.

Various initiatives have been taken up to ensure the comprehensive development of children. District Early Intervention Centres have been established to detect any sort of disability among children, in early stages. In addition, support for persons with disabilities and transgender people were also given special emphasis in the 14th Plan.

## Plan Performance of Local Governments – 2023-24

### Budget provision to Local Self- Governments for development expenditure for the year 2023-24 (Development Fund)

Development Funds are allocated to LSGs in three categories: General Sector, Scheduled Caste Sub-Plan (SCSP) and Tribal Sub-Plan (TSP). Formula-based devolution has ensured that funds reach every corner of the State, giving more to backward areas, thereby enhancing local area development and improving people’s lives.

An amount of Rs 8,258 crore, including the grant support of Rs 210 crore to Municipalities and Corporations under KSWMP, was earmarked as Plan Grant (Development Fund) to LSGs in the budget estimate for the year 2023-24. Around 27.19 per cent of the State Plan fund was allocated to LSGs as Development Funds. This forms the Plan allocation for local-level development, over which LSGs have full autonomy in deciding priorities, formulating projects and implementing them subject to the Plan guidelines issued by the State Government. Development Funds consisted of Rs 4,009.2 crore under General Sector (Normal share), Rs 2,495.9 crore under 15th Union Finance Commission Grant, Rs 1,341.3 crore under the

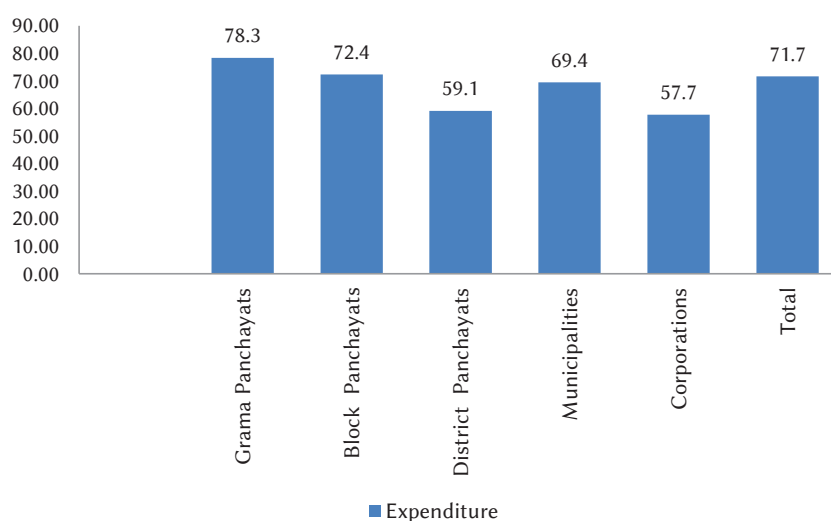
Scheduled Caste Sub Plan (SCSP), and Rs 201.55 crore under the Tribal Sub Plan (TSP).

In 2023-24, the total budgeted outlay under Development Fund for LSGs was Rs 7460.6 crore, excluding health grant. The expenditure was Rs 5,346.5 crore, which was 71.7 per cent of the budgeted outlay. The overall expenditure performance of Grama Panchayats has been 78.3 per cent, 72.4 per cent for Block Panchayats and 59.1 per cent in District Panchayats. Municipalities have expended 69.4 per cent, while for Corporations, it was 57.7 per cent. The tier-wise expenditure details are given in **Figure 12.1.1**.

#### Category-wise expenditure

Of the total expenditure of Rs 5,346.5 crore, Rs 4,276.2 crore was in the general sector, Rs 930.2 crore was in SCP, and Rs. 140.1 crore was under TSP. Grama Panchayats performed well in utilising all three types of funds, spending around 80 per cent of each. Block Panchayats spent between 60 and 80 per cent, and District Panchayats spent around 60 per cent in each. Municipalities have recorded expenditure above 50 per cent in TSP and SCP funds and above 70 per cent in general sector funds. Corporations spent approximately 60 per cent of the General and SCSP funds, but only about 11 per cent of TSP funds. The details are given in **Figure 12.1.2** and **Appendix 12.1.1**.

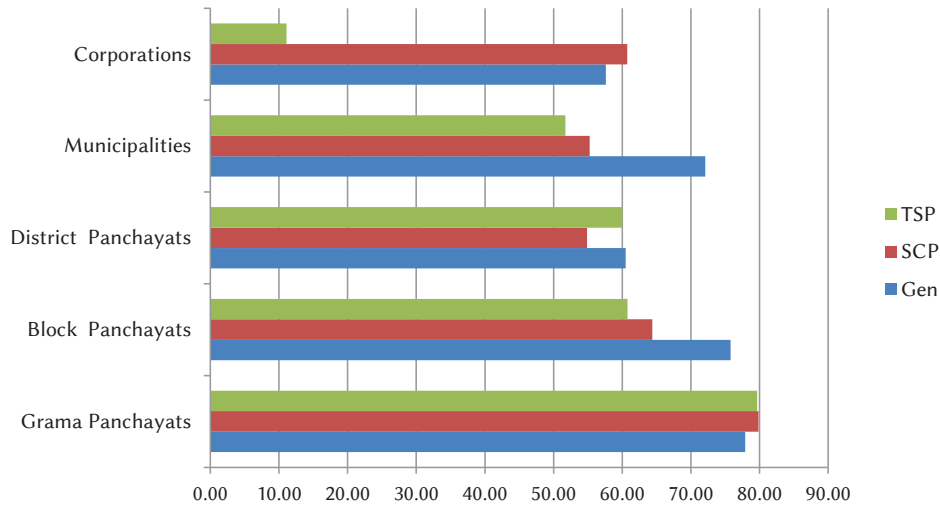
**Figure 12.1.1** Development Fund-Tier wise expenditure against budget amount in 2023-24 (per cent)



Source: Information Kerala Mission 2024



**Figure 12.1.2** Category-wise expenditure of Local Governments against release in 2023-24 (in per cent)



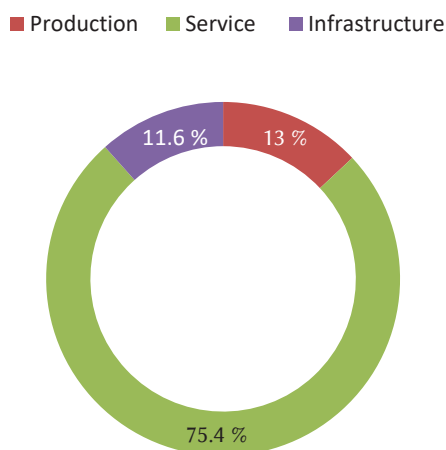
Source: Information Kerala Mission 2024

### Sectoral Analysis

The Annual Plan guidelines for LSGs mandate that funds be allocated in three sectors- production, service, and infrastructure, based on specific sectoral norms. Accordingly, Grama Panchayats, Block Panchayats, and District Panchayats must allocate at least 30 per cent of the normal share under the General Sector Fund to the production sector. However, urban LSGs need allocate only 10 per cent to the production sector from the normal share of the General Sector Funds. All LSGs are required to earmark at least 10 per cent of the total

Development Funds (other than the 15th Finance Commission Grant) for the Women Component Plan, 5 per cent for the welfare and development of children, persons with disabilities, and transgender people, and at least 5 per cent for the welfare of the elderly and for palliative care. Gram Panchayats cannot allocate more than 30 per cent of the normal share in the general Development Funds to the infrastructure sector. The ceiling of allocation in the infrastructure sector is 25 per cent and 45 per cent for Block and District Panchayats, respectively. In urban LSGs, it is 50 per cent.

**Figure 12.1.3** Sectoral share of total expenditure incurred by the Local Governments in 2023-24



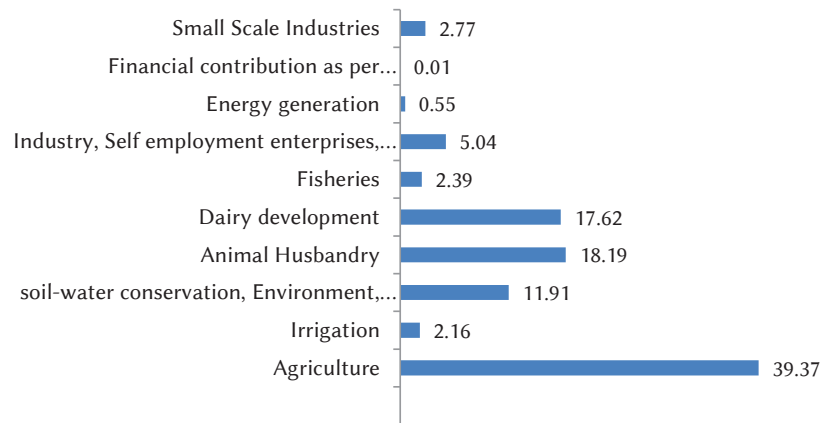
Source: Information Kerala Mission 2023

The sector-wise performance is shown in **Figure 12.1.3**. Of the total expenditure of Rs 5,346.5 crore, Rs 696.2 crore was in the production sector (13 per cent), Rs 4,028.9 crore in the service sector (75.4 per cent) and Rs 621.4 crore in infrastructure sector (11.6 per cent). Details are given in **Appendix 12.1.2**.

### Production Sector

**Figure 12.1.4** shows the subsector-wise expenditure of LSGs in the production sector. Out of the total expenditure incurred in production, the largest share was for agriculture (39.4 per cent), followed by animal husbandry (18.2 per cent), and dairy development (17.6 per cent). For other productive sectors such as industry, small-scale industries, and fisheries, the expenditure was less than 6 per cent, hinting that more attention has to be directed to utilising the resources allocated to these sectors. Details are given in **Appendix 12.1.3**.

**Figure 12.1.4** Sub-sector-wise productive sector expenditure incurred by the Local Governments in 2023-24 (in per cent)



Source: Information Kerala Mission 2024

### Service Sector

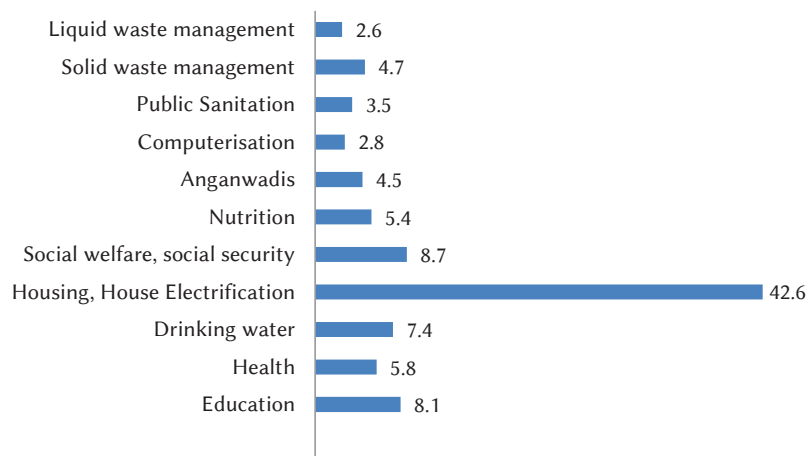
The sub-sector wise expenditure in the service sector by LSGs is shown in **Figure 12.1.5**. The service sector includes housing, education, social welfare, sanitation and waste processing, health, etc. Out of the total expenditure in the service sector, 42.6 per cent was incurred in housing and house electrification, 7.3 per cent in waste processing (2.6 per cent for liquid waste management ,4.7 for solid waste management), 8.1 per cent in education, and 7.4 per cent in the drinking water sector. Allocation for housing by all LSGs is mandatory, and explains the high expenditure in the sector. LSGs have to earmark 20 per cent of the sum total of funds under Normal share of general sector, SCSP, and TSP

towards housing. In addition to this, housing includes expenses incurred for enhancing the unit cost of houses constructed under Pradhan Mantri Awas Yojana (PMAY). Expenditure figures show that LSGs focus more on providing nutrition, housing and house electrification, health, and education. Expenditure in drinking water and sanitation is reflective of the mandatory expenditure in these sectors, as insisted by the Union Finance Commission. Details of sub sector wise expenditure are given in **Figure 12.1.5** and **Appendix 12.1.4**.

### Infrastructure

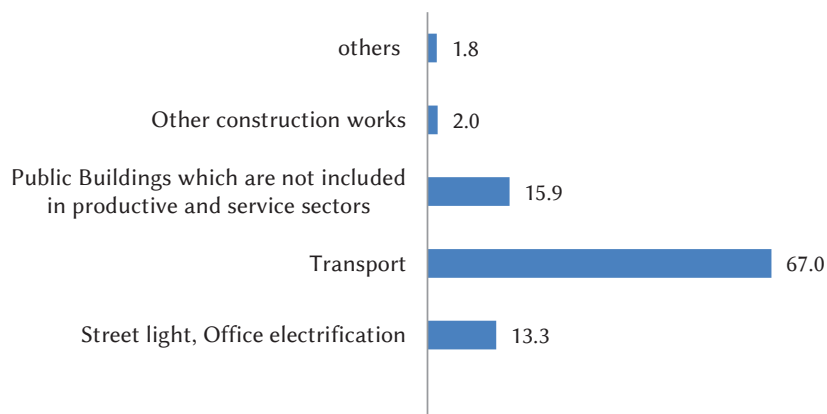
There are seven sub-sectors in the infrastructure sector, including transport, public buildings, street

**Figure 12.1.5** Sub-sector-wise expenditure share of the service sector in 2023-24, in per cent



Source: Information Kerala Mission 2024

**Figure 12.1.6** Sub-sector-wise expenditure share of the infrastructure sector in 2023-24



Source: Information Kerala Mission 2024

lights, etc. In 2023-24, of the total expenditure in the infrastructure sector, a significant portion (67 per cent) has been utilised for transport, including roads and bridges. Public buildings, with 15.9 per cent, and street lights and electrification with 13.3 per cent, are the next highest. Sub-sector-wise expenditure details under the infrastructure sector in 2023-24 are given in **Figure 12.1.6** and **Appendix 12.1.5**.

#### Performance under Special Sector Plans

The Women Component Plan (WCP) and Plans for disadvantaged groups (aged, children, persons with disabilities, palliative care, and transgender people) by LSGs are noteworthy features of Kerala's decentralised planning. LSGs are mandated to earmark 10 per cent of the total Normal share of General sector funds, SCSP, and TSP towards Women Component Plan (WCP), and 5 per cent for children, persons with disabilities, and transgender, and another 5 per cent for the development of elderly and palliative care projects.

The expenditure on WCP in 2023-24 was Rs 209.3 crore. For the special programme for children and for persons with disabilities, Rs 141.0 crore and Rs 57.5 crore, respectively, were spent. Expenditure on projects for the elderly was Rs 94.6 crore, and Rs 80.8 crore for palliative care. On projects for transgender people, the expenditure was Rs 0.2 crore. Details of expenditure for special sector Plans in 2023-24 are given in **Table 12.1.1** and **Appendix 12.1.6**.

**Table: 12.1.1** Expenditure for Special Sector Plan 2023-24 (Rs in lakhs)

SI No	Special Sectors	Expenditure
1	Women Component Plan	20,928.9
2	Special plan for children	14,105.1
3	Special plan for the elderly	9,458.8
4	Special plan for the persons with disabilities	5,755.0
6	Palliative care projects	8,083.6
7	Special Plan for the Transgender people	25.1

Source: Information Kerala Mission 2024

#### Award of 15th Union Finance Commission Grants to LSGs: Possibilities and Constraints

The 15th Union Finance Commission (UFC) has made a significant departure from the previous UFCs in its recommendations, particularly in urban areas. For rural areas, the Commission has recommended grants to all tiers of Panchayats, including Block and District Panchayats; whereas 14th Finance Commission had provided grants to village panchayats only. In a major departure from previous practice, 15th UFC recommended grants to urban LSGs under two categories, (a) Million-plus urban agglomerations/cities, and (b) all other cities and towns with less than one million populations. The guidelines issued by the Government of Kerala for the utilisation of 15th Finance Commission award stipulated that each LSG should prepare a Union Finance Commission sub-plan as per the direction given by the Finance Commission.

However, as per the stipulations of the 15th UFC, flexibility in spending has been reduced considerably. The 14th Finance Commission had given bulk of the funds as 'Basic Grant', and allowed all expenses related to basic civic services including maintenance of community assets and roads- both rural and urban. The 15th Finance Commission, on the other hand, has made all grants to million-plus cities and 60 per cent of grants to other cities and rural LSGs, highly conditional. In addition, these tied grants must be equally divided between water and sanitation.

### Health Grant

The 15th Union Finance Commission, in its final report (Chapter 7- Empowering Local Government), has recommended a total grant of Rs. 4,27,911 crores for LSGs, for the award period 2021-22 to 2025-26. Of this, the Commission has inter-alia decided to provide grants amounting to Rs.70,051 crore to strengthen and plug critical gaps in the health care system at the primary health care level. The UFC has also identified interventions that will directly lead to strengthening the primary health infrastructure and facilities in both rural and urban areas.

In the Eleventh Schedule of the Constitution, health and sanitation, including hospitals, primary health centres and dispensaries, and family welfare, are listed as functions of Panchayats. In the Twelfth Schedule, public health, sanitation, conservancy, and solid waste management are

listed as functions of Municipalities. To achieve the objective of universal health, rural and urban LSGs can play a key role in delivering primary health care services. Kerala has already demonstrated the efficacy of its grassroots-level health service systems, which are bolstered by LSGs. Kerala has made significant strides in building infrastructure facilities for better public health services. Strengthening LSGs regarding resources, health infrastructure, and capacity building would further enable them to play a catalytic role in health care delivery. The components identified for the upgradation of primary health care infrastructure in rural and urban areas in Kerala are listed in **Table 12.1.2**.

### The special window for innovative programmes

One of the prominent features of the 13th Plan was the introduction of a 'Special Window of Innovative Programmes' for designing schemes that are relevant and innovative, but cannot otherwise be taken up by the LSGs. A key objective of decentralised planning is to analyse specific problems in an area and formulate appropriate solutions based on the resource potential of that area. However, it would be difficult to implement many of the projects that are conceptualised within existing norms. It is in this context that this mechanism to examine the feasibility of innovative projects proposed by LSGs has been established.

A District-Level Expert Committee chaired by the District Collector is constituted to examine and

**Table 12.1.2** Details of 15th Finance Commission Health Sector Grants (Rs in crore)

Activities	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Total FC-XV grants	559	559	587	616	647	2,968
<b>Rural components</b>						
Building-less Sub Health Centres, PHCs, CHCs	0.5	0.5	0.5	0.5	0.6	2.6
Block Public Health Units	30.6	30.6	32.1	33.7	35.4	162.4
Support for diagnostic infrastructure to the primary healthcare facilities	89.2	89.2	93.7	98.28	103.2	473.6
Conversion of rural Sub Health Centres and PHCs to HWCs	105.4	105.3	110.7	116.2	122.0	559.8
<b>Urban components</b>						
Support for diagnostic infrastructure to the primary healthcare facilities	11.0	11.0	11.6	12.2	12.8	58.7
Urban health and wellness centres (HWCS)	322.2	322.2	338.3	355.2	373.0	1711.0

Source: Department of Expenditure, Ministry of Finance, GOI

approve innovative projects of the LSGs. These committees also facilitate consultation with domain experts and agencies to find new technical and managerial solutions to resolve development issues.

### **Conclusion**

Kerala has been a leader in participatory and decentralised development, and the model is highly appreciated nationally and internationally. The 14th FYP has focused on strengthening the systems and processes of local governance to suit the emerging requirements of the people and development concerns of communities. As stated earlier, the major objectives are enhancing economic growth, improving service delivery, and improving social security for marginalised sections of society.

Given this, several innovative mechanisms have been formulated during this Plan period. Significant steps include the formulation of District Plans with long-term perspectives, periodic social audits, formation of District Resource Centres, revitalising of grama sabha/ward sabha, attempts to promote local economic development, etc.

It is to be noted that the model of democratic decentralisation in Kerala is being emulated across the country, in a limited manner. The Ministry of Panchayati Raj, GoI, has now asked all states to prepare the annual Grama Panchayat Development Plan (GPDP), which is based on Kerala's experience in decentralised planning. However, this limited model insisted on by GoI does not address the basic issues of devolution of resources, authority and personnel to the LSGs, which were the key features of the people's plan movement in Kerala.

With the implementation of the 14th FYP, there will be significant changes in local economic growth and employment generation at the grassroots level. Significant improvement is anticipated in the field of skill development. Other major initiatives, such as extreme poverty eradication, local action for climate change, disaster management initiatives, effective waste management methods, and focusing on urbanisation, are also being zealously pursued by LSGs. Kerala's LSGs are expected to develop far more effective systems that can take advantage of new opportunities and meet new development challenges.

### **Review of Central and State Programmes Implemented by Local Governments**

Kerala has made giant strides in empowering the Local Governments and institutionalising the process of decentralised planning. The Government of Kerala is committed to sustaining its accomplishments across diverse development sectors and enhancing the people's standard of living through accelerated economic growth, equitable distribution of resources, efficient social security networks and robust service delivery systems. In pursuit of these objectives, the State is focused on revitalising its productive capacities, attracting investments across various development sectors, and building up systems for better management of institutions. These efforts aim to establish a knowledge-based economy where academic, research, and development institutions are empowered to foster innovation. This has necessitated effectively mobilising as many resources as possible, including development schemes of the central governments.

In Kerala, Local Self-Governments (LSG) are pivotal in implementing most State and Centrally-sponsored schemes. The paradigm of decentralised planning followed in Kerala gives immense scope for such integration. LSGs are oriented to integrate local plans with the schemes and programmes of the State and Central governments to enhance the effectiveness of development interventions in various sectors. The Plan formulation guidelines for LSGs specify that wherever possible, similar provisions of schemes and projects must be integrated to harness financial and human resources, and create synergy. This involvement of LSGs makes them integral to the process of implementing schemes, ensuring active public participation, and contribution.

The major centrally sponsored programmes implemented through LSGs are for establishing urban amenities, enhancing rural connectivity, creating sanitation and waste management infrastructure, constructing homes in rural and urban areas, and generating employment and livelihood opportunities. State and Local Governments formulate schemes and projects every year, depending on specific requirements. Centrally Sponsored Schemes (CSS) invariably contain a mandatory contribution from the State. The central share of CSS funds is allotted in pre-determined tranches only when the State share is earmarked beforehand. Stringent conditions in

releasing the central share pose serious practical issues while implementing such programmes, particularly when the States have resource constraints. In some cases, LSGs also contribute to some of the State share. However, the State Government is keen to use the centrally sponsored programmes to supplement the LSG efforts in various sectors. The details of centrally-sponsored and State-sponsored programmes executed by LSGs across various development sectors are discussed below.

### **Infrastructure Development**

The decentralised planning approach adopted by the State has significantly enhanced public investment in rural and urban infrastructure, citizen services, social security, and the service sector. This approach has allowed LSGs to progress considerably in key areas such as housing, road connectivity, access to clean drinking water, sanitation, and drainage systems. These improvements are crucial in enhancing the quality of life and promoting decent living standards, and have undoubtedly contributed significantly to the State's ability to have numerous human development indicators comparable to those of developed countries.

### **Housing**

Over the decades, Kerala has made significant strides in housing, propelled by progressive policies, government interventions, and a strong emphasis on inclusive growth. The State's housing initiatives have addressed basic shelter and the quality of living environments, and promoted equity among diverse social groups. In Kerala, a house is considered an essential physical asset and a foundation for enhancing economic stability, health, and overall well-being, especially for marginalised communities. Kerala's success in providing housing support to people experiencing poverty reassures of the State's unwavering commitment to inclusive growth.

The Government of Kerala is addressing the issue of homelessness among the economically disadvantaged through its flagship programme, LIFE Mission. This initiative aims to integrate and consolidate financial resources of various housing schemes from State and Central governments, with support from LSGs. This step became necessary because the support from Central Government housing programmes is grossly inadequate to meet the housing requirements of the

economically disadvantaged population in Kerala. Furthermore, the initiative acknowledges that homeless individuals require housing and support to sustain their livelihoods and overcome poverty-related barriers. Driven by this understanding, the State Government developed LIFE Mission as a comprehensive strategy to ensure the Livelihoods, Inclusion and Financial Empowerment of the State's homeless populations.

### **Pradhan Mantri Awaas Yojana (PMAY)-Gramin**

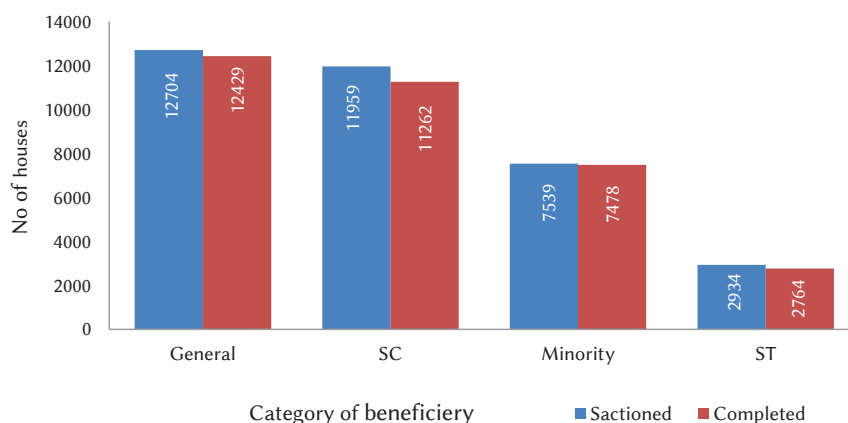
The Ministry of Rural Development (MoRD) has implemented the Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) since April 1, 2016. This scheme aims to assist eligible rural households in building pucca houses with basic amenities. The scheme employs a multi-layered prioritisation framework for eligible beneficiaries, focusing on housing deprivation among different social categories. The identification of beneficiaries under PMAY-G is based on the housing deprivation parameters and exclusion criteria prescribed under the Socio-Economic Caste Census (SECC)-2011. This is followed by due verification by the respective Gram Sabhas and the completion of an appellate process.

The minimum size of the house prescribed by the PMAY-G scheme is only 25 sq mt with a hygienic cooking space. The construction of the house should be completed within 12 months from the date of sanction. The unit assistance of a home under PMAY-G fixed by MoRD is only Rs 1.2 lakh, shared between Central and State Governments in the ratio 60:40 (Rs 72,000 + Rs 48,000).

However, the State Government decided to integrate this programme with LIFE Mission, with the assistance per unit being enhanced to Rs 4 lakh. The balance amount of Rs 2.8 lakhs is shared among Grama, Block, and District Panchayats in the ratio 25:40:35. The cost of construction will be disbursed to beneficiaries in three instalments directly to the Aadhar-linked bank accounts/post office accounts registered in Awaas Soft MIS.

As part of the Rural Mason Training (RMT) initiative, the shortage of trained masons in rural areas is addressed under PMAY-G. It provides training via Short-Term Training (STT) and Recognition of Prior Learning (RPL). The STT

**Figure 12.1.7** PMAY(G) Physical Progress as on August 31, 2024



Source: Principal Directorate, LSG

mode consists of a 45-day programme, and the RPL mode is a 10-day programme for workers from the informal sector.

The target of 22,046 houses, set under the 2011 Socio-Economic Caste Census (SECC) as of September 30, 2023, has been fully sanctioned.

An additional target of 13,090 homes has been sanctioned for Awaas Plus beneficiaries not included in the 2011 SECC list. Altogether, under the PMAY-G scheme, 35,136 houses have been sanctioned, of which 33,933 have been completed. **Figure 12.1.7** depicts the category-wise physical progress of the PMAY (G) scheme.

**Table 12.1.3** District-wise breakup – Sanctioned and completed houses as of August 31, 2024

Sl. No	District Name	Sanctioned					Completed				
		Total Sanctioned	ST	SC	Minorities	Others	Total Completed	ST	SC	Minorities	Others
1	Thiruvananthapuram	5390	129	2090	1306	1865	5241	122	1999	1297	1823
2	Kollam	3072	27	1433	596	1016	2959	26	1340	593	1000
3	Pathanamthitta	1444	28	743	230	443	1393	25	702	229	437
4	Alappuzha	1924	9	769	317	829	1813	8	688	318	799
5	Kottayam	1005	35	296	243	431	946	31	257	237	421
6	Idukki	1926	446	601	349	530	1808	438	533	341	496
7	Ernakulam	1365	67	497	329	472	1334	66	473	329	466
8	Thrissur	2791	17	1208	544	1022	2725	12	1164	539	1010
9	Palakkad	4919	182	1904	945	1888	4780	168	1822	940	1850
10	Kozhikode	2423	36	681	449	1257	2313	34	619	437	1223
11	Malappuram	3925	84	1192	1551	1098	3870	82	1160	1538	1090
12	Wayanad	2305	1182	235	374	514	2178	1105	209	370	494
13	Kannur	1121	150	142	156	673	1098	131	141	154	672
14	Kasargod	1526	542	168	150	666	1475	516	155	156	648
<b>Total</b>		<b>35136</b>	<b>2934</b>	<b>11959</b>	<b>7539</b>	<b>12704</b>	<b>33933</b>	<b>2764</b>	<b>11262</b>	<b>7478</b>	<b>12429</b>

Source: Principal Directorate, LSG

In 2023-24, Rs 42.5 crore was allocated for PMAY-Grameen, with Central and State shares of Rs 25.5 crore and Rs 17 crore, respectively. In 2024-25, Rs 5.2 crore was allocated with Central and State shares of Rs 3.12 crore and Rs 2.08 crore, respectively. This scheme's financial and physical progress in 2023-24 and 2024-25 (up to August 31, 2024) is provided in Appendix 12.1.7 and 12.1.8, in the same order. The district-wise physical progress of the PMAY (G) scheme is given in **Table 12.1.3**.

MoRD has extended PMAY-G from the financial year 2024-25 to 2028-29, retaining the current unit assistance of Rs 1.2 lakh per house. Beneficiary selection will be based on the Socio-Economic Caste Census (SECC), and the AWAAS+ lists compiled at the Grama Panchayat level since 2021.

**Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)**

PM JANMAN is a programme proposed to address the critical gap in the well-being of 'Particularly Vulnerable Tribal Groups' (PVTGs). MoRD surveyed PVTGs residing in the identified districts of Kerala. As part of this, 2,147 households were surveyed through the Awaas+ app, and 1,215 eligible households were registered for the scheme. The first tranche of PM-JANMAN funds, amounting to Rs 3.5 crore, has been released, comprising a Central share of Rs 2.1 crore and a State share of Rs 1.4 crore. The beneficiaries will receive unit assistance of Rs 2 lakh, additional support for unskilled labour wages estimated at Rs 27,000 under MGNREGS and a toilet provision estimated at Rs 12,000 under Swachh Bharath Mission.

Under LIFE Mission, the Government of Kerala has raised the unit cost for Scheduled Tribe families living in distant habitats to Rs 6 lakh, with funding sourced from various tiers, including Rs 75,000 from the Grama Panchayats, Rs 1,20,000 from the Block Panchayats, Rs 1,05,000 from District Panchayats, and Rs 1,00,000 as the share of ST Department.

#### **Pradhan Mantri Awas Yojana (Urban)**

The Pradhan Mantri Awas Yojana (Urban), PMAY (U), initiated in June 2015, is a housing programme to provide all-weather pucca houses to all eligible beneficiaries in urban areas by 2022. The Mission has been extended up to December 31, 2025.

This programme operates through four distinct components:

1. Slum rehabilitation of slum dwellers with the participation of private developers using land as a resource.
2. Promotion of affordable housing for weaker sections through credit-linked subsidies.
3. Affordable housing in partnership with public and private sector
4. Subsidy for beneficiary-led individual house construction.

Since the provision for financial assistance to construct houses in this programme is inadequate, the Kerala Government integrated this scheme with the LIFE Mission. Kudumbashree serves as the nodal agency at the State level for implementing this programme. As per the norms of the Government of India, the cost of a unit under the Beneficiary-Led Construction (BLC) component is Rs 2.5 lakh. Of this, Rs 1.5 lakh is contributed by the Government of India, with the fund released in three instalments (40 per cent, 40 per cent, 20 per cent). The remaining cost is to be met by the State and Local Governments. A home insurance cover of Rs 4 lakh for three years is provided for the houses, with the premium covered by the State Government. Under this, 63,449 PMAY (Urban) houses have been included.

Under the Affordable Housing Project (AHP), the average cost per dwelling unit is Rs 10.5 lakhs, the Central share of the component being Rs 1.5 lakhs, Rs 6.50 lakhs as the State share, and Rs 2.5 lakh is the share of the urban local government. It is to be noted that the State meets the major share of the assistance to beneficiaries in all these programme components.

In the financial year 2023-24, PMAY (U) was allocated Rs 416 crore, of which Rs 312 crore was the Central share and Rs 104 crore was the State share. For the financial year 2024-25, the allocation was increased to a total of Rs 532 crore, with the Central share raised to Rs 399 crore and the State share to Rs 133 crore. From the financial year 2022-23 till August 31, 2024, an amount of Rs 463.3 crore was released as Central share, and Rs 118.89 crore was released as State share for all the components under the scheme. The financial progress of PMAY (Urban) from 2019-20 to 2024-25 (as of August 31st, 2024) is given in **Appendix 12.1.9**.



Under BLC, the Ministry of Housing and Urban Affairs (MoHUA), the Government of India, has sanctioned 1,32,327 houses. Of these, the construction of 3,136 dwelling units falls within the jurisdiction of three Development Authorities: namely, the Greater Cochin Development Authority, Goshree Islands Development Authority, and Thiruvananthapuram Development Authority. Out of the total sanctioned units, 86,299 houses have been completed as of 8th November 2024. Among the completed units as of 8th November 2024, 8,370 homes were for Scheduled Caste (SC) beneficiaries and 260 houses for Scheduled Tribe (ST) beneficiaries.

Under the AHP component, 970 dwelling units have received approval with a project cost of Rs 14.5 crore. This programme operates within the framework of the LIFE Mission and benefits from the increased financial support from the State Government to develop housing complexes equipped with all essential amenities. In this specific category, the construction of 936 units has commenced, and among them, 530 units have been completed.

Under the 'credit linked subsidy scheme' (CLSS) component, interest subvention was provided to eligible urban poor to acquire or construct a house. As of August 31, 2024, loans have been sanctioned to 32,651 beneficiaries, and all the homes have been completed. The Central Government discontinued this component, which had aimed to expand the institutional credit flow to the housing needs of the urban poor as of March 31st, 2021.

Urban LSG-wise progress of beneficiary-led construction component of PMAY (Urban) as of 8th November 2024 is given in **Appendix 12.1.10** and year wise sanctioned and completed houses of beneficiary-led construction component of PMAY Urban upto 8th November 2024 is provided in **Appendix 12.1.11**. The physical progress of the affordable housing component up to 31st August 2024 is provided in **Appendix 12.1.12**, respectively.

The State Government has integrated several programmes to provide beneficiaries of housing programmes with livelihood support. For instance, livelihood support is offered to beneficiaries of housing programmes through convergence with the National Urban Livelihood Mission (NULM) and Ayyankali Urban Employment Guarantee Scheme

(AUEGS). Provisions of NULM are being used to enhance the quality of life of urban housing beneficiaries by skill upgradation and setting up self-employment ventures. Through convergence with the Ayyankali Urban Employment Guarantee Scheme (AUEGS) of the State Government, employment of 90 person days was provided to PMAY (Urban) beneficiaries, enabling additional financial assistance of Rs 29,970 per beneficiary. Labour cards for employment are given to PMAY (U) beneficiary families, and 40,73,461 person-days were provided, equating to total assistance of Rs 82.85 crores as of 31st August 2024.

The Union Budget 2024 proposed Pradhan Mantri Awas Yojana-Urban (PMAY-U) 2.0, an initiative aimed at constructing one crore affordable houses for urban poor and middle-class families, which was announced for five years, beginning September 1, 2024, to build, purchase, or rent a home at an affordable cost. It offers four primary components, viz, beneficiary-led construction for families with available land, affordable housing in partnership with public-private collaborations, affordable rental housing for urban migrants, and an interest subsidy scheme providing a 4 per cent subsidy on home loans up to Rs 25 lakh. Under PMAY-U 2.0, central assistance for BLC will be Rs 1.50 lakh per unit, with a minimum state contribution of Rs 1.00 lakh per unit, and State/UT contributions are mandatory. The funding ratio has been revised from 75:25 to 60:40.

### **Sanitation and Waste Management**

Sanitation and waste management have emerged as critical challenge for Kerala, especially with the rapid expansion of urbanisation. Without effective systems for processing, recycling, and disposing waste, environmental pollution would likely intensify, increasing public health risks and disease exposure. Recognising the profound impact of waste management on the State's development prospects, the Government of Kerala has firmly resolved to address the issue of waste management in the State on a war footing. The Government has formulated a range of strategies at both State and local levels to tackle waste management challenges effectively.

Apart from State-wide campaigns and initiatives, waste management has been integrated into LSGs' plans. Central and State-sponsored programmes and schemes concerning waste management are executed through LSGs. Suchitwa Mission

**Table:12.1.4** Solid Waste processing facilities operational in urban local bodies during 2023-24 (Number of Units)

Facilities	Composting	Vermi Composting	Biogas
Centralised Plants	29	NA	NA
Community level	594	10	95
Institutional level	7181	NA	713
Household-level	6,48,783	NA	34,326

Source: Annual Report 2023-24, Kerala State Pollution Control Board

plays a crucial role in developing implementation strategies and providing technical support to the State Government and local authorities for the formulation and execution of solid and liquid waste management policies and projects.

Data indicates that Kerala generates 10,504 tonnes of solid waste per day, of which 7,930 tonnes are organic and 2,568 tonnes are non-organic, resulting in approximately 75 per cent organic and 24 per cent non-organic waste composition. Kerala has adopted a decentralised approach to managing biodegradable waste, implementing various composting devices and bio-waste treatment systems—small, medium, and large-scale—at household, institutional, and community levels. Currently, 69 per cent of the State’s organic waste is processed through these methods.

The State’s policy for biodegradable waste management prioritises source-level treatment under the guiding principle of “My waste, My responsibility.” In Kerala, most bio-degradable waste is treated at households, institutions and community-level centres. This approach encourages using composting devices and biogas plants to manage organic waste at its origin, thus reducing reliance on centralised waste systems. Where household-level capacity is insufficient, community-based facilities manage surplus waste, fostering a sustainable system that minimises transportation needs, reduces landfill waste, and supports the production of renewable resources like compost and biogas. This strategy enhances community engagement and encourages locally tailored solutions to waste management challenges. **Table 12.1.4** indicates the number of solid waste processing facilities operational in urban LSGs during 2023-24.

### Pollution Control Board

Haritha Karma Sena units and other partner collection agencies collect non-biodegradable

waste from the doorsteps. There are over 37,000 Haritha Karma Sena units engaged in the 1034 LSGs. The non-biodegradable waste collected from households and other sources is temporarily stored in Material Collection Facilities (MCF) and Mini MCFs operated across the state. Recyclable waste is sent to recycling units, while non-recyclable waste is directed to co-processing facilities such as cement plants for energy recovery. The quantity of rejected waste transferred to cement plants from January to December 2023 is provided in **Table 12.1.5**. After separating biodegradable and non-biodegradable waste from the total waste generated, the remaining portion, known as inert waste, is utilised to fill low-lying areas, offering an environmentally sustainable disposal method.

**Table 12.1.5** Quantity of reject waste transferred to cement plants from January 2023 to December 2023

Quantity of reject waste transferred	Govt sector	29,826 tonnes
	Private Sector	18,205 tonnes
	<b>Total</b>	<b>48,031 tonnes</b>

Source: Report filed before National Green Tribunal

The State Government aims to make Kerala the cleanest State in the country through the Malinya Muktam Navakeralam Campaign, led by LSGs and supported by the Haritha Keralam and Suchitwa Missions. The campaign promotes sustainable waste management, encourages reuse and recycling, advocates for eco-friendly alternatives, enforces legal measures against improper waste disposal, and fosters best practices across all levels of society. The campaign is gaining significant momentum, with the total number of houses covered for door-to-door dry waste collection by Haritha Karma Sena reaching 66,81,613 by September 2024. This includes 54,13,414 houses in Grama Panchayats, 8,27,720 houses in Municipalities, and 4,40,479 houses in Municipal Corporations.

The State has made significant investments in

infrastructure in the past few years to store dry waste. It is envisaged that there will be at least one MCF in each ward and at least one RRF in each block and Municipality. As of August 31, 2024, there are 1,233 Material Collection Facilities and 19,112 Mini Material Collection Facilities units across the state. Concerning the Resource Recovery Facility, there are 197 units. District-wise details of Haritha Karma Senas and details of MCFs, Mini MCFs, and RRFs as of August 31st, 2024, are given in **Appendix 12.1.13** and **12.1.14**, respectively. As per the data from Suchitwa Mission, toilet and washroom facilities are available in 1,063 MCFs across Kerala. District-wise details of facilities in MCFs are provided in **Appendix 12.1.15**.

Non-recyclable plastic waste is shredded in MCF/ RRFs and mixed with tar for roads. During 2016-2023, Clean Kerala Company Limited (CKCL) supplied 3466.2 T of shredded plastics to various agencies viz, National Highway Authority of India (NHAI), PWD, and LSGs. According to CKCL, the total length of the polymerised road constructed during this period using shredded plastic was 6042.4 km. During 2023-24 alone, CKCL supplied 200.6 MT of shredded plastic, and in 2024-25 (as of September 31, 2024), 151.6 MT has been supplied. The details are shown in **Table 12.1.6**.

Though a significant waste stream, there are no precise estimates on the amount of e-waste

**Table 12.1.6** Details of usage of plastic waste in the construction of roads during 2016-2023

Year	National Highway Authority of India/Others	Public Works Department	Local Self self-government institutions	Total	Length of road Constructed Total
	(MT)	(MT)	(MT)	(MT)	(km)
2016-2017	0.0	5.1	18.7	23.8	51.9
2017-2018	0.0	52.4	122.4	174.8	358.3
2018-2019	0.0	136.1	143.9	279.9	495.7
2019-2020	5.0	303.9	305.9	614.9	1073.7
2020-2021	6.1	379.8	529.8	915.7	1710.4
2021-2022	2.5	370.7	361.6	734.8	1277.1
2022-2023	0.2	273.7	96.2	370.1	514.3
2023-2024	0.0	107.9	92.6	200.6	339.5
2024-2025 (September 30, 2024)		105.2	46.4	151.6	221.2
<b>Total</b>	<b>13.9</b>	<b>1734.8</b>	<b>1717.5</b>	<b>3466.2</b>	<b>6042.4</b>

Source: CKCL

**Table 12.1.7** Quantity of e-waste collected in the State, 2019-20 to 2022-23

Year	Category-wise quantity of e-waste collected			Total amount of e-waste collected (tonne)
	Information Technology and Telecommunication equipment (tonne)	Consumer Electrical and Electronic items (tonne)	Other items (tonne)	
2019-20	108.4	82.2	1098.6	1289.2
2020-21	27.7	88.3	1378.1	1494.0
2021-22	55.6	18.0	1175.9	1249.6
2022-23		1465.3	-	1465.3
2023-24		6023.54	-	5251.385

Source: Annual Reports, Kerala State Pollution Control Board

generated in the State. The quantity of e-waste collected in the State from 2019-20 to 2023-24, as per the annual reports of the Kerala State Pollution Control Board, is shown in **Table 12.1.7**.

### **Suchitwa Keralam (Rural and Urban)**

Suchitwa Keralam (Rural and Urban) programmes run by Suchitwa Mission with State Government funding are primarily responsible for waste management in urban and rural areas. This provides partial funding for waste management programmes and pre-monsoon cleaning efforts to prevent the spread of infectious diseases. These are run by LSGs and coordinated with the National Health Mission, Haritha Keralam Mission, and the Directorate of Health Services.

Suchitwa Keralam Rural and Urban schemes involve awareness campaigns to promote scientific waste management practices through audio-visual and print media. This scheme also includes installing mini, medium, and significant bio-waste treatment systems at the household, institutional, and community levels to serve the waste management needs of families and institutions in the State.

Under the Suchitwa Keralam (Urban) scheme, a total expenditure of Rs 612 lakh was incurred during 2023-24 across various components, including liquid waste management; information, education, and communication (IEC) activities; ‘Take a Break’ toilets; pre-monsoon cleaning; public toilets; septic tanks; sanitary napkin destroyers; and source-level waste treatment. Of the total expenditure, more than 58 per cent was allocated to liquid waste treatment projects. Under the Suchitwa Keralam (Rural) scheme, Rs 110.4 lakh was expended during the same period, with IEC activities accounting for the largest share. Other significant components included liquid waste management, pre-monsoon cleaning, school toilets, general waste management, ‘Take a Break’ facilities, and the establishment of green facilitation centres. In 2023-24, three liquid waste management projects—comprising one bio-digester and two Sewage Treatment Plants (STPs)—were initiated in three Grama Panchayats, namely, Karimkulam in Thiruvananthapuram, Adimali in Idukki, and Payam in Kannur districts under Suchitwa Keralam (Rural) scheme. Additionally, Rs 33.3 lakh was allocated for 2,459 organic waste management projects, such as ring compost systems, bio-digesters, and bio-bins, implemented across 14

Grama Panchayats. An amount of Rs 40.4 lakh has been allocated to 14 Grama Panchayats to construct school toilets.

### **Swachh Bharat Mission (Gramin)**

The Swachh Bharat Mission (Grameen) Phase II aims to improve sanitation and hygiene in rural India. Launched in 2020-21, it builds upon the achievements of Phase I, focusing on sustaining Open Defection Free (ODF) status and enhancing solid and liquid waste management. As part of the Swachh Bharat Mission (Grameen) or SBM (G), the State has constructed a total of 2,50,739 Individual Household latrines (IHHL) till November 11, 2024, as per the SBM Gramin dashboard.

Under SBM (G), financial incentives are provided to BPL (Below Poverty Line) and identified APL (Above Poverty Line) households, amounting to a maximum of Rs 12,000 for the construction of a single IHHL unit, with 70 per cent of the amount funded by SBM (G) and 30 per cent from Union Finance Commission grant. The Central share of this incentive for IHHLs from SBM (G) is Rs 7,200 (60 per cent), and the State share is Rs 4,800 (40 per cent). With the LSG contribution of Rs 3400, a total of Rs 15,400 can be granted per unit.

It is envisaged under SBM (G) that each village must have at least one community sanitary complex to enhance sanitation standards. The unit cost of a community sanitary complex is Rs 3 lakh. As per data from the SBM Grameen dashboard, the state has constructed 1550 Community Sanitary Complexes until 11th November 2024.

Grama Panchayats are now endeavouring to achieve ODF Plus status by meeting all the criteria set by the Department of Drinking Water and Sanitation, GoI. The conditions for ODF Plus include the following: all residents should have access to toilets, proper usage of toilets, scientific management of solid and liquid waste, public sanitation facilities, etc. Grama Panchayats can achieve ODF Plus status only if liquid waste is managed effectively. As of 11th November 2024, 1,433 SBM villages and 1,381 villages are in ODF plus status, and 1,368 come under the model category. Details of the ODF Plus status in the State are depicted in **Table 12.1.8**.

**Table 12.1.8** Status of ODF Plus Achievement in the State

Category	Number
Total Villages	1,433
Total ODF Plus villages	1381
Model category villages	1,368
Rising category villages	6
Aspiring category villages	7
Villages having arrangements for Liquid Waste Management	1,375
Villages having arrangements for Solid Waste Management	1,381

Source: SBM Grameen Dashboard, as of 11th November 2024

### **GOBARDhan (Galvanizing Organic Bio-Agro Resources Dhan) Scheme**

GOBARDhan, an integral component of SBM (G), launched in April 2018, is intended to promote decentralised waste management and biogas production, reduce waste disposal issues, and generate clean energy. In 2023-24, 15 GOBARDhan Community biogas plants were completed, and 39 more are coming up in the State.

### **Swachh Bharat Mission (Urban)**

Swachh Bharat Mission (Urban) is intended to ensure hygiene, waste management and sanitation. It has five components - individual household latrines, public toilets, solid waste management, capacity building, and information, education, and communication activities. Details of SBM-U allocation/expenditure across components for 2023-24 and 2024-25 up to August 31, 2024 are provided in **Appendix 12.1.16**.

Swachh Bharat Mission (Urban) 2.0 was launched on October 1, 2021 to ensure 100 per cent source-level segregation, door-to-door collection, scientific waste management, legacy dumpsite remediation, and disposal of used water and used water management. The SBM (U) Phase 2 components are city solid waste management, city sanitation, used water management, IEC activities and capacity building.

Under SBM (U) phase I, during 2023-24, 227 units of household hold latrines, 1,40,884 units of household level composting devices/biogas plants, 41 Take a Break /Institutional toilets, 563 community level composting devices, 402 MCF/bottle booths, 5 MRF/RRF were completed. As

part of the clean toilet campaign, 689 toilets and 504 urinals were renovated.

An action plan has been prepared for the components to be undertaken in Phase II. An expenditure of Rs 14.6 crore has been accorded in SBM Phase (II) in the financial year 2023-24. Out of this, Rs 8.3 crore is spent on SWM and sanitation projects, Rs 3.5 crore on IEC, and Rs 2.9 crore on Capacity building. Status of implementation of (SBM)- U during 2023-24 and in 2024-25 (as of 31st August 2024) is provided in **Appendix 12.1.17**.

### **“Take a Break” initiative**

Take a Break (TAB) is an innovative programme envisioned by the State Government to establish refreshment facilities and toilet complexes to address the long-standing shortage of good-quality public toilets in the State. The facility would be set up alongside National and State Highways, transport stations, shopping complexes, etc. Safety, good upkeep, and cleanliness standards would be highly prioritised in TABs. Napkin vending machines, napkin-destroyers, waste bins, cleaning agents and implements, coffee shops, and rest areas are included in some TABs. The target is 1,842 TAB facilities across village panchayats, municipalities and corporations. Out of these, 1741 units were taken up by the LSGs, and 1167 units have been completed. The State also expects to solve the pending demand for tourist public sanitation facilities through the project. This would significantly contribute to the development of the state’s tourism industry.

### **Kerala Solid Waste Management Project (KSWMP)**

KSWMP, jointly funded by the World Bank (IBRD), Asian Infrastructure Investment Bank and Government of Kerala, commenced operation in January 2022 and is in the initial phase of activities. The project cost of USD 300 million ( Rs 2,400 crore approximately) is intended to improve the entire solid waste management value chain activities in Kerala through appropriate technical assistance (TA) and capacity-building interventions at urban LSGs, and at regional levels through adopting an integrated service delivery value chain approach. So far, 150 training and orientation programmes were conducted by SPMU with the support of KILA, covering 11,000 participants, including 7,300 Haritha Karma Sena members. Draft city-wide

comprehensive SWM plans are being prepared for all the urban LSGs in the State.

### Urban Infrastructure

As the State undergoes rapid urbanisation, its economic development would rely primarily on its ability to enhance urban infrastructure. Better urban infrastructure could be built only by harnessing diverse sources and partners who can enter new partnership models. This may include LSGs and various public, private, social, and community stakeholders.

Urban infrastructure encompasses a wide range of initiatives which can make the city space more liveable and attractive. It should address the growing requirements of the urban population for better livelihoods and citizen services. Any initiative to improve urban infrastructure would include improving water supply systems, waste management systems and city sanitation planning; establishment and improvement of public amenities; establishing and maintaining sewerage and stormwater drainage systems; adoption of effective parking policies along with modern mechanised parking solutions; city beautification; creation of environmentally friendly urban spaces, and the promotion of non-motorized urban transportation.

Keeping this in mind, the State Government has launched and executed several programs through urban LSGs, utilising LSG Development Funds, State schemes, and Central government programmes. These initiatives have been strategically integrated to combine horizontal and vertical complementary activities. The following section discusses the key infrastructure development programmes underway in the State.

### Atal Mission for Rejuvenation and Urban Transformation 1.0 (AMRUT 1.0)

AMRUT aims to address the fundamental challenges of urban physical and institutional infrastructure development, covering the components of water supply and sewerage, septage, stormwater drainage, urban transport, green spaces and parks, and capacity building. The fund-sharing pattern among the Centre, State, and urban LSGs is 50:30:20.

Six Municipal Corporations and three Municipalities (Alappuzha, Palakkad, and

Guruvayoor) in the State were selected under AMRUT 1.0. Though the Mission's duration was five years (2015-2020), it has been extended until December 2024. Under AMRUT 1.0, Rs 2,357.7 crore were sanctioned for 1,111 projects and 971 projects (87.4%) were completed, for which Rs 1,922.7 crores was expended. Currently, 140 projects are in progress under the mission.

Water supply projects under AMRUT 1.0 include rejuvenating water sources, constructing water treatment plants and tanks, laying new pipelines, and replacing old pipes. It aims to ensure every household has access to a tap with an assured water supply. Under this component, sanction was accorded for 217 projects costing Rs 1461.9 crores. So far, 172 projects have been completed, and Rs 1211.2 crores have been spent as of August 31, 2024. Under the water supply projects, six (265 MLD) water treatment plants were set as the target, and so far, five treatment plants (165 MLD) have been completed. The target for the water supply network was 2,084 km, and 1,806 km of the water supply network has so far been achieved. For new water tap connections, the target was 83,582 numbers and 50,647 tap connections have been given as of August 31, 2024.

The sewerage management component is intended to manage liquid waste scientifically and to ensure that every household in the AMRUT cities has access to a sewerage connection. Administrative sanctions worth Rs 352.3 crores have been accorded for 152 projects, and 114 projects have been completed. Under this component, Rs 252.8 crores (71.7 per cent) was spent till August 31, 2024.

Stormwater drainage projects aim to eliminate city flooding by constructing and improving drains and stormwater drains. It comprises 536 projects with Rs 336.8 crore sanctioned, out of which 503 projects have been completed, and the expenditure incurred is Rs 290.5 crore. The total drainage network target was 344 km, of which 328 km was achieved as of August 31, 2024.

The urban transport sector is intended to facilitate non-motorised transport in cities. It includes the construction of skywalks, footpaths/walkways, sidewalks, foot over-bridges and multi-level parking facilities. There are 128 projects with Rs 189.6 crores sanctioned, of which 109 projects have

### Box 12.1.1 Best practice under the Urban Transport sector of AMRUT 1.0

#### Skywalk at Shakthan Nagar- Thrissur Corporation

The Skywalk at Shakthan Nagar in Thrissur is a unique urban traffic crossover for pedestrians and has been recognised as a best practice by HUDCO. The structure is the longest skywalk in Kerala, with a circular design having a circumference of 279 meters. Built under the Urban Transport content of AMRUT 1.0, it was opened to the public in August 2023. The steel skywalk accommodates approximately 50,000 pedestrians daily, enabling them to avoid vehicular traffic at Shakthan Nagar effortlessly. The skywalk connects key locations such as the Shakthan bus stand, vegetable market, fish market, and municipal exhibition ground. It is roofed and air-conditioned, which makes it suitable for all seasons. The facility is equipped with four lifts at the connecting points and ensures easy accessibility. Moreover, the structure is classified as a 'Net Zero Energy' facility, with its solar energy system generating 160 KW, equivalent to its installed power requirements.

Source: SMMU

been completed, and Rs 129.7 crores has been spent as of August 31, 2024. Three multi-level car park structures, 77.4 km of footpaths, and 6.49 km of cycle track have been constructed. Twenty-seven pedestrian overbridges and one skyway are significant achievements in the urban transport sector during this period.

Under the green space and parks sector, 78 projects costing Rs 46.3 crores have been sanctioned to develop green spaces and parks with special provisions for child-friendly components. Of this, 73 projects have been completed, and the expenditure is Rs 38.5 crores. The financial progress of AMRUT.1.0 projects up to August 31, 2024 is given in **Appendix 12.1.18**. The progress of the AMRUT 1.0 project in nine cities is shown in **Appendix 12.1.19**, and the sector-wise status of AMRUT 1.0 is shown in **Appendix 12.1.20**.

An incentive fund is allocated as the Central Share to support the implementation of reforms aimed at enhancing the efficiency and effectiveness of citizen service delivery, reducing delivery costs, improving financial sustainability, augmenting resource mobilization, and fostering transparency. These reforms encompass establishing a single-window system for approvals, creating a dedicated municipal cadre, achieving a minimum of 90 per cent billing and collection efficiency for taxes and user charges, developing at least one children's park annually, instituting maintenance systems for parks and playgrounds, undertaking credit rating exercises, and implementing model building bye-laws, among other initiatives. Kerala has received reform incentives continuously for the last 4 years. An amount of Rs 59.8 crore has been received as reform incentives. Kerala, with an average score of 82.5 per cent, ranks 7th in Urban Reform Implementation (per MoHUA ranking).

#### AMRUT 2.0

AMRUT 2.0, launched on October 1, 2021, is an extension of AMRUT 1.0, which aims to address water scarcity, enhance water distribution in urban LSGs, and promote sustainable access to clean water. The programme is being implemented across all 93 urban LSGs in Kerala, with a five-year project timeline (2021–2026). Key objectives include providing household water tap connections, improving sewerage/septage management in AMRUT cities (six Corporations and the municipalities of Alappuzha, Guruvayoor, and Palakkad), rejuvenating water bodies, and developing green spaces.

Central assistance under AMRUT 2.0 is provided based on population. For cities with a population below 1 lakh, the Central Government contributes 50 per cent of the project cost. For towns with a population between one lakh and 10 lakhs, the Central share is 33.3 per cent, while for cities with more than 10 lakh population, it is 25 per cent.

All 93 urban LSGs have submitted their city water balance plans (CWBP) detailing water bodies, treatment, and distribution systems, followed by city water action plans (CWAPs) outlining mission-specific projects. The consolidated State Water Action Plan (SWAP) includes approved projects under SWAP-I, II, and III, with a cumulative cost of Rs3,651.3 crore, covering 751 projects.

Under the water supply component, of the 187 projects and Rs1,748.2 crore sanctioned, eight projects have been completed as of August 31, 2024. In the sewerage and septage management component, 14 projects of Rs 449.3 crore have been sanctioned, with one project completed. In water body rejuvenation, 251 projects of Rs 75.8

**Table 12.1.9** Physical progress under AMRUT 2.0

Sl.No	Sector	Unit	Target	Completed
1	<b>Water Supply</b>			
	Water tap connections (new)	nos	3,86,916	56,647
	Water tap connections (replacement)	nos	10,83,925	18,281
2	<b>Sewerage and Septage</b>			
	Sewerage Network	km	90.6	1.3
	Sewerage Connection ( replacement)	nos	14,508	12
3	<b>Waterbody rejuvenation</b>			
	Waterbody rejuvenation	nos	251	8

Source: State Mission Management Unit

crore have been sanctioned, with eight projects completed, incurring an expenditure of Rs 6.2 crore. The green spaces and parks category projects are proposed under SWAP III. **Table 12.1.9** provides a detailed account of physical progress under each component of AMRUT 2.0. This progress underscores the State's commitment to achieving the Mission's objectives of sustainable urban water management and ecosystem rejuvenation.

Under the Technology Sub Mission of AMRUT 2.0, MoHUA has selected seven startups from Kerala to render support. AMRUT 2.0 has been integrated into the State Urban Digital Mission project, which is being executed under the guidance of the National Urban Digital Mission. This programme is currently underway in three locations across the country and is being implemented with 100 per cent central assistance, with a total allocation of Rs 22.5 crores. As an initial disbursement for the 2023-24 financial year, the State has received Rs 7.5 crores. The sector-wise status of AMRUT 2.0 is provided in **Appendix 12.1.21**.

### Smart Cities Mission

Smart Cities Mission is a major infrastructure development programme launched by the Ministry of Housing and Urban Affairs (MoHUA) in 2015 to promote cities to provide core infrastructure facilities and a decent quality of life to its citizens, build a clean and sustainable environment, and encourage application of smart solutions to accomplish better quality standards in urban governance. Kochi city was selected under the Mission in the first phase, and Thiruvananthapuram in the third phase. All the

projects are scheduled to be completed before 31<sup>st</sup> March 2025.

### Smart City, Kochi

The Smart City project of Kochi aims to plan and integrate the development of the Kochi Corporation area by improving civic infrastructure. Under this, 90 projects were sanctioned, of which 58 have been completed, while 32 are currently underway.

The completed projects include Integrated Command Control And Communication Centre, smart roads in Ernakulam, implementation of Integrated Traffic Management System, construction of walkways on hospital road, installation of solar panels in Government buildings, distribution of household bins and street bins, upgradation of Dutch Palace entry area, establishment of open-air theatre at Fort Kochi, beachfront upgradation at Vasco square, e-health solution at General Hospital, Health ATM, police kiosks, and open space corridor linking Durbar Hall ground to Mangalavanam.

To monitor and control city operations and enable data-based decision-making for city administrators, Cochin Smart Mission Limited (CSML) has established the state-of-the-art City Command Centre (Integrated Command Control and Communication Centre-IC4), which has been operational since December 2020. It is a highly effective means to monitor diverse operations within city administration and harness the advanced analytical capabilities for strategic planning in anticipation of future challenges. The key outcomes of IC4 encompass real-time situational monitoring, continuous 24x7 engagement, swift



responses to emergencies, monitoring of key performance indicators (KPIs), identification of anomalies and inefficiencies, promotion of transparency and accountability, monitoring of city functions, establishment as a foundation for further innovation, control and monitoring of city field assets, and the enhancement of citizen and government engagement. IC4 was extensively used as a District COVID Cell for patient transfers, oxygen cylinder monitoring, telemedicine, etc. The projects transferred to other agencies include the multi-storeyed housing project at Thuruthy Tower, the rejuvenation of the Mullassery canal, the renovation of the Kaloor market, the establishment of smart water meters, the renovation of various parks, etc.

### **Smart City, Thiruvananthapuram**

Smart City Thiruvananthapuram Limited (SCTL) has 79 sanctioned projects with a total cost of Rs 1,242.9 crores. Of the total project cost, Rs 488 crore each is from the Central Government and State Government, and the remaining amount is contributed by urban LSGs and other convergence projects. Within these, SCTL has identified 69 individual projects with an estimated cost of Rs 938 crore. As of July 30, 2024, 55 of these projects, worth Rs 538.2 crore, have been completed, while 14 projects, with an allocation of Rs 399.8 crore, are ongoing.

Major completed projects include procurement of buses for KSRTC, phase I and II, construction of multi-level car parking at Thampanoor and Palayam, roof top solar-ANERT Phase I to VI, construction of smart roads, deviation of sewer lines and reconstruction of brick manhole, construction of open air theatre and park at Putharikkandam maidanam, grid-connected roof mounted solar Photovoltaic (PV) power plants at 5 locations, development of traffic signal, installation of drinking water kiosks at 25 locations, construction of vending zone at RKV road, urban street haat - Charithra veedhi including sree chitra park, redevelopment of children's park, KWA linked green activity, cultural streets - Manaveeyam Veedhi, upgradation of public health centre at Rajaji, redevelopment and landscaping of Ponnara Sreedhar Park, improvement of temple tanks at Puthenchantha Sreekandeshwaram, construction of open-air auditorium and its allied works at Thiruvananthapuram corporation, biomining of legacy wastes at Palayam and Chalai, smart bus shelter at six locations, reconstruction of public

toilets at three locations, mosquito density system, renovation of public toilets at six locations, procurement of 15 e-autos, last mile connectivity, construction of interactive information kiosks it equipment procurement, upgradation of anganwadi— phase 1, installation of open-air gym, outdoor and child play equipment at three locations, installation of statues at five locations, construction of interactive information kiosks, and procurement of smart EV chargers.

### **Rural Connectivity**

Rural road connectivity is a key component of rural development as it enhances access to economic and social services, thereby generating increased agricultural incomes and productive employment opportunities. Rural roads facilitate better goods distribution, promote market centre development, and incentivise farmers to generate more marketable surplus. An integrated road network would also facilitate farm mechanisation, better mobilisation of labour, effective utilisation of resources, and increased use of rural infrastructure facilities. The major programmes that ensure road connectivity in Kerala are as follows.

#### ***Pradhan Mantri Gram Sadak Yojana (PMGSY):***

The Pradhan Mantri Gram Sadak Yojana (PMGSY), launched on December 25, 2000 under the Ministry of Rural Development (MoRD), is a flagship programme to enhance rural connectivity to foster socio-economic development. In Kerala, PMGSY has complemented the efforts of LSGs to improve connectivity by helping them build all-weather roads (complete with necessary culverts and cross-drainage structures) to link eligible, unconnected habitations in rural regions. The programme targets habitations with populations of 500 or more in the plains, while in hilly, desert, and tribal areas, the threshold is reduced to 250 persons. Initially, PMGSY was fully funded by the Central Government, but since November 2015, it has been jointly funded by the Centre (60 per cent) and the States (40 per cent) as per the recommendations of the 14th Finance Commission.

The Local Self Government (Rural) Department is the nodal authority for implementing PMGSY in Kerala, with the Kerala State Rural Roads Development Agency (KSRRDA) acting as the State-level nodal agency.

The funds provided by GoI under PMGSY can be

used only to meet the estimated cost of the work. The scheme does not have provisions to meet funds for tender excess, shifting of utilities, and maintenance of completed roads. To meet these additional expenses necessary for the successful implementation of such projects, the State Government sets aside adequate funds in addition to the stipulated share of 40 per cent through the 'State support scheme for PMGSY'. PMGSY is implemented in three phases.

**PMGSY I:** The objective of the PMGSY-I scheme is to provide sound, all-weather access to eligible, unconnected habitations with a population of 1000 and above by 2003, and those with a population of 500 and above by 2007, in rural areas. Under PMGSY I, 3,308.4 km of the road was sanctioned, and construction of 3239.9 km was completed.

**PMGSY-II** aims to upgrade selected rural roads based on their economic potential and their role in facilitating the growth of rural market centres and hubs. District Rural Roads Plan (DRRP) is the basis for selecting roads, duly considering Census 2011 data. The District Rural Roads Plan (DRRP) is also called the Master Plan for Rural Roads, and it incorporates all roads in the district. Under PMGSY-II, 582.9 km of road works were sanctioned, and 561.7 km were completed. Three bridge works with spans of 30m, 20m and 60.7m were sanctioned and constructed.

**PMGSY-III** proposes consolidating the rural road network by upgrading routes and major rural links connecting habitations to Gramin Agricultural Markets, higher secondary schools and hospitals. Under PMGSY-III, 1,421.1 km of road has been sanctioned, 238.1 km completed, and 189.1 km is ongoing. The physical progress of PMGSY in 2023-24 and 2024-25 (as of August 31, 2024) is given in the **Table. 12.1.10**.

The District-wise details of road laying under the PMGSY scheme in 2023-24 and 2024-25 (as of 31st August 2024) are given in **Appendix 12.1.22**.

The implementation of PMGSY in Kerala faces challenges due to geographical constraints, including GoI norms on gradient and road length requirements, compounded by the State's unique topography and dense population. Issues such as the non-availability of machinery for surface dressing, delays in Jal Jeevan Mission (JJM) works, and cost restrictions on DPR provisions for retaining walls and drains further impede progress. Advanced technologies like full-depth reclamation, coir subgrade improvement, and plastic waste utilisation are being adopted under PMGSY-III for roads spanning 594.7 km, costing Rs 554.4 crore. The PMGSY roads are designed for a life period of 10 years and have an inbuilt 5-year maintenance defect liability period after construction. The funds required for maintenance, which is about 9 per cent of the construction cost, are to be met by the State Government. The concerned District Panchayat must carry out the post-five-year maintenance of the PMGSY roads.

#### Natural Resource Management

The emphasis on natural resource management has significantly increased, as evidenced by the number of schemes in this sector. The Government of India merged the erstwhile Integrated Watershed Management Programme (IWMP) with Pradhan Mantri Krishi Sinchai Yojana (PMKSY) in 2015-16. It is implemented as a Watershed Development Component (WDC) of PMKSY.

#### *Watershed Development Component of Pradhan Mantri Krishi Sinchayee Yojana (WDC-PMKSY)*

The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) launched in 2009-10 focuses on

**Table. 12.1.10** Physical Progress of PMGSY

Year	PMGSY I		PMGSY II		PMGSY III	
	No	Length (Kms)	No	Length (Kms)	No	Length (Kms)
2023-24	3	7.2	4	9.1	32	244.5
2024-25 (31.08.2024)					11	55.6
<b>Grand Total</b>	<b>3</b>	<b>7.2</b>	<b>4</b>	<b>9.1</b>	<b>43</b>	<b>300.1</b>

Source: LSGD

preventing soil erosion, regenerating natural vegetation, harvesting rainwater, recharging groundwater, afforestation and reclaiming cultivable wasteland. Activities under the scheme include the construction of check dams, percolation tanks, farm ponds and drainage line treatment activities. The Rural Development Department is the nodal department that implements the watershed development component of PMKSY. Project implementation is managed at the State-level by the State Level Nodal Agency (SLNA), at the district-level by Watershed Cell cum Data Centre (WCDC) constituted at the Poverty Alleviation Unit, at the block-level by the Project Implementing Agency (PIA) of Block Panchayats, and the Grama Panchayat-level or watershed-level by Watershed Committees (WC) specially constituted for the purpose. The funding pattern of the scheme between Central and State Governments is 60:40.

These interventions are expected to enable multi-cropping and the introduction of diverse agro-based activities, which would help provide sustainable livelihoods to the people residing in the watershed area.

PMKSY 2.0 was launched in 2021-22 as a new-generation watershed development programme. As part of this, 37 micro watersheds with a project area of 26,163 ha were sanctioned at a project cost of Rs 73.3 lakhs. The work components of the scheme are grouped under three major categories: a) natural resource management, b) production system improvement, and c) livelihood support and micro enterprises. In 2023-24, the project outlay for the scheme was Rs 25 crore, with Rs 15 crore allocated by the Centre and Rs 10 crore by the State. Of this, Rs 5.9 crore was released by the Centre and Rs 3.9 crore by the State, contributing to a total available fund of Rs 23.9 crore. The expenditure for the year was Rs 23.6 crore, achieving 98.5 per cent utilisation. In 2023-24, the project led to the construction of 616 new water harvesting structures and the renovation of 317 existing ones. The project has also provided irrigation, benefiting local agriculture. As a result, 6,200 farmers have directly benefited from the scheme. The project also generated 17,660 man-days, and 477.1ha were brought under plantation, including horticulture.

In the current financial year, up to 31<sup>st</sup> August 2024 31, 18 water harvesting structures were constructed,

and 284 old water harvesting structures were renovated. The project has also provided irrigation, benefiting 5,283 farmers and generating 18,277 person-days of employment. Additionally, 87.7 ha were brought under plantation, including horticulture. PMKSY is mainly implemented in Idukki, Kozhikode, Malappuram, Palakkad, Thiruvananthapuram and Wayanad districts.

### **Employment Generation and Livelihood Support**

Implementing a demand-driven employment guarantee programme in the country has tremendously impacted the livelihood security of the rural masses. Below are the details of implementing the employment guarantee programme and other livelihood support programmes implemented in the state.

### **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)**

The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) launched under the MGNREGA Act of 2005, aims to provide 100 days of wage employment annually to adult members of rural households willing to do unskilled manual labour, enhancing livelihood security. The scheme promotes the active participation of women in the workforce. This contributes to women's empowerment and addresses gender disparities in rural employment.

As per guidelines, the list of works under MGNREGS is grouped under the following categories.

Category A: Public works relating to natural resources management.

Category B: Individual assets for vulnerable sections (only for households that are SC, ST, families below the poverty line, women-headed households, physically handicapped households, beneficiaries of land reforms, etc).

Category C: Includes common infrastructure for NRLM-compliant self-help groups, and

Category D: Rural Infrastructure.

At the national level, 312.2 crore person days were generated in the financial year 2023-24. Out of the total person days generated, the percentage of person days for women, SC and ST was 58.9 per cent, 19.2 per cent, and 17.6 per cent, respectively. A total of 6 crore households were employed, averaging 52.1 days

**Table 12.1.11** MGNREGS- Status of Kerala compared to National Level 2023-24

Indicator	National Average	Kerala Value	Position of Kerala among States
Average Person days	52.1	67.7	2
Average Person days (SC)	50.7	68.2	2
Average Person days (ST)	55	96.5	1
Women Person days	58.9	89.3	1
% of families provided with 100 days of wage employment	7.5	38.7	2
% of SC families provided 100 person days	6.9	36.5	1
% of ST families provided 100 person days	9.5	49.5	2

Source: LSGD

per household. A total of 45 lakh households completed 100 days of employment. It is also reported that 27.7 per cent of the expenditure was on developing rural infrastructure, while 49.2 per cent was directed toward activities related to natural resource management.

Kerala had the highest percentage of work in natural resource management, agriculture, and the allied sectors.

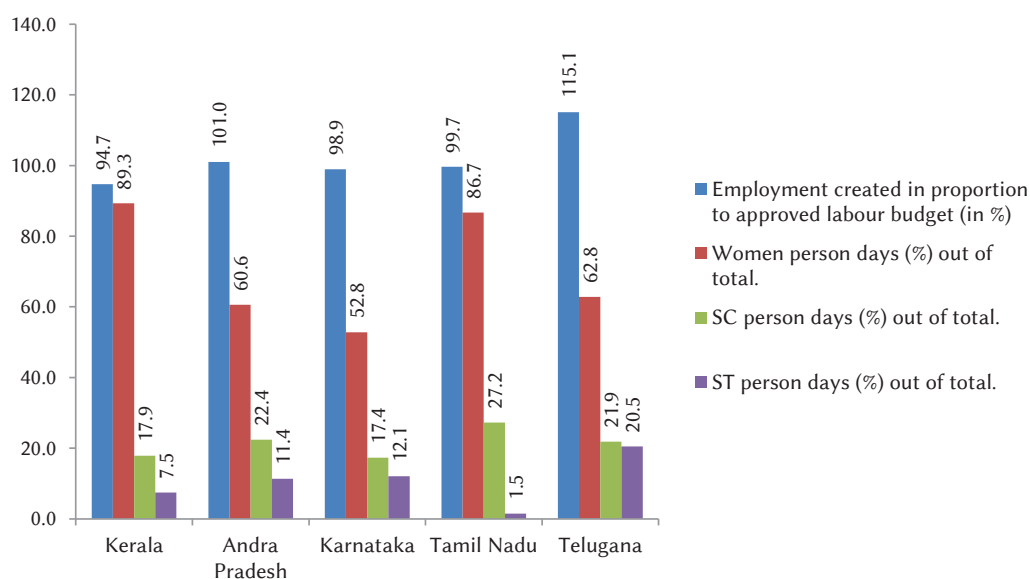
Kerala has always regarded MGNREGS as an effective programme to revive the rural economy and ensure livelihood security for the rural poor. In 2023-24, the State generated 9.9 crore person days of employment, of which 17.9 per cent was generated by Scheduled Caste individuals and 7.5

per cent by Scheduled Tribe individuals. Women constitute a significant majority of beneficiaries in Kerala, accounting for 89.3 per cent of total person-days (compared to the national figure of 58.9 per cent), the highest in the country (**Table 12.1.11**). The average days of employment provided per household were 67.7 lakh, the second highest in India. Around 5.7 lakh households in Kerala were provided 100 days of employment, and the State ranks second behind Andhra Pradesh.

A comparison of South Indian States based on their performance in implementing MGNREGS in 2023-24 is shown in (**Fig 12.1.8**).

In 2023-24, Rs 3,973.8 crore was expended, of which Rs 3,324.4 crore (83.7 per cent) was spent

**Figure 12.1.8** PMAY(G) Physical Progress as on August 31, 2024



Source: MGNREGS website

**Table 12.1.12** Review of employment generation and performance

Indicator	2024-25	2023-24	2022-23	2021-22	2020-21
	31st August 2024				
Approved person days in Labour Budget (in lakh)	330	1050	950	1000	1000
% of Achievement against Total Labour Budget	82.3	94.7	101.7	106	102.3
% of women person days generated	88.4	89.3	89.8	89.4	90.5
% of person days generated by SC families	17.7	17.9	18.2	18.3	18.4
% of person days generated by ST families	8.0	7.5	7	6.3	6.5
Average Person days/Household	25	67.7	62.3	64.3	63.2
Families provided 100 days	1079	5,69,108	4,49,638	5,12,823	4,70,410

Source: MGNREGS website.

as unskilled wages and Rs 506.4 crore (12.7 per cent) as material component, semi-skilled and skilled wages. The financial and physical progress of MGNREGS in 2023-24 and 2024-25 (as of August 31, 2024) is given in **Appendix 12.1.23, 12.1.24, 12.1.25, and 12.1.26**, respectively. **Table 12.1.12** depicts the employment generation and performance of MGNREGS in Kerala during the previous years.

There has been a gradual increase in the participation of ST households, with their share of person-days rising from 6.7 per cent in 2019-20 to 7.5 per cent in 2023-24, reflecting improved outreach and inclusion of Scheduled Tribe communities.

In the financial year 2023-24, an outlay of Rs 4,039.7 crores was allocated by GoI. The Centre released Rs 3,682 crores. The expenditure for the year 2023-24 was Rs 3,973.8 crores. Of the total available funds, 99.6 per cent was utilised (**Table 12.1.13**).

### Convergence

MGNREGS has been of great help to the State as it has been instrumental in creating assets in rural areas, particularly in the productive sector. Convergence involves various stakeholders from multiple departments such as agriculture, social justice, dairy development, forest and wildlife, Scheduled Caste and Scheduled Tribe development, as well as various Missions and Local Self Governments. These programmes combine resources, local knowledge, and new strategies to create stronger, lasting results for State development projects by working together toward common goals.

In association with Suchitwa Keralam Mission, 5,800 composite pits and 31,773 soak pits were constructed using the MGNREGS funds.

### Subhiksha Keralam

The State Government had launched Subhiksha Keralam to increase production in agriculture and allied sectors. This programme has also been integrated with MGNREGS. As part of

**Table 12.1.13** Financial achievement of MGNREGA in Kerala in 2023-24 and 2024-25(as on 31st August 2024)

F.Y	Outlay (Rs in crore)			OB+Mis (Rs in crore)	Release (Rs in crore)			Total Available fund (Rs in crore)	Exp. (Rs in crore)	Per cent
	Centre	State	Total		Centre	State	Total			
1	2	3	4	5	6	7	8	9=5+8	10	11= (10/9* 100)
2023-24	4039.7	230.1	4269.8	183.6	3682.0	124.2	3806.3	3989.8	3973.8	99.6
2024-25 (31.08.24)	4427.3	230.1	4657.4	172.9	1390.3	20.4	1410.7	1583.6	1239.8	78.3

Source: LSGD

the programme, livelihood assets were created in rural areas, which help the rural population generate a steady income to meet their day-to-day expenses. In 2023-24, 6,026 cattle sheds, 4,263 goat sheds, 5,455 poultry sheds, 1,859 farm ponds, and 170 SHG work sheds were constructed. The programme also brought 388 ha of land under fodder cultivation.

### **Construction of Anganwadis**

Under MGNREGS, the construction of 720 Anganwadis was undertaken in collaboration with the Women and Child Development Department. Of this, 473 were completed.

### **UNNATI**

The “UNNATI” project, funded entirely by MGNREGS, intends to upgrade the skill base of MGNREGS workers to facilitate their transition from partial to full employment. One adult member (of age 18-45 years) of a household who completed 100 days of work under MGNREGS will be considered for skill upgradation. In 2023-24, 2,144 candidates received training through programmes such as Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), Rural Self Employment Training Institutes (RSETI), and Krishi Vigyan Kendra (KVK).

### **Kerala Tribal Plus**

The Government of Kerala has been keen to bridge the gaps in implementing Centrally Sponsored Schemes by incorporating new complementary components and schemes. Kerala introduced the Kerala Tribal Plus scheme in 2017-18 to provide 100 days of unskilled manual work for Scheduled Tribe families. Funded entirely by the State Tribal Development Department, this scheme generated 15,51,466 person-days of employment in 2023-24, benefiting 34,958 ST households. Furthermore, 38,070 families completed 100 days of work during the same period. This review discusses the above details in Chapter 8.2 (Addressing Social Economic Vulnerabilities).

### **Ayyankali Urban Employment Guarantee Scheme (AUEGS)**

Kerala is the first State that launched an exclusive programme to employ the urban poor, following the spirit and principles of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). The programme, named Ayyankali Urban Employment Guarantee Scheme (AUEGS),

is funded by the State Government and intends to enhance livelihood security in urban areas by guaranteeing at least 100 days of wage employment to every household whose adult members are willing to engage in unskilled manual labour. The State Government launched AUEGS in 2009-10. The funds are utilised to create durable assets in urban LSGs.

The budget provision for the AUEGS for the first year 2010-11 was Rs 20 crore, but only 17 per cent was utilised. In the subsequent five years, the budget allocation for the scheme fluctuated, and total expenditure slowly increased. However, the fund utilisation was below 50 per cent. However, with the change of government in 2016-17, there has been a steady increase in the budget allocations and utilisation and creation of employment. Since the financial year 2016-17, remarkable progress has been made in implementing the Ayyankali Urban Employment Guarantee Scheme.

In 2022-23, the outlay provided was Rs 125 crore, of which Rs 89 crore was expended. The programme created 41,11,897.5 person days in various Municipalities and Corporations. In the same year, 85,310 households and 79,766 women were provided employment, and 12,024 families completed 100 days of employment. Of the women provided employment, 15,531 workers were from Scheduled Castes, and 1,714 were from Scheduled Tribes. During this year, 3,187 SC and 158 ST families completed 100 days of employment. This programme employed 25,680 beneficiaries in the age group of 51-60.

In 2023-24, Rs 150 crore was allocated to the scheme, and Rs 103.5 crore was expended. The programme created 26,89,283 person days in various Municipalities and Corporations, a reduction from 2022-23. During this period, 68,864 families received employment, which includes 54,384 general category families, 13,650 SC families, and 830 ST families. Of the 63,847 women provided employment, 12,911 workers were from Scheduled Castes, and 825 were from Scheduled Tribes. During 2023-24, 1,607 SC families, 26 ST families, and 4,624 general category families completed 100 days of employment.

In 2024-25, the budget allocation was increased to Rs 165 crore, and the scheme’s expenditure up to August 2024 was Rs 35.5 crore. The

**Table:12.1.14** Projects undertaken in AUEGS during 2023-24

Sl/No	Projects	Number	Person-days
1	Renovation of ponds	1,632	3,49,586
2	Renovation of tanks	103	14,527
3	Wells	176	16,369
4	Canals	112	25,918
5	Tree planting and afforestation:	119	14,952
6	Waste collection/management/flood cleaning	2,362	4,75,266.5
7	Animal husbandry/dairy farming	1,501	2,77,391
8	Land development/organic farming	993	3,72,050
9	Central and state housing construction	5,240	5,74,730
10	Well recharge	105	298
11	Rainwater harvesting pits	9,685	17,869
12	Compost pits	8,344	11,867.5

Source: LSGD

programme created 4,34,082 person days in various Municipalities and Corporations as of August 31, 2024.

Activities under AUEGS include waste management, pre-monsoon cleaning, water conservation, afforestation, and house construction under PMAY. From the financial year 2019-20, dairy farmers have also been included as beneficiaries of AUEGS. House construction materials for PMAY beneficiaries are provided under AUEGS. Major projects taken under AUEGS in the year 2023-24 and the person-days created under each project are provided in **Table 12.1.14**.

Local Government-wise distribution of funds under AUEGS in 2023-24 and 2024-25, up to August 31, 2024, is given in **Appendix 12.1.27**. Details of the physical achievements of the scheme are given in **Appendix 12.1.28**.

### Development of livelihoods of the poor

As seen earlier, the State has given due emphasis to livelihood development schemes such as MGNREGS and AUEGS that guarantee wage employment. The significant initiatives through Centre-State partnership to provide livelihood options are the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) for rural areas and Deendayal Antyodaya Yojana–National Urban Livelihoods Mission (DAY-NULM) for urban areas, with a funding pattern of 60:40 between Centre and State, respectively.

### Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM)

The Deendayal Antyodaya Yojana—National Rural Livelihoods Mission (DAY-NRLM) is a demand-driven programme encouraging self-employment among the rural poor. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY), Start-up Village Entrepreneurship Programme (SVEP) and Mahila Kisan Sashaktikaran Pariyojana (MKSP) are the sub-components of DAY–NRLM. DDUGKY is the skill and placement initiative under DAY-NRLM, implemented from 2016 to 2025. This scheme was earlier known as Aajeevika skills. DDUGKY is an initiative to transform the rural youth into the largest pool of technically trained human power by investing adequately in their skilling and employability, ensuring their integration into the organised sector. The State Government has assigned Kudumbashree as the Nodal Agency to implement the scheme. As part of the programme, 76,509 students have completed training, with 54,128 receiving placements.

Since the financial year 2023-24, DAY-NRLM has restructured its non-farm livelihood initiatives under the SVEP Umbrella Schemes. This unified framework has now consolidated various programs, including the Micro Enterprise Development (MED) program, Start-Up Village Entrepreneurship Programme (SVEP), One Stop Facility (OSF), Clusters, Incubators, and the Aajeevika Gramin Express Yojana (AGEY). As part of the Start-up Village Entrepreneurship Programme (SVEP) at the block level up to

September 30, 2024), 34,082 enterprises are supported with the help of 427 active MECs. In this regard, Rs 105.2 crore was released as a Community Enterprises Fund (CEF) to 25,838 enterprises.

MKSP focuses on reducing the gender gap in agriculture by promoting drudgery reduction systems and sustainable agricultural practices for women farmers. In Kerala, MKSP is implemented through the Kudumbashree Joint Liability Groups (JLGs) network. As of September 1, 2024, there are 88,827 Joint Liability Groups (JLGs) with 4,26,116 women farmers engaged in agriculture, cultivating 15,041.37 acres.

### **Deendayal Antyodaya Yojana–National Urban Livelihoods Mission (DAY-NULM)**

DAY-NULM aims to reduce poverty and vulnerability of the urban poor. The scheme is being implemented by all the urban LSGs in the State. Kerala has efficiently implemented this programme over several years.

Under the Social Mobilisation and Institution Development (SM&ID) component of DAY-NULM, neighbourhood groups (NHGs) are established. Through this component, as of August 31, 2024, 26,929 NHGs have been formed, and 35,543 NHGs were assisted with a Revolving Fund amounting to Rs 10,000 each. In addition, 3,360 Area Development Societies (ADS) have been supported with a Revolving Fund at the rate of Rs 50,000, and 14 City Livelihood Centres have been made functional to provide marketing support for goods and services of the urban poor. In 2023-24, 1,196 new NHGs were formed, and 2,344 NHGs were supported with a Revolving Fund of Rs 10,000 for each unit. In 2024-25, as of August 31, 2024, 393 new NHGs were formed, and 152 were supported with a revolving fund of Rs 10,000 for each.

Under the component 'Employment through Skill Training and Placement' (EST&P), 26,853 candidates have been enrolled in skill training, of which 22,367 were certified, and 15,706 candidates got placement up to August 31, 2024. Under the Self-Employment Programme (SEP) of DAY-NULM, 1,156 individual micro-enterprises and 354 group enterprises were established in 2023-24, and 270 individual micro-enterprises and 202 group enterprises were established in 2024-25 as of August 31, 2024.

Financial and physical achievements of the DAY-NULM from 2018-19 to 2024-25, up to August 31, 2024, are given in Appendix 12.1.29 and 12.1.30, respectively. A list of district-wise micro-enterprises and details of bank linkage loans of NHGs are provided in Appendix 12.1.31 and 12.1.32, respectively.

### **Kudumbashree**

Kudumbashree, the State Poverty Eradication Mission launched by the Government of Kerala in 1998, is a pioneering initiative for poverty eradication and women empowerment, widely acclaimed globally. This innovative, women-centric, and participatory poverty alleviation program now involves over 46 lakh women, organised into 3.2 lakh NHGs, playing a vital role in eradicating absolute poverty across the State. For this, the Mission set up Community-based Organisations (CBO) under Local Self Governments. Kudumbashree has evolved significantly, expanding its reach and diversifying its activities across numerous sectors. The organisation follows a three-tier structure, with Neighbourhood Groups (NHGs) at the grassroots-level, Area Development Societies (ADS) at the ward-level, and Community Development Societies (CDS) at the LSG-level. This makes Kudumbashree one of the most prominent women's community networks.

Kudumbashree is the nodal agency implementing several Centrally Sponsored Schemes, including DAY-NRLM, DAY-NULM, and Pradhan Mantri Awas Yojana (Urban). Beyond these, Kudumbashree actively collaborates with various developmental initiatives within the State. The key activities undertaken by Kudumbashree are given below.

#### ***Social Development***

Kudumbashree social development initiatives primarily focus on the holistic development of marginalised individuals, including children and those with special needs. Kudumbashree has implemented various targeted programmes to improve capacity development and livelihood activities.

#### ***Destitute Free Kerala***

To rehabilitate the poorest of the poor, Ashraya was scaled up and renamed Agathirahitha Keralam (Destitute Free Kerala -DFK). The needs of the destitute are converted into detailed projects for the DFK Challenge Fund. Forty per cent of the total



project cost, limited to Rs 40 lakh in the general DFK project and Rs 50 lakh in the ST DFK project, is met through the Kudumbashree as a Challenge Fund. Kudumbashree has disbursed the Challenge Funds through 1,033 authorised general projects and 170 tribal projects, benefiting 1,57,381 people with basic needs, including food, medicine, and education.

#### ***BUDS institutions for children with disabilities***

BUDS institutions for children with disabilities, functioning under LSGs, are monitored through the Kudumbashree machinery. The State Government has taken several measures to accomplish the vision of universalising education and rehabilitating persons with intellectual disabilities. Currently, 377 BUDS institutions (167 BUDS Schools and 210 BUDS Rehabilitation Centres) are functioning throughout the State.

*Balasabha* is an innovative empowerment process that attempts to retain knowledge through self-evaluation, participation, and enquiry. Through this platform, children are involved in decision-making, nurturing their evolving capacities and reinforcing the relevance of participation. Currently, there are 31,612 *Balasabhas* with 4,60,197 children, including 2,13,943 boys and 2,46,254 girls. In 2023-24, the Suchithwolsavam campaign was carried out across 1,070 CDS. Additionally, 1,034 special Bala Panchayats, 14 district-level Bala Parliaments, and the State Bala Parliament were also conducted. In 2024-25, the Suchitholsavam 2.0 campaign was expanded to 7,238 wards, with 100 Suchitwa projects underway as part of the Suchitwa Uchakodi initiative.

#### ***Gender activities***

Kudumbashree's gender initiatives include Gender Resource Centers, Vigilant Groups, Community Counselling, and Gender Point Persons. The Gender Self-Learning Programme (GSLP) enables women in NHGs to learn about and address gender issues through participatory education. As part of this programme, 86,307 women were trained as resource persons for a cascading training programme till the NHG-level. In total, 4,33,313 women underwent training, including resource persons and 3,47,006 support team members. The programme focuses on employment, health, mobility, gender justice, and addressing dowry and gender-based violence. The Sthreepaksha Navakeralam initiative has focused on issues related to dowry and violence. In addition, Transgender

Forums have been established in every district to support transgender and sexual minority communities, working in coordination with relevant departments.

The Dheeram Self-Defence Training Programme, which trained 332 district trainers and 28 master trainers in 2023-24, has commenced its initial phase across all districts in 2024. Across Kerala, 404 community counsellors are working at the Grama Panchayat level through Gender Resource Centers (GRCs) to identify and address gender issues

*Snehitha Gender Help Desks:* As part of its gender-focused initiatives, Snehitha Gender Help Desks operate 24/7 across all districts, including Attappady, to provide critical support and protection to vulnerable women. Their primary mission is to assist women and children in distress by addressing concerns, advocating on their behalf, and working to prevent and respond to domestic violence. This year, Snehitha has provided temporary shelter to 764 individuals and managed 2,996 cases involving women and children. Snehitha sub-centres and Mini Snehitha centres are key outreach initiatives by Kudumbashree to extend support to women in remote and vulnerable areas. Sub-centres, strategically located in various regions, operate with the support of Gender Resource Centers (GRCs) and Community Counsellors, providing immediate access to counselling, legal aid, and other essential services through 10 centres across seven districts. Mini Snehitha centres, established in areas with high vulnerability—such as tribal, coastal, and plantation regions—further extend this support. Some Mini Snehitha centres offer temporary shelter for up to three days, effectively addressing localised gender issues and directly assisting women in need.

#### ***Agricultural activities:***

Kudumbashree conducted various activities to promote agriculture. Joint Liability Groups consisting of 4-5 members are formed and are supported through training, financial assistance, convergence opportunities, etc., facilitated by District Missions. They are exposed to a vast arena of livelihood ventures for income enhancement. *Nattuchantha* was identified as one of the best methods of marketing the agricultural products of women farmers. In 2023, 24,841 *Nattuchanda* events were organised, resulting in the sale of 4,717.32 tonnes of vegetables valued at Rs 10.3 crores, providing substantial benefits to local

farmers. 1,51,883 Mahila Kisans have been trained in agro-ecological practices, enhancing sustainable farming skills. A National Conclave on Millets was organised at Attappady to impart awareness on millets as part of the International Year of Millets. Additionally, seven bamboo units were established in partnership with the Bamboo Mission under the NBM scheme. Significant projects involve poultry, goat rearing and cow rearing, with support provided to members through back-end subsidy schemes and low-interest loan schemes.

Kudumbashree has empowered over 1.7 lakh women in livestock and 4.3 lakh women in agriculture through JLGs. More than 4 lakh women are engaged in farm-related livelihoods, benefiting from employment opportunities and value addition in agricultural produce. In the non-farm sector, Kudumbashree has established 1.4 lakh micro enterprises involving 3.3 lakh entrepreneurs, indirectly improving the economic conditions of 15.7 lakh individuals approximately.

**Training:** Kudumbashree trains Haritha Karma Sena members in LSGs for waste management

#### **Box 12.1.2** Prominent interventions by Kudumbashree

**Pocketmart:** This application facilitates the market entry of Kudumbashree's farm products, non-farm products, and services offered through various schemes by leveraging an e-commerce platform. This initiative is designed to empower Kudumbashree-supported entrepreneurs by granting them access to digital markets, expanding their economic opportunities and enhancing their reach in the online space. The Pocketmart application enables customers to locate and access information on nearby Kudumbashree enterprises, premium hotels, Janakeeya hotels, and Kerala Chicken outlets. Kudumbashree's food delivery service, Lunch Bell, is available through this app. In its initial phase, Pocketmart supports offline ordering, requiring customers to call or message enterprises to place orders. Online ordering and delivery features will be added in the future, making Pocketmart a fully competitive e-commerce platform.

**Lunch Bell:** Kudumbashree's online tiffin delivery service, piloted in Thiruvananthapuram to serve office workers who lack time to cook, particularly in locations like the Secretariat, Ayurveda College, and Vikas Bhavan. Accessible via the Pocket Mart app, customers can easily order food, with delivery tracking available for real-time updates. Food is prepared in a Kudumbashree-run cloud kitchen and delivered in eco-friendly steel containers, which are collected later in line with Green Protocol standards.

**Premium Cafe:** Branded as a high-quality restaurant, Kudumbashree's Premium Cafes deliver unique cuisine, superior service, and a refined atmosphere, achieving an average daily turnover of Rs 50,000. Four cafes have been launched in Pathanamthitta, Ernakulam, Thrissur, and Wayanad, employing 238 entrepreneurs and generating additional indirect opportunities. Each cafe sees an average monthly turnover of Rs 1.2 lakh per annum, contributing significantly to the local economy.

**K4Care:** K4Care capitalises on the care economy by providing in-home medical and support services. Its core service is home nursing, along with offerings like babysitting, health check-ups, and assistance with shopping and billing. Health monitoring for chronic conditions and recreational activities are also included. To date, 427 executives have been trained, with 182 actively working in the field.

Source: Kudumbashree

activities. Currently, 37,765 Haritha Karma Senas are working across 1,034 LSGs.

**Marketing activities:** Kudumbashree uses four marketing activities: trade fairs, monthly markets, festival fairs, and SARAS fairs. During 2023-24, Kudumbashree conducted 1,665 monthly markets, 69 food festivals and 2,190 festival fairs. Nano markets, Kudumbashree bazaar, marketing kiosks, marketing outlets, and pink cafes are the other prominent marketing activities started by the mission. Kudumbashree products were added to popular online sales platforms like Amazon, Flipkart, and Open Network Digital Commerce Platform.

**Microfinance Activities:** The Mission has implemented bank linkage schemes, revolving funds, and vulnerability reduction schemes over the years. After six months, NHGs are given linkage loans without collateral security. One NHG can avail of a loan up to Rs 20 lakh. As part of this programme, 63,579 NHGs have availed bank loans in the FY 2023-24, and the total linkage amount is Rs 463.4 crore. The mission also provided 4 per

cent interest subsidy for all NHG linkage loans up to Rs 3 lakh. A maximum amount of Rs 15,000 is given to neighbourhood groups in rural areas as a revolving fund to meet the members' credit needs directly and as catalytic capital for leveraging repeat bank finance. A maximum amount of Rs 1,00,000 is given to the Area Development Society as a vulnerability reduction fund to address vulnerabilities like food insecurity, health risk, sudden sickness/hospitalisation, natural calamity, etc., faced by the household(s) or community.

**Micro Enterprise Activities:** Kudumbashree ensures the financial sustainability of Kudumbashree members by providing overall support, including counselling, training, skill development, financial support, and marketing support to set up enterprises. In 2023-24, with the handholding support of Kudumbashree, 34,526 new enterprises were formed, with 39,064 entrepreneurs. In 2024-25, Kudumbashree has formed 11,771 new Micro Enterprises with 14,040 entrepreneurs. To strengthen Kudumbashree micro-enterprises, 730 trained Micro Enterprise Consultants (MECs) have been deployed, with one assigned to each Community Development Society (CDS) across Kerala. Kudumbashree introduced a Micro Enterprises Insurance scheme to aid microenterprise sustainability, further providing insurance coverage to 6,264 enterprises and 23,569 entrepreneurs in the manufacturing, trading, and service sectors. Seventeen block-level Micro Enterprises Resource Centres (MERCs) are now operational, serving as central hubs to support sustainable income for entrepreneurs.

**Prathyasha:** The scheme Prathyasha mainly aims at the formation of microenterprises among vulnerable women who are mothers of children with intellectual disabilities, persons with disabilities, elderly, victims, widows, and dependents of severely ill/bedridden patients. There are 444 micro-enterprises initiated through this scheme during 2023-24.

To make the Kudumbashree women and their families self-reliant in the coastal area, 182 micro-enterprises were started to create employment opportunities.

**Amrutham Nutrimix:** Nutrimix fortification is a collaborative project jointly conceived and implemented by the Social Justice Department, Kudumbashree, and the United Nations World

Food Programme, which aims to supply fortified Amrutham Nutrimix as take-home rations (THR) to children between 6 months to 3 years of age through the ICDS in Kerala. To implement the Fortification Project in Kerala, 1,680 entrepreneurs received training at State and district levels, and 242 Nutrimix units were equipped with 100 kg blenders in collaboration with the UN World Food Programme.

**Coastal Micro Enterprises:** The Coastal Micro Enterprises initiative aims to create opportunities for Kudumbashree women and their families in coastal areas, promoting financial self-reliance. In 2023-24, 789 micro-enterprises were established, involving 1,207 entrepreneurs.

**SHE Starts:** Kudumbashree launched exclusive start-ups for women as part of its silver jubilee celebrations. The programme, called She-Starts, helps bring young women to initiate enterprises. As of FY 2023-24 and up to September 30, 2024, 858 micro-enterprises have been established, engaging 1,283 entrepreneurs.

**Convergence with Other Organizations:** Kudumbashree has partnered with various government departments and organisations, including the SC Welfare Department, Local Self-Governments, Kerala Institute for Local Administration, Kerala Academy for Skill Excellence, Motor Vehicle Department, Social Justice Department, Haritha Kerala Mission, Suchitwa Mission, Water Authority, Supply Co, Kerala Medical Services Corporation, among others, to maximise benefits for its members.

**Kudumbashree Auxiliary Groups:** Auxiliary Groups, a new generation system of Kudumbashree, was formed in 2021 to create new spaces for young women for social and cultural engagement and livelihood upliftment. The plan was then to form 20,000 Auxiliary Groups in the State, to include more young women in the Kudumbashree fold, to bring them to the mainstream of society and give them awareness on various social, financial, and women empowerment-related issues. Every CDS would form Women Auxiliary Groups in all the wards in their operational area. Women between 18 and 40 are eligible for membership in the groups. More than one member (between the ages of 18 and 40) from a family can join the group. The maximum number of members can be included in a single

group is 50. More groups could be formed if more than 50 women enter a ward. The groups could be registered at the District Missions with the recommendation of the respective CDSs. As of November 1, 2024, 19,472 auxiliary groups have been formed, with 3,00,532 members.

*Theerashree* programme for coastal communities: Kudumbashree initiated Theerashree to improve the socio-economic conditions of the coastal population through the development of coastal communities. For this, the service of 82 Coastal Community Volunteers was utilised. 13,151 NHGs and 1,83,431 NHG members were included in this Special Project. Two sub-programmes- *Prathibha Theeram* and *Kaayika Theeram*- were initiated as part of this programme. *Prathibha Theeram* aims to provide special tuition and life skill education to the students in the evenings. As part of this programme, 62 centres were started. *Kaayika Theeram* formulated programmes to create opportunities for the coastal youth to participate in sports and games.

**Activities in tribal areas:** Kudumbashree's tribal interventions have achieved a 96.8 per cent inclusion rate for tribal members in NHGs, facilitated by community resource persons or animators, who ensure the program reaches into tribal hamlets. The main aim of these interventions is to provide a stable foundation for tribal development activities. A bridge course offers educational support to assist students with academic challenges and encourage consistent school attendance. During 2023-24, 520 self-reliant NHGs were identified, and revolving funds were given to 26 NHGs. These NHGs started 397 goat-rearing units and 307 backyard poultry units. In a significant accomplishment, 85 new tribal JLGs were formed for farming activities. Similarly, 42 group micro-enterprises and 95 individual micro-enterprise units were started afresh by the tribal families, and the tribal products are marketed through the Kudumbashree bazaar. Also, 221 tribal JLGs are supported through fund distribution of Rs 4,000 per JLG. In 2023-24, 188 NHGs were supported for their start-up activities, and 43 Tribal Youth clubs were started.

### **Kerala Chicken**

The Kudumbashree-Kerala Chicken Project is a transformative initiative by the Government of Kerala focused on empowering women by enabling them to operate poultry farms and retail outlets.

The project is active across 11 districts, including Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha, Kottayam, Ernakulam, Thrissur, Palakkad, Malappuram, Kozhikode, and Kannur. So far, KBFPCL has supplied 31,391 metric tons of meat through Kerala Chicken outlets, offering poultry at prices below prevailing market rates. As part of this project, Kudumbashree Broiler Farmers' Producer Company Limited has been integrating poultry production in 431 Kerala Chicken farms and selling the meat through 139 Kerala Chicken outlets. KBFPCL has opened 24 new farms and five new outlets in the current financial year. Poultry farmers earn an average of Rs 50,000 after each integration cycle (approximately every 45 days), while outlet beneficiaries earn Rs 89,000 monthly by selling the birds through Kerala Chicken outlets. The project has disbursed Rs 28.5 crore as integration fees to poultry farmers and Rs 43.9 crore to outlet beneficiaries. Currently, 700 women are directly benefited from employment and entrepreneurial opportunities in poultry farming and chicken sales through Kudumbashree outlets.

### **Back to School campaign**

Kudumbashree organised a 'Back to School' campaign to strengthen the three-tier structure of Kudumbashree and equip NHG women to take up novel ventures in tune with the changing times. This campaign is organised by utilising Government schools in association with the education department. In 2023, 38.6 lakh NHG members have attended the 'Back to School' Campaign.

### **Rebuild Kerala Initiative - Entrepreneurship Development Programme (RKI-EDP)**

The Kerala Government approved the SVEP model project called "Rebuild Kerala Initiative-Entrepreneurship Development Programme," which was submitted by Kudumbashree as part of the Rebuild Kerala Development programme. The programme's design would help develop and sustain farm, off-farm and non-farm livelihood options for the poor. The program targeted 14 blocks across eight districts, intending to establish 16,800 enterprises. Over 200 microenterprise consultants were trained to provide ecosystem support and mentorship to budding entrepreneurs. By the project completion date of March 31, 2024, 18,269 enterprises were established, exceeding the initial target.



# GLOSSARY

## Basic Price

Basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer.

## Casual Labour

A person who casually engages in others farm or nonfarm enterprises (both household and non-household and, in return, receives wages according to the terms of the daily or periodic work contract, is considered as a casual labour.

## CDS

The current daily activity status for a person is determined on the basis of his/ her activity status on each day of the reference week using a priority-cummajor time criterion.

## Consumer Price Index (CPI)

CPI is designed to measure the changes overtime in the level of retail prices of a fixed set of goods and services (consumption basket) consumed by an average family of a defined population group at a particular place.

## CWS

The current weekly activity status of a person is the activity status obtained for a person during a reference period of 7 days preceding the date of survey. It is decided on the basis of a certain priority cum major time criterion. According to the priority criterion, the status of 'working' gets priority over the status of 'not working but seeking or available for work', which in turn gets priority over the status of 'neither working nor available for work'.

## Density of Population

Density of population is one of the important indices of population concentrations. It is defined as the number of persons per sq. kilometre. The geographica unit is ward, town, district and state.

## Gross National Income (GNI)

It is GDP less net taxes on production and imports, less compensation of employees less property income payable to the rest of the world plus the corresponding items receivable from the rest of the world (in other words, GDP less primary incomes payable to nonresident units plus primary incomes receivable from non-resident units); an alternative approach to measuring GNI at market prices is as the aggregate value of the balances of gross primary incomes for all sectors; (note that gross national income is identical to gross national product (GNP) as previously used in national accounts generally).

## Infant Mortality

The infant mortality rate is an estimate of the number of infant deaths (death before the first birthday of an infant) for every 1,000 live births.

## Old Age Dependency Ratio

The number of persons in age group 60 years and more divided by the number of persons in age group 15-59 years.

## Parity Index

Parity Index is a relative measure of the gains or loss to farmers as a consequence of the price fluctuations in the economy. The index is a function of cost of farm cultivation, domestic expenditure, and market rate of farm products.

## Protection of Children from Sexual Offences Act, 2012

An Act to protect children from offences of sexual assault, sexual harassment and pornography and provide for establishment of Special Courts for trial o such offences and for matters connected therewith or incidental thereto.

## Labour Force

Persons who were either 'working' (or employed) or 'seeking or available for work' (or unemployed) constituted the labour force.

### **Labour Force Participation Rate (LFPR)**

Labour force participation rate is the ratio between the labour force and the overall size of population

### **Literacy Rate**

Literacy rate is defined as the percentage of population aged 6 years and over who can both read and write with understanding a short simple statement on his her every-day life.

### **Retail Price**

Retail Price of a commodity is defined as the price which the ultimate consumer pays for relatively small transactions of the commodity.

### **Wholesale Price Index (WPI)**

Wholesale Price Index measures the average changes in the prices of commodities for bulk sale at the level of early stage of transaction.

### **Worker Population Ratio (WPR)**

WPR is defined as the percentage of employed persons in the population

# ABBREVIATIONS

<b>AAJ</b>	Ananthodaya Anna Yojana	<b>C-DAC</b>	Centre for Development of Advanced Computing
<b>ADB</b>	Asian Development Bank	<b>CHC</b>	Community Health Centre
<b>AHIDF</b>	Animal Husbandry Infrastructure Infrastructure Development Fund	<b>CHIS</b>	Comprehensive Health Insurance Scheme
<b>AI</b>	Artificial Insemination	<b>COTPA</b>	Cigarettes and Other Tobacco Products Act
<b>AIIB</b>	Asian Infrastructure Investment Bank	<b>CPC</b>	Centralized Processing Centre
<b>AKC</b>	Agricultural Knowledge Centres	<b>CPC</b>	Coconut Producer Company
<b>AMUL</b>	Anand Milk Union Limited	<b>CPF</b>	Coconut Producers Federations
<b>ANERT</b>	Agency for Non-conventional Energy and Rural Technology	<b>CPI</b>	Consumer Price Index
<b>ANP</b>	Annapoorna Scheme	<b>CSO</b>	Central Statistics Office
<b>APCOS</b>	Anand Pattern Co-operative Societies	<b>CWRDM</b>	Centre for Water Resources Development and Management
<b>APEDA</b>	Agricultural and Processed Food Products Export Development Authority	<b>CZMP</b>	Coastal Zone Management Plan
<b>APL</b>	Above Poverty Line	<b>DCS</b>	Dairy Co-operative Society
<b>ARD</b>	Authorised Retail Distributors	<b>DES</b>	Directorate of Economics and Statistics
<b>ARMS</b>	Animal Resource Management System	<b>DoECC</b>	Directorate of Environment and Climate Change
<b>ASC</b>	Agro Service Centres	<b>DPL</b>	Development Policy Loan
<b>ASCAD</b>	Assistance to States for Control of Animal Diseases	<b>DRFI</b>	Disaster Risk Financing and Insurance
<b>ASEAN</b>	Association of South East Asian Nations	<b>EDC</b>	Eco Development Committees
<b>BMC</b>	Biodiversity Management Committees	<b>EEA</b>	European Environment Agency
<b>BMC</b>	Biodiversity Management Committees	<b>EEZ</b>	Exclusive Economic Zone
<b>BMW</b>	Biomedical Waste	<b>EPI</b>	Environmental Performance Index
<b>BOD</b>	Biochemical Oxygen Demand	<b>ePoS</b>	Electronic Total Station
<b>BOQCL</b>	Biofertilizer and Organic Manure Quality Control Laboratory	<b>FAO</b>	Food and Agriculture Organization
<b>BPL</b>	Below Poverty Line	<b>FCI</b>	Food Corporation of India
<b>CAAQMS</b>	Continuous Ambient Air Quality Monitoring Stations	<b>FDA</b>	Forest Development Agency
<b>CAGR</b>	Compound Annual Growth Rate	<b>FFEWS</b>	Flood Forecasting and Early Warning System
<b>CAMPA</b>	Compensatory Afforestation Fund Management and Planning Authority	<b>FPMS</b>	Forest Fire Prevention and Management System
<b>CAPE</b>	Co-operative Academy of Professional Education	<b>FPO</b>	Farmer Producer Organization
<b>CAPEX</b>	Kerala State Cashew Workers Apex Co-Operative Society	<b>FSI</b>	Forest Survey of India
<b>CBD</b>	Convention on Biological Diversity	<b>FSS</b>	Farmers Service Societies
<b>CBWTFD</b>	Common Biomedical Waste Treatment and Disposal Facility	<b>FTA</b>	Free Trade Agreement
		<b>GDI</b>	Gender Development Index
		<b>GDP</b>	Gross Domestic Product



<b>GHG</b>	Green House Gases	<b>KFWFB</b>	Kerala Fishermen's Welfare Fund Board
<b>GIM</b>	Green India Mission	<b>KIIFB</b>	Kerala Infrastructure Investment Fund Board
<b>GIS</b>	Geographic Information System	<b>KINFRA</b>	Kerala Industrial Infrastructure Development Corporation
<b>GLC</b>	Ground Level Credit	<b>KITTS</b>	Kerala Institute of Tourism and Travel Studies
<b>GNI</b>	Gross National Income	<b>KITE</b>	Kerala Infrastructure and Technology for Education
<b>GPS</b>	Global Positioning System	<b>KKS</b>	Karshika Karma Sena
<b>GSDP</b>	Gross State Domestic Product	<b>KLDB</b>	Kerala Livestock Development Board
<b>GSVA</b>	Gross State Value Added	<b>KMML</b>	Kerala Minerals and Metals Ltd
<b>GVA</b>	Gross Value Added	<b>KFON</b>	Kerala Fibre Optic Network
<b>GoI</b>	Government of India	<b>KRDCL</b>	Kerala Rail Development Corporation
<b>HACCP</b>	Hazard Analysis and Critical Control Point	<b>KRFB</b>	Kerala Road Fund Board
<b>HDCK</b>	Handicrafts Development Corporation of Kerala	<b>KSAMM</b>	Kerala State Agricultural Mechanisation Mission
<b>HUDCO</b>	Housing and Urban Development Corporation Limited	<b>KSBB</b>	Kerala State Biodiversity Board
<b>HWA</b>	Human Wildlife Conflict	<b>KSCADC</b>	Kerala State Coastal Area Development Corporation
<b>IITM-K</b>	Indian Institute of Information Technology and Management Kerala	<b>KSEBL</b>	Kerala State Electricity Board Limited
<b>IPCC</b>	Intergovernmental Panel on Climate Change	<b>KSERC</b>	Kerala State Electricity Regulatory Commission
<b>IPBES</b>	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services	<b>KSIDC</b>	Kerala State Industrial Development Corporation
<b>IWRM</b>	Integrated Water Resources Management	<b>KSIE</b>	Kerala State Industrial Enterprises Ltd
<b>JICA</b>	Japan International Cooperation Agency	<b>KSINC</b>	Kerala Shipping and Inland Navigation Corporation Limited
<b>JJ</b>	Juvenile Justice	<b>KSITIL</b>	Kerala State Information Technology Infrastructure Ltd
<b>JJS</b>	Jana Jagratha Samithi	<b>KSITM</b>	Kerala State Information Technology Mission
<b>JNTBGRI</b>	Jawaharlal Nehru Tropical Botanical Research Institute	<b>KSLMA</b>	Kerala State Literacy Mission Authority
<b>KAICO</b>	Kerala Agro Industries Corporation Ltd	<b>KSoM</b>	Kerala School of Mathematics
<b>KALNET</b>	Kerala Academic Library Network	<b>KSPCB</b>	Kerala State Pollution Control Board
<b>KAMCO</b>	Kerala Agro Machinery Corporation	<b>KSPDC</b>	Kerala State Poultry Development Corporation
<b>KARSAP</b>	Kerala Antimicrobial Resistance Strategic Action Plan	<b>KSWIFT</b>	Kerala Single Window Interface for Fast and Transparent Clearance
<b>KASP</b>	Karunya Arogya Suraksha Padhathi	<b>KUFOS</b>	Kerala University of Fisheries and Ocean Studies
<b>KAVIL</b>	Kerala Aqua Ventures International Limited	<b>KVASU</b>	Kerala Veterinary & Animal Science University
<b>KCC</b>	Kissan Credit Card	<b>LBHS</b>	Local Biodiversity Heritage Sites
<b>KCEMS</b>	Kerala Captive Elephant Management System	<b>LFPR</b>	Labour Force Participation Rate
<b>KCMMF</b>	Kerala Co-operative Milk Marketing Federation	<b>LGs</b>	Local Governments
<b>KCZMA</b>	Kerala Coastal Zone Management Authority	<b>LIFE</b>	Livelihood, Inclusion and Financial Empowerment
<b>KESRU</b>	Kerala Self-Employment Scheme for the Registered Unemployed	<b>LPG</b>	Liquefied Petroleum Gas
<b>KFL</b>	Kerala Feeds Limited	<b>LSGD</b>	Local Self Government Department
<b>KFRI</b>	Kerala Forest Research Institute		

<b>LTRCF</b>	Long Term Rural Credit Fund	<b>NUALS</b>	National University of Advanced Legal Studies
<b>MBGIPS</b>	Malabar Botanical Garden and Institute for Plant Science	<b>NULM</b>	National Urban Livelihood Mission
<b>MDDT</b>	Multi-Disciplinary Diagnostic Team	<b>NWMP</b>	National Water Quality Monitoring Programme
<b>MFP</b>	Minor Forest Produce	<b>OFP</b>	Operation Flood Programme
<b>MGNREGS</b>	Mahatma Gandhi National Rural Employment Guarantee Scheme	<b>PACS</b>	Primary Agriculture Credit Societies
<b>MPC</b>	Monetary Policy Committee	<b>PBR</b>	People's Biodiversity Register
<b>MPI</b>	Meat Products of India	<b>PDS</b>	Public Distribution System
<b>MMR</b>	Maternal Mortality Ratio	<b>PFMS</b>	Public Financial Management System
<b>MSME</b>	Micro Small Medium enterprises	<b>PFR</b>	Program for Result
<b>MT</b>	Metric Tonne	<b>PHH</b>	Priority Household
<b>NABARD</b>	National Bank for Agriculture and Rural Development	<b>PLFS</b>	Periodic Labour Force Survey
<b>NABL</b>	National Accreditation Board for Testing and Calibration Laboratories	<b>PMFBY</b>	Pradhan Mantri Fasal Bima Yojana
<b>NAFED</b>	National Agricultural Cooperative Marketing Federation of India Ltd	<b>PPC</b>	Primary Processing Centers
<b>NAMP</b>	National Ambient Air Quality Monitoring Programme	<b>PROUD</b>	Programme for Removal of Unused Drugs
<b>NAPCC</b>	National Action Plan for Climate Change	<b>PRT</b>	Primary Response Teams
<b>NAS</b>	National Accounts Statistics	<b>PSA</b>	Priority Sector Advance
<b>NATPAC</b>	National Transportation Planning and Research Centre	<b>PSUs</b>	Public Sector Undertakings
<b>NCDC</b>	National Cooperative Development Corporation	<b>RBCMA</b>	River Basin Construction and Management Authority
<b>NDDB</b>	National Dairy Development Board	<b>RBDCK</b>	Roads and Bridges Development Corporation of Kerala
<b>NDPREM</b>	Norka Department Project for Return Emigrants	<b>RCC</b>	Regional Cancer Centre
<b>NDPS</b>	Narcotic Drugs and Psychotropic Substance	<b>RCEP</b>	Regional Comprehensive Economic Partnership
<b>NETFISH</b>	Network for Fish Quality Management and Sustainable Fishing	<b>RCS</b>	Registrar of Co-operative Societies
<b>NFHS</b>	National Family Health Survey	<b>RKDP</b>	Rebuild Kerala Development Programme
<b>NFSA</b>	National Food Security Act	<b>RKI</b>	Rebuild Kerala Initiative
<b>NHAI</b>	National Highways Authority of India	<b>RRT</b>	Rapid Response Teams
<b>NHM</b>	National Health Mission	<b>RT</b>	Responsible Tourism
<b>NNI</b>	Net National Income	<b>RUSA</b>	Rashtriya Uchathaar Shiksha Abhiyan
<b>NORKA</b>	Non Resident Keralite Affairs	<b>RWBCIS</b>	Restructured Weather Based Crop Insurance Scheme
<b>NPCA</b>	National Plan for Conservation of Aquatic Ecosystems	<b>SACC</b>	Student Affairs and Counseling Centre
<b>NPS</b>	Non Priority Subsidy	<b>SAF</b>	Society for Assistance to Fisherwomen
<b>NRCB</b>	National Research Centre for Banana	<b>SAMP</b>	State Ambient Air Quality Monitoring Programme
<b>NSO</b>	National Statistical Office	<b>SAPCC</b>	State Action Plan on Climate Change
<b>NSS</b>	National Sample Survey	<b>SDG</b>	Sustainable Development Goal
<b>NSSO</b>	National Sample Survey Organisation	<b>SFAC</b>	Small Farmers Agribusiness Consortium
<b>NTFP</b>	Non Timber Forest Produce	<b>SFC</b>	State Finance Commission
		<b>SHE</b>	Scheme for Her Empowerment in Engineering education
		<b>SHGs</b>	Self Help Groups

<b>SHM</b>	State Horticulture Mission
<b>SI-MET</b>	State Institute of Medical Education and Technology
<b>SJD</b>	Social Justice Department
<b>SLBC</b>	State Level Bankers Committee
<b>SLBP</b>	Special Livestock Breeding Programme
<b>SLEC</b>	State Level Empowered Committee
<b>SMP</b>	Skimmed Milk Powder
<b>SONTR</b>	State's Own Non Tax Revenue
<b>SOTR</b>	State's Own Tax Revenue
<b>SPB</b>	State Planning Board
<b>SRIBS</b>	Srinivasa Ramanujan Institute for Basic Sciences
<b>Supplyco</b>	Kerala State Civil Supplies Corporation Limited.
<b>SWMP</b>	State Water Quality Monitoring Programme
<b>SWTD</b>	State Water Transport Department
<b>TDS</b>	Targeted Distribution System
<b>TSG</b>	Technical Support Groups
<b>TTDI</b>	Travel and Tourism Development Index
<b>UN DESA</b>	United Nations Department of Economics and Social Affairs
<b>UNEP</b>	United Nations Environment Programme
<b>UPASI</b>	United Planters Association of Southern India
<b>VAT</b>	Value Added Tax
<b>VDVK</b>	Van Dhan Viaks Kendra VFPCCK
<b>VFPCCK</b>	Vegetable and Fruit Promotion Council, Kerala
<b>VSS</b>	Vana Samrakhana Samithis
<b>WHO</b>	World Health Organisation
<b>WMO</b>	World Meteorological Organisation
<b>WPI</b>	Wholesale Price Index
<b>WPR</b>	Worker Population Ratio
<b>WWF</b>	World Wildlife Fund
<b>ZSI</b>	Zoological Survey of India

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KERALA STATE PLANNING BOARD

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