GOVERNMENT OF KERALA

ECONOMIC REVIEW

2005

STATE PLANNING BOARD

THIRUVANANTHAPURAM

FEBRUARY 2006

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CHAPTER I

AN OVERVIEW

National Economy

Strong growth momentum continued in the economy during the financial year 2005-06. The Gross Domestic Product grew by 8.1% in the first half of the financial year. The manufacturing sector registered a growth rate of 9.9%. The service sector maintained the growth momentum with 10% rise in trade, hotels, transport and communications in the lead (12.2%).

1.2 Agriculture and allied sectors recorded a growth of 2%. The decline in growth rate of agriculture is partly attributed to the drought like conditions in some parts of the country.

1.3 The foodgrain production, which was 213.46 million tonnes in 2003-04, declined to 204.61 million tonnes in 2004-05. Food grains production during the current financial year is predicted to record a reasonable growth, as there was sufficient rains in the southwest monsoon and with 16% above normal post monsoon rainfall during October- November 2005.

1.4 There was steady deceleration in point to point inflation from 5.7 percent on 2nd April 2005 to a low level of 3.3 percent on 27th August 2005. The flare-up in the international petroleum prices resulted in the reversal of this trend from early September. Consequent on this inflation in terms of Wholesale Price Index was 4.2% on 1st October 2005 and 4.3% on 19th November 2005. However the rate of inflation was comparatively lower than 7.1% and 7.2% as compared with the corresponding period of the previous year.

1.5 . The first quarter of the current financial year was characterised by increase in tax buoyancy, moderation in the pace of expenditure and consequent moderation in the deficit levels. Gross tax collection in the first half of the current year grew by 21.9 percent over the corresponding period of the previous year. The total expenditure of the Government rose by 7.8%. The revenue expenditure increased by 12.9% while capital expenditure declined by 20.9%. The decline in capital expenditure was primarily attributed to a steep drop in loans and advances following the acceptance of the recommendations of Twelfth Finance Commission i.e. plan size of each State needs to take into account the sustainable level of debt and capacity to borrow in the market. The revenue deficit during April – September 2005 (Rs.65097 crore) at 68.3% BE was actually lower than the 78.7% BE achieved in the corresponding period of the previous year.

1.6 Foreign exchange reserves increased by US$1.54 billion in the first half of 2005-06. With inflows of US$2.19 billion and US$4.30 billion respectively, Foreign Direct Investment & Foreign Institutional Investment registered growth rate of 17.2 percent and 120.2 percent respectively. The Indian rupee has exhibited a somewhat fluctuating trend against major global currencies during the current financial year. Against US$ after gaining mildly during April – July 2005 the rupee started weakening thereafter. This was due to the dollar strengthening against other major international currencies.

1.7 There was a decline of US$ 1.3 billion in the external debt of the country from the end of March 2005 to US$ 122.2 billion at the end of June 2005. More over the ratio of external debt to GDP not only continued to be prudently low but also lower than the ratio in 2003-04 by 0.4% points. With foreign exchange reserves at US$ 138.4 billion at end of June 2005, such reserves provided more than full cover to external debt.

1.8 The Sensex is now in a high vibrant position which touched all time peak of 9993.92 points on 1st February 2006. This is partly attributed to the strong investments by Foreign Institutional Investors.

Kerala's Economy

1.9 During 2004-05, the State economy exhibited a high time growth rate of 9.2 percent. This was possible by the targeting growth rate of 13.8 percent in the services sector. The rate of growth of different sectors of economy during the last three years are given below:

Kerala Economy - Sectoral Growth Rates

(Percent)

Year	Sectors			
	Primary	Secondary	Tertiary	Overall
2002-03	1.5	12.7	10.2	8.3
2003-04*	2.8	10.7	7.7	7.4
2004-05**	2.5	1.3	13.8	9.2

* *Provisional* ** *quick estimates*

1.10 The State income at 1993-94 prices is Rs.44054.72 crore as against Rs.40327.56 crore in 2003-04. At current prices it is Rs.89451.99 crore during 2004-05 compared to Rs.80116.12 crore (11.7% increase) in 2004-05. Correspondingly the per capita income at constant prices is Rs.13321 as against Rs.12328 during 2003-04. At current prices it is Rs.27048 and Rs.24492 during the above period.

Agriculture

1.11 The targeted growth rate in agriculture and allied sectors during Tenth plan for the state was 3.05 per cent and the achievement for the first three years of the plan was 2.21 per cent. The growth rate in agriculture income recorded during 2004-05 was 1.7 per cent. The share of contribution of agriculture to State income has been on the decline as the other sectors registered higher rates of growth. The share declined to 12.68 per cent during 2004-05 from 13.62 in 2003-04.

1.12 The global agricultural prices have showed a recovery path from the later half of 2002 and has been reflected in the domestic prices also. Data on average farm price of principal crops grown in Kerala shows increase in 2004-05 compared to previous year in respect of most of the commodities, namely arecanut (15.54 %), coconut (8.96 %) ginger (27 %) cashewnut (24.76 %), rubber (3.65 %) and tapioca (3.8 %); Decline in prices was recorded for paddy (-6.3 %), pepper (-11.33 %).cardamom (-8.47 %) and banana (-4.7 %). The price of rubber and coffee improved further during 2005-06 compared to 2004-05. The price of rubber improved by 21 per cent and coffee by 45 per cent till August 2005.

Crops	2002-03	2003-04	2004-05*
Coconut (1000 nos.)	4736.30	5827.30	6350.00
Rubber (QTL)	3919.00	5040.00	5224.00
Pepper (QTL)	7692.17	6802.46	6032.00
Paddy (QTL)	649.76	694.69	651.00
Tea (Kg)	47.21	45.78	52.14
Coffee (Kg)	28.12	32.29	35.34
Cardamom (Kg)	561.13	361.02	330.44

** upto August 2005*

1.13 In order to tap the potential in horticulture and double production, Government of India has launched the National Horticulture Mission from 2005-06. State Government has already established the State Horticulture Mission for the integrated development of horticulture. The state action plan for the development of horticulture has already been prepared.

1.14 One of the remarkable developments during the last three years is the lease land farming by the neighbourhood groups of women below poverty line under Kudumbashree. There are about 33519 NHGs and 327063 families presently involved in the programme covering an area of 21584 ha indicating an increase of 3970 ha over 2003-04. The area and production under paddy showed an increase largely due to lease land farming.

1.15 Government of India has formulated a scheme for replicating the Agriculture Technology Management Agency model of extension services which was successfully pilot tested under the National Agricultural Technology Project. The state also initiated the project for implementation with the involvement of LSGs and line departments. This extension programme can be improved in collaboration with IITMK led KISSAN Project, Virtual University and AGRISNET. A project on Urban Agriculture has been initiated for implementation in corporations.

1.16 The total milk production of the state is showing a declining trend from 2001-02 onwards, from 27.18 lakh tonnes to 20.25 lakh tonnes in 2004-05. When compared to 2003-04, the decline in milk production was 4.07 per cent. Egg production declined by 1.64 per cent in 2004-05 to 1197 million numbers from the previous year production of 1277 million. The gap between the production and requirement of eggs is widening at an alarming rate. Only meat production has been increasing over the years to keep in pace with the demand. A project for the creation of disease free zone with assistance from NDDB, FMD CP with 100% Central assistance and ASCAD has been already started implementing in the State and now the diseases are under control.

1.17 Marine fish production declined slightly to 6.02 lakh tonnes during 2004-05 from 6.09 lakh tonnes in the previous year. Inland fish production is stagnant at 0.76 lakh tonnes during 2004-2005. Promotion of reservoir fisheries, one paddy one fish culture, ornamental fisheries and fish culture in tanks and ponds offer good scope in the state.

Water Resources

1.18 During 2005-06 Planning Commission has provided financial assistance for the completion of Muvattupuzha valley Irrigation project under AIBP. The benefits of Bharat Nirman could also be utilized for augmenting investment in irrigation.

1.19 Rejuvenation of local water resources is necessary for augmenting area under irrigation in the state. Even though Government of India has initiated a pilot project for the restoration of

tanks and ponds in the country, the share of Kerala in allocation is insignificant compared to total allocation (0.77 %). Considering the severity of coastal erosion in Kerala the Twelfth Finance Commission has awarded Rs.175 crore as grant in aid for coastal zone management for implementation over a period of five years.

Industry

1.20 The industrial growth rate was negative in 2002-03, but it increased to 7.14 percent in 2003-04 and 5.77 percent in 2004-05. The general index of industrial production in the State continuously declined from 302.29 in 2001-02 to 262.59 in 2003 -04. Performance of industrial exports of almost all major products recorded positive growth.

1.21 'Prathyasa', which is to facilitate the setting up of 25000 units in the small scale sector by creating employment to one lakh people is being implemented by the state. For augmenting industries, B2B meet is being conducted every year. In the B2B Meet 2005, 291 industrialists from all over the State in the core sectors participated and interacted with the sellers. In the Traditional industries, coir industry stands first in providing employment (3.75 lakh workers) followed by the handloom sector with an employment of 1.75 lakh workers. KINFRA is establishing a textile centre at Kannur for the growth of the textile industry to provide direct employment 10000 people.

1.22 During 2004-05 the position of the State in IT sector was promising. In the E-governance initiatives the achievements include first computerized Panchayat (Vellanad in Thiruvananthapuram district), fully computerized Collectorate (Palakkad), FRIENDS initiatives etc. Kochi ranked second in super ITES destinations. The state has also made substantial progress in terms of investments, infrastructure and employment generation through focused initiatives. Efforts are on to acquire 500 to 600 acres of land in Thiruvananthapuram to establish Technocity

1.23 The proposed animation and gaming industry at Kazhakuttam in Thiruvananthapuram district, Electronic Park at Kalamassery and Smart City at Ernakulam in partnership with the Dubai Internet City will place the State at high in the IT scenario. The universal e-literacy programme 'Akshaya' which is under implementation in some districts and which is to be universalised will generate the demand for IT based services.

Tourism

1.24 Tourism sector witnessed remarkable progress in tourists arrivals, foreign exchange earnings and employment generation during 2004-05. The Foreign tourist arrivals increased by17.28 per cent which constitutes 10.26 percent of the total foreign to the country. The foreign exchange earnings recorded 28.82 percent growth in 2004-05 providing employment to eight lakh people. New Eco-tourism initiatives were established in 16 identified areas. To tap the tourism potential, IT is being used as a communication medium. Health tourism, heritage tourism, Eco-tourism, pilgrim-tourism etc. have the potential to be interlinked to attract tourists.

Infrastructure

1.25 The infrastructure on road development in the State lay emphasis on improvement and upgradation of the existing roads rather than construction of new ones. During 2004-05 the length of road per lakh population is 485.8 km. It is much higher than the national average of 259.2-km. Road development through KSTP focused on corridor upgradation, road maintenance, road safety and institutional strengthening. The first phase of 339 km of the project has been completed during 2004-2005.

1.26 The Prime Minister of India laid the foundation stone for the Vallarpadam International Container Transshipment Terminal. Completion of the Vallarpadam Terminal would make Kochi

port as a major hub port in the Indian Ocean region. It would have a cascade effect on the industrial, economic, commercial and social growth of the State. Government have decided to develop Vizhinjam Deep water international Container Transshipment Terminal. It will increase the country's proximity to the international sea route, which links Europe, Persian Gulf and the Fareast.

1.27 Twelfth Finance Commission has awarded Rs.225 crore for 2005-2010 to develop the Inland Water Transport. The proposed Metro System at Kochi, Kannur Airport and recognising Calicut Airport as an International Airport will boost the infrastructure development in the State. Similarly doubling of Ernakulam – Kayamkulam Railway line, Electrification and commissioning of Shoranur – Mangalore Double line will increase the passenger facilities.

Power Sector

1.28 The installed capacity of power in the State during 2004-05 is 2617.22MW. The system consisted of 24 hydel projects (2617 MW), five thermal (1810.60 MW) and one wind project (two MW). The power availability of 9455.2mu in 2004-05 showed an increase of 5.76 percent over previous year. The per capita consumption of energy increased from 386kwh in 2003-04 to 400 kWh during 2004-05.

1.29 The transmission and distribution loss could be reduced from 28.46 percent to 26.22 percent. For improving the transmission and distribution network, APDRP schemes have been introduced in Pathanamthitta, Malappuram and Kasaragod districts in 2004-05. Under RGGY schemes 3578 habitats in 930 villages in 14 districts were electrified during 2004-05. The number of energy consumers increased from 73 lakh to 77.9 lakh till 2004-05. Revenue collection increased to Rs 291736.21 lakh from Rs. 275609.27 lakh in 2003-04. Under Kerala Development Plan. 2401 line extension works have been completed.

Education

1.30 The state has 12650 schools in 2005 comprising of 6827 Lower Primary Schools, 3042 Upper Primary Schools and 2781 High Schools. Besides there are 483 CBSE schools, 78 ICSE schools, 26 Kendriya Vidyalaya and 13 Jawahar Navodaya Vidyalaya. In addition there are 1656 Higher Secondary Schools.The total enrolment of students in schools was 48.42 lakh in 2005 as against 48.94 lakh in 2004 which shows a fall by 0.52 lakh students in the school education sector.The drop-out rates is comparatively low in Kerala. During 2003-04, the drop out rate was 0.86 at LP level, 0.79 at UP level and 1.84 at HS level.

1.31 The total number of teacher stood at 175244 in 2004-05 as against 173807 in 2003-04. Teacher-Pupil ratio during 2004-05 is worked out at 1:27.71. During 2003-04, the ratio was 1:28.5.

1.32 As regards higher education 3 new colleges (one government and two aided) were started in 2004-05 taking the total number of arts and science colleges to 189 consisting of 39 government colleges and 150 aided colleges.

1.33 There are 84 engineering colleges with a sanctioned intake of 23196 seats in 2005. In addition, there are 43 government polytechnics and 6 private aided polytechnics.

Medical and Public Health

1.34 The state is faced with the problem of high morbidity rate, low maintenance of health infrastructure, HIV/AIDS issues, reemergence of decease like malaria, diarrhoea, dengue fever, mental health issues etc. There are 2696 health care institutions under three systems of medicine (Allopathy, Ayurveda and Homoeo) together with total bed strength of 48834.

Social Security and Welfare

1.35 Social security measures in Kerala has two faces, viz., protective and promotional. Programmes under protective measure include old age pension for destitute & widows, assistance to physically disabled, insurance protection to BPL families on health care and other benefits through various institutions functioning directly under the control of government and other private charity organizations. In the year 2004-05, old age pension benefited to 131346 persons, destitute/ widow pension benefited to 251698 women and financial assistance to unemployment youth disbursed to 344698 persons. Besides, Welfare Fund Boards provided welfare assistance to unorganized sector. There are 22 Welfare Fund Boards functioning in the State and the total number of labourers enrolled is 50.96 lakh, which constitute 64 percent of the estimated workers. Major initiative has been taken up by the Government to distribute pensions in the first week of the month.

Decentralisation

1.36 In the 'Kerala Development Plan' a programme of institutionalising decentralisation has been intensified with emphasis on updating of records, completion of asset registers, preparation of road registers, preparation of benefit registers, introduction of new accounting system, developing innovative means of financing through taxes, community contributions and borrowings, establishing performance standards for institutions and offices, reducing waste and leakage and improving service delivery standards in Local Governments. The works related to computerisation of Local Governments and online monitoring of progress of plan implementation of Panchayats are nearing completion. Kerala has been selected in 2005 by the Union Ministry of Panchayat Raj as the state having the best Panchayat Raj system.

Poverty Reduction

1.37 The Mission for Poverty Reduction under Kudumbashree system facilitates micro level interventions to reduce poverty and accurately monitor poverty reduction initiatives where it happen. An innovative extension of this programme called "Asraya" has been implemented to provide community based social security to the poorest of the poor.

1.38 Kudumbashree have taken active role for the implementation of various programmes to reduce urban poverty. SJSRY, NSDP and VAMBAY have provided gainful employment to the urban poor through encouraging the setting up of self employment ventures or through wage employment.

1.39 Kudumbashree has organised CBOs in all the 53 Municipalities and 5 Corporations. Employment opportunities have been created for 2,92,207 women living below the poverty line.

Employment

1.40 The number of work seekers in the live register of employment exchanges in Kerala was 37.56 lakhs in 2004. There has been very high growth in the number of professional and technical work seekers (1.76 lakh). The employability of the technically qualified workers need to be improved.

Urban Development

1.41 Clean Kerala Mission has been established to facilitate, enable and motive activities for the environmental upgradation and solid waste management in particular. The long-term vision of the mission is of a waste free, unpolluted, hygienic and clean Kerala. As a part of this, 49 urban local bodies possess land for Solid Waste Management. Kudumbashree SHGs have been formed and trained for house to house collection of wastes in 15 municipalities and 5 corporations.

1.42 The Kerala Sustainable Urban Development Project is proposed to ensure sustainable growth and reduce poverty in all the Municipal Corporations of Kerala. The project is to be implemented with ADB loan.

Banking

1.43 During 2004-05 some innovative developments has been evolved in the banking sector, particularly in customer services and facilities Core-banking, e-banking, phone banking, ATMs etc. are some among them. The average population per bank branch in Kerala is 9000 as against the national average of 15000. The CD ratio crossed 60 (61.39 in 2004-05) against the all-India average of 63.52. The poverty eradication programme implemented through Kudumbashree facilitated to avail an amount of Rs. 278.81 crore as bank credit which served employment to 2.42 lakh women. The priority sector advance during 2004-05 was Rs. 18387 crore and Agriculture credit was Rs. 6854 crore. The RIDF corpus at State Level during 2004-05was Rs. 250 crore and the cumulative disbursement under RIDF to Kerala is Rs. 819.18 crore.

State Finances

1.44 The alarming fiscal situation which prevailed at the commencement of the 10th Five Year Plan has shown perceptible improvement. On account of the concerted efforts of the Government, the deterioration in revenue deficit as a percentage of GSDP has been arrested. The Revenue Deficit came down from Rs. 4118.66 crore (4.53% of GSDP) in 2002-03 to Rs.3680.30 crore (3.59 % of GSDP) in 2003-04. However, Revenue Deficit moderately grew by 0.07 per cent of GSDP and reached at Rs. 3668.92 crore (3.66% of GSDP) in 2004-05 compared to the previous year. The fiscal deficit came down from 5539.05 crore (5.41% of GSDP) in 2003-04 to Rs. 4451.90 crore (4.44% of GSDP) in 2004-05.

1.45 The fiscal reforms introduced in the state like implementation of State level VAT, Public Sector restructuring, State debt restructuring, effective expenditure rationalisation, revenue collection reforms have all contributed to putting the state on a fiscal consolidation path.

Governance

1.46 To improve the quality of services renders to the common people especially poor and also to ensure its speedy delivery within a stipulated time, Service Delivery Project (SDP) has been started implementing in 2605 institutions of 8 departments in 2005-06 under Modernising Government Programme (MGP). These institutions are anganwadis, schools, hospital, police stations, public offices etc which have interface with common people. As part of this, detailed institutional plans have been prepared and linked to plan integration process of the departments in a manner that the development budget of the department is focussed on delivery of quality services. The initiatives viz. Normative Man power study, Base Line and Citizen Survey, Certification Programme for Master Trainees and Trainers, Quality initiatives and Training Programme for all staff of all institutions covered under SDP have been included.

Missions for Kerala's Development and Poverty Alleviation

1.47 His Excellency, the President of India, Dr.A.P.J.Abdul Kalam, while addressing the Kerala Legislative Assembly on 28th July, 2005 outlined ten missions for Kerala's prosperity and development. Taking into account the needs of the state, Kerala Government has suggested three more Missions and the Kerala Legislative Assembly resolved to add another three Missions. These 16 Missions are known as 'Missions for Kerala's Development and Poverty Alleviation'. Subsequently five task forces were constituted for preparation of detailed report and Action Plan for translating these Missions in to practice. The Task Forces submitted their report and based on this Vision 2010 of the State is under finalisation.

CHAPTER-2

STATE FINANCES

All States

The Fiscal Performance of the State Governments as reflected in the key deficit indicators viz Revenue Deficit (RD), Gross Fiscal Deficit (GFD) and Primary Deficit (PD) is an area of concern in recent years. The persistent deterioration measured by the above indicators that had set in sharp from mid 1990's. This is evident from Table 2.1, showing the fiscal health of all the States put together. The ratio of GFD/GDP, of all the States which was 2.6 per cent in 1995-96 increased year after year and reached to 4.7 percent in 1999-2000. Revenue Deficit and Primary Deficit also maintained a similar trend. A number of factors contributed for the disparity in the growth rates of receipts and expenditure and the consequent widening of the fiscal gap of the State Governments.

Table - 2.1
Key Fiscal Deficits of All States

(Rs. in crore)

Year	Gross Fiscal Deficit (GFD)	Revenue Deficit	Primary Deficit
1995-96	31426 (2.6)	8201 (0.7)	9494 (0.8)
1996-97	37251 (2.7)	16114 (1.2)	11675 (0.9)
1997-98	44200 (2.9)	16333 (1.1)	14087 (0.91
1998-99	74254 (4.2)	43642 (2.5)	38381 (2.2)
1999-00	91480 (4.7)	53797 (2.7)	46309 (2.4)
2000-01	895 32 (4.3)	53569 (2.5)	37830 (1.8)
2001-02	95994 (4.2)	59188 (2.6)	33488 (1.5)
2002-03	102123 (4.1)	55111 (2.2)	31981 (1.3)
2003-04 RE	141010 (5.1)	72126 (2.6)	57042 (2.1)
2004-05 BE	111852 (3.6)	43718 (1.4)	20994 (0.7)

Source. State Finances, A Study of Budget 2004-05. RBI December 2004.

2.2 The States were confronted with a number of problem such as growing interest burden, increasing pension liabilities, large administrative expenditure, losses incurred by state public sector undertakings, inappropriate user charges and deceleration in central transfers. The persistently large revenue deficit has led to a higher fiscal deficit and spiraling debt. The fiscal stress, in turn had seriously affected states' ability to discharge their primary responsibility of developing social and economic infrastructure

2.3 Recognizing the urgent need for comprehensive fiscal reforms, States' have initiated several measures towards fiscal consolidation through revenue augmentation, expenditure containment, public sector restructuring and institutional reforms. Central government also initiated measures to encourage fiscal reforms at State level. Such measures included *inter alia*, the Fiscal Reform Facility and Debt Swap Scheme. As a Bankers' Bank, RBI was also sensitizing the States on various fiscal matters. The initiatives introduced on the revenue front include strengthening of tax effort, rationalization of user charges relating to power, water and transport.

2.4 The fiscal reform measures initiated by the State Governments have the potential to improve and strengthen the state finances. Adoption of fiscal policy rules built under Fiscal Responsibility legislation committed the State Governments to a deficit reduction path, which would provide greater fiscal discipline. Some moderation in fiscal imbalances of State Governments have been visible since with the speeding up of various fiscal and institutional reforms undertaken by the State Governments. All the major deficit indicators as ratios to the GDP recorded a decline over the period 2000-01 to 2002-03. The GFD of all States declined from 4.7 per cent in 1999-2000 to 4.1 per cent of GDP in 2002-03. However slippages were continued in respect of major deficit indicators on the revised estimate for 2003-04. The policy frame work of State governments in 2004-05 was influenced by three major development viz. the ongoing fiscal and institutional reforms at the State level facilitated by central government and Reserve Bank, general acceptance of the recommendations of Twelfth Finance Commission which would form the basis of federal fiscal relations for a period spanning 2006-10 and the implementation of VAT by a number of States from 1st April 2005.

State Finances

2.5 Kerala State was confronted with worsening fiscal situation from mid 1980's. This situation became sharper since 1998, when liabilities due to all round increase in emoluments of government servants, teaching staff and employees of autonomous institutions had to be met. Besides there had been grievous failures on all fronts, in controlling expenditure, mobilising tax revenue, adequate user charges etc. Movement of all fiscal indicators viz; revenue deficit, fiscal deficit and primary deficit showed a deterioration during the 1990's, in spite of the steps undertaken to contain deficits in tune with the economic reforms in the country. Faced with a secular deterioration, government enacted the Fiscal Responsibility Act 2003 which mandates lowering of fiscal deficit to 2 per cent of State Domestic Product and balancing revenue deficit by March 2007.

Over all Fiscal Position of Kerala

2.6 On account of the concerted effort of the government, the overall fiscal health of the State has shown perceptible improvement as evident from fiscal indicators given in Table 2.2. The deterioration of revenue deficit as percentage of GSDP has been arrested. The revenue deficit came down from Rs.4118.66 crore (4.53 per cent of GSDP) in 2002-03 to Rs.3680.30 crore (3.59% of GSDP) in 2003-04. However the revenue deficit moderately grew by 0.07 per cent of GSDP and reached at Rs.3668.92 crore (3.66 per cent of GSDP) in 2004-05 compared to the previous year. The fiscal deficit came down from Rs.5539.05 crore (5.41% of GSDP) in 2003-04 to Rs.4451.90 crore (4.44% of GSDP) in 2004-05. There was considerable fall in primary deficit. It declined from Rs.2210.75 crore (2.16% of GSDP) in 2003-04 to Rs.839.36 crore (0.84% of GSDP) in 2004-05.

Table 2.2
Major Deficit Indicators

(Rs. Crore)

Year	Revenue Deficit		Fiscal Deficit		Primary Deficit	
	Amount	% to GSDP	Amount	% to GSDP	Amount	% to GSDP
1995-96	402.82	1.04	1302.66	3.36	378.50	0.98
1996-97	643.03	1.45	1542.48	3.47	439.07	0.99
1997-98	1122.90	2.27	2413.85	4.88	1127.76	2.28
1998-99	2029.96	3.61	3012.2	5.36	1565.94	2.78
1999-00	3624.21	5.8	4534.56	7.25	2582.29	4.13
2000-01	3147.05	4.51	3877.8	5.56	1620.20	2.32
2001-02	2505.64	3.28	3269.4	4.12	779.94	0.98
2002-03	4118.66	4.53	4990.04	5.49	2043.28	2.25
2003-04	3680.30	3.59	5539.05	5.41	2210.75	2.16
2004-05	3668.92	3.66	4451.9	4.44	839.36	0.84

Source: Finance department, Govt. of Kerala

2.7 Balance from Current Revenue (BCR) as in the last several years continues to be negative on account of higher rate of growth of non plan revenue expenditure than the rate of growth of revenue receipts. Marginal improvement can be witnessed in the case of share of capital outlay on capital receipts. The asset liability ratio remain unchanged during the last three years (Table 2.3).

Table 2.3
Financial Indicators for Government of Kerala

Particulars	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Balance of Current Revenue (BCR) (Rs in Crore)	-437	-2069	-1704	-1660	-1811	-1983	-1496
Interest Ratio	0.19	0.24	0.26	0.27	0.28	0.28	0.27
Capital Outlay/Capital Receipts	0.24	0.14	0.17	0.16	0.15	0.12	0.15
Return of Investment ratio	0.004	0.006	0.006	0.003	0.005	0.009	- 0.013
Outstanding Guarantees/ Revenue Receipt	0.71	1.00	1.09	1.30	1.19	1.18	0.91
Assets/ Liabilities	0.61	352	0.47	0.44	0.4	0.4	0.4

Source: Finance department, Government of Kerala.

Pattern of Revenue Receipts

2.8 Receipts in the revenue account comprises of (i) State's own revenue, and (ii) central transfers in the revenue account through shared taxes and grants for plan and non plan purpose. The total revenue receipts of the State during the last decade is shown in Table 2.4. During the period revenue receipts grew by 10.8 per cent. The component wise growth rates are: 11.6 per cent by State's own tax revenue, 5.7 per cent by states own non tax revenue and 11.0 per cent by central taxes and grants-in-aid. Over the decade while the contribution of State revenue to total revenue ranges between 71 - 75 per cent, the contribution from central transfers was to the extent of 25 - 29 per cent.

Table-2.4
Revenue Receipt

(Rs. crore)

Year	State's own Revenue						Share of Central Taxes and Grants		Total Revenue (6+8)	Annual Growth rate
	State's own Tax Revenue	Growth rate	State's own Non Tax Revenue	Growth rate	Total (2+3)	Growth rate		Growth rate		
1	2	3	4	5	6	7	8	9	10	11
1995-96	3382.68		535.49		3918.17		1505.39		5423.56	
1996-97	3898.50	15.26	513.8	-4.05	4412.3	12.61	1732.78	15.11	6145.08	13.30
1997-98	4501.05	15.48	562.11	7.46	5053.16	14.52	2065.06	19.18	7118.22	15.84
1998-99	4649.56	3.30	557.66	1.01	5207.22	3.05	1990.9	-3.59	7198.12	1.12
1999-00	5193.51	11.70	530.71	-4.83	5724.21	9.93	2217.53	11.38	7941.75	10.33
2000-01	5870.26	13.03	659.09	24.19	6529.35	14.07	2201.51	-0.72	8730.86	9.94
2001-02	5523.42	0.91	543.38	-17.59	6466.8	-0.95	2589.59	17.63	9056.39	3.73
2002-03	7302.54	23.28	681.26	25.37	7983.8	23.46	2653.58	2.47	10637.38	17.48
2003-04	8088.78	10.77	806.98	18.45	8895.76	11.42	2919.61	10.03	11815.37	11.07
2004-05	8963.65	10.82	819.08	1.50	9782.73	9.97	3717.75	27.34	13500.48	14.26
AAGR from 1995-96 to 2004-05		11.5		5.7		10.9		11.0		10.8

Source: Finance Department, Govt. of Kerala

2.9 The revenue receipt of the State increased from Rs.5423.56 crore in 1995-96 to Rs.13500.48 crore representing more than 2.5 times increase in 2004-05. The total revenue receipt increased by Rs.1685.11 crore (14.26%) in 2004-05 as against the increase of Rs.1177.99 crore (11.07%) in 2003-04.

2.10 The growth of revenue receipt always lagged behind the growth of revenue expenditure, is a disturbing feature of Kerala's dismal fiscal position. Salaries and pension, a major component of revenue expenditure is increasing year, after year is putting pressure on revenue and fiscal deficits. Therefore scope for raising additional revenue realisation by curtailing wide spread tax evasion and collecting substantial tax arrears may be looked into.

State's Own Tax Revenue

2.11 Growth rate of State's own tax revenue exhibits (Table 2.5) a mixed trend. Ups and downs registered in the growth rate continue to rule quite for a long time during the decade. The growth momentum maintained a steady trend only from the last two years.

Table 2.5
State's Own Tax Revenue

(Rs. in crore)

Year	Land Revenue	Stamps and Registration fees	State Excise Duties	Sales tax	Motor vehicle tax	Others	Total	Annual Growth rate
1995-96	23.71	353.79	449.29	2285.96	222.87	47.06	3382.68	
1996-97	22.33	360.30	416.53	2772.28	247.59	77.47	3898.50	15.25
1997-98	23.75	331.36	543.41	3014.09	301.63	216.81	4501.05	15.46
1998-99	32.73	301.15	529.62	3366.62	323.31	96.13	4649.56	3.30
1999-00	34.67	279.65	591.10	3853.54	380.83	53.72	5193.51	11.70
2000-01	39.35	341.10	688.94	4344.33	394.85	61.69	5870.26	13.03
2001-02	34.93	384.28	541.48	4440.65	452.18	59.72	5923.42	0.91
2002-03	38.40	486.93	683.07	5343.15	513.20	258.20	7302.55	23.28
2003-04	40.59	549.81	655.91	5991.43	585.78	265.26	8088.78	10.77
2004-05	43.65	775.35	746.45	6701.05	610.48	86.47	8963.65	10.82
AAGR from1995-96 to 2004-05	7.8	10.3	6.9	12.8	12.0			11.6

Source. Finance Department, Govt. of Kerala.

2.12 The share of Kerala's own tax revenue to total own revenue receipts ranged between 86 per cent and 92 per cent during 1995-96 to 2004-05. During this period annual average growth rate of State's own tax revenue was 11.6 per cent. The total own tax revenue realised during 2004-05 was Rs.8963.65 crore, out of which Rs.6701.05 crore (75%) was by way of Sales Tax and Rs.775.35 crore (8.6 per cent) by way of stamps and registration and Rs.746.45 crore (8.3%) by way of State's excise duties. All components of the own tax revenue registered improvement in its growth rate during 2004-05 compared to the previous year. Highest growth rate was achieved by stamps and registration fees (41.0%) followed by State's excise duties (13.8%) and sales tax (11.8%). Though Kerala stands foremost among States in per capita consumption expenditure, such consumption has not led to considerable buoyancies in tax revenue. Since a major share of revenue expenditure is met from State's own revenue, revenue augmentation measures initiated by the government have to be strengthened by plugging loopholes for tax evasion.

2.13 Sales tax, one of the single most item of State's own tax revenue was replaced by the newly introduced VAT, a tax policy to strengthen the tax administration, from 1st April 2005. Several states in India introduced VAT with effect from April 1, 2005. A white paper on it, released by the empowered committee of the State Finance Ministers is given in Box.2.1.

BOX 2.1
White paper on State level Value Added Tax: Salient Features

The Empowered Committee of State Finance Ministers (Convenor Dr. Asim Kumar Dasgupta) was constituted by the Ministry of Finance, Government of India in November 1999 for laying down the broad contours for introducing State-level Value Added Tax (VAT). The Committee released 'A White Paper on State-level VAT' in January 2005. The White Paper incorporate the justification and background for switching over to VAT ,delineates its main design and addresses key related issues.

In general, all goods would be covered under VAT, excepting a few whose prices are not fully market determined which would continue to be taxed under the existing Sales Tax Act or by making special provisions in the VAT Act. There would be only two basic VAT rates 4 per cent and 12.5 per cent covering 550 goods. There would be a category of 46 tax exempted goods comprising natural and unprocessed products in the unorganised sector and a few commodities which are of local social importance for individual States. Another special VAT rate of 1 per cent is for gold and silver ornaments. The 4 per cent rate category would comprise items of basic necessities such as medicines and drugs, all agricultural and industrial inputs, capital goods and declared goods. The remaining commodities will fall under the general VAT rate of 12.5 per cent. On items presently attracting additional excise duties, viz. sugar, textile and tobacco, VAT will not be imposed for one year and will be reviewed thereafter.

The White Paper indicates the need for phasing out the Central Sales Tax (CST) and adequate compensation from the Government of India. The CST would be reviewed during 2005-06. In this regard, the Taxation Information Exchange System is being set up. Acknowledging the possibility of revenue loss due to VAT in the initial years, the Government of India has agreed to compensate the States for the loss up to 100 per cent in the first year, 75 per cent in the second year and 50 per cent in the third year.

Source: Annual Report 2004-05, RBI.

2.14 VAT has certain distinct advantages over the existing sales tax structure as it will abolish the burden of existing tax such as turn over tax, surcharge on sales tax, additional sales tax etc. Under the new regime, the over all tax burden will be rationalised and prices in general is expected to fall. VAT will replace the existing system of inspection by a built on self assessment by traders and manufactures. A kind of risk was also anticipated with regard to introduction of VAT as there is likelihood of revenue loss in the initial years of transfers. Government of India have agreed to compensate for the loss up to 100 per cent in the first year and thereafter at reduced levels.

State's Own Non Tax Revenue

2.15 State's own non tax revenue constitute only about 8 - 14 per cent of State's own revenue. Component-wise details of non tax revenue receipt from 1995-96 to 2004-05 are given in Table 2.6. The non tax revenue realisation increased by Rs.12.10 crore from Rs.806.98 crore in 2003-04 to Rs.819.08 crore in 2004-05. The annual average growth rate over the decade is registered only about 5.7 per cent while that of State's own tax revenue grew by 11.6 per cent.

Table-2.6

State's Own Non-Tax Revenue

Year	Forest	Annual Growth rate	Debt Services (Interest)	Annual Growth rate	Social Development Services*	Annual Growth rate	Others	Annual Growth rate	Total	Annual Growth rate
1995-96	160.77		102.32		96.42		177.98		535.49	
1996-97	162.00	0.77	56.73	-44.45	86.30	-10.50	209.77	17.86	513.80	-4.05
1997-98	144.91	-10.55	53.48	-4.04	106.73	23.67	246.99	17.74	552.11	7.46
1998-99	121.03	-16.49	70.96	32.69	122.66	14.93	243.01	-1.61	557.66	1.01
1999-00	109.88	-9.21	37.3[illegible]	-47.42	118.41	-5.46	285.11	9.09	530.71	-4.83
2000-01	141.24	28.54	36.8[illegible]	-1.34	165.07	39.36	315.97	10.88	659.09	24.18
2001-02	113.70	-19.50	31.08	-15.57	135.51	-17.88	263.09	-16.74	543.38	-17.56
2002-03	149.58	31.56	35.86	15.38	185.67	37.02	310.15	17.89	681.26	25.37
2003-04	187.18	25.14	32.4	-9.65	207.90	11.97	379.50	22.36	806.08	18.45
2004-05	199.69	6.68	40.51	25.03	209.85	0.94	368.03	-2.76	819.08	1.50
AAGR from 1995-96 to 2004-05		4.10		-5.50		10.70		9.20		5.70

Source. Finance Department, Govt. of Kerala

** It includes education, medical and Public Health, Agriculture, Rural Development, Animal Husbandry, Co-operation, Industries, Community Development and miscellaneous Social Development Organisation*

2.16 Table 2.7 shows the changing pattern of non tax revenue receipts of Kerala and All states from 2000-03. In the case of interest receipt, Kerala lags far behind the All states. Among the sectors, major share in Kerala is realised from general services and economic services. The contribution of State lotteries to State exchequer is remarkable. This accounts nearly one fifth of the total non tax. The share of dividends and profits was low, but it remained more or less stable. A major source of non tax revenue is revenue from forest which constitute 24% of the total non tax revenue realised during 2004-05 (Table 2.6). A decelerating trend in revenue realisation from forest is observed from 1995-96 and continued till 1999-2000. The trend, though picked up during 2000-01, was short lived. However the trend in the last two years has shown some improvement.

Table 2.7

Component wise realisation of Own Non Tax Revenue - Kerala & All states (Rs.Crore)

Item	2000-01		2001-02		2002-2003	
	Kerala	All States	Kerala	All States	Kerala	All States
States own Non Tax Revenue	659 (100)	31455 (100)	543 (100)	32281 (100)	678 (100)	35859 (100)
Interest Receipts	37 (5.6)	11438 (36.4)	31 (5.7)	9205 (28.5)	36 (5.3)	9501 (26.8)
Dividends & Profit	13 (2.0)	154 (0.5)	5 (0.9)	128 (0.4)	10 (1.6)	328 (0.9)
General services	253 (38.4)	6087 (19.4)	217 (40.0)	7965 (24.7)	262 (38.6)	8802 (24.5)
of which States Lotteries	134 (20.3)	2700 (18.6)	122 (22.5)	4420 (13.7)	128 (18.9)	5338 (14.8)
Social & Community Service	77 (11.6)	2311 (7.3)	82 (15.1)	2558 (7.9)	106 (15.6)	2856 (7.9)
Economic services	280 (42.4)	11463 (36.4)	208 (38.4)	12424 (38.5)	264 (38.9)	14372 (39.9)
of which Forestry & Wildlife	141 (21.4)	1486 (4.7)	114 (21.0)	1466 (4.5)	150 (22.1)	1922 (5.4)

Source: State Finances RBI (Figures in bracket indicate percentage)

2.17 The returns from public enterprises and social services especially from education and health are very little, where government is making huge investment. The real reason for low recovery from public services can be attributed mainly to the reason that the State was trying to maintain a welfare state by charging low user charges for its public services. The rates for the aforesaid public services were fixed years back and rates have not been changed though per capita income and wages/salary levels had increased in the State. One of the pre requisite for improving cost recovery is that quality of public services have to be improved substantially. Because of the poor quality of the public services, large sections of population have opted in favour of private service providers; examples are education and health care.

2.18 A comparative position of non-tax revenue in the neighbouring states for 2002-03 is given in Table 2.8. There the ratios between non-tax revenue and revenue expenditure in Andhra Pradesh, Tamilnadu, Karnataka are 13.55 per cent, 7.24 per cent and 6.79 per cent respectively. In Kerala it is only 4.59 per cent.

Table - 2.8

Comparative Position of States Own Non Tax Revenue in four neighbouring States 2002-03

(Rs. Crore)

States	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu
Non Tax Revenue of State	3529.42	1277.66	677.77	1860.62
Revenue Expenditure (RE)	26056.89	18814.50	14756.05	25687.70
Revenue Receipts (RR)	23002.92	16168.75	10633.88	20836.74
NTR / RE	13.55	6.79	4.59	7.24
NTR / RR	15.34	7.90	6.37	8.93

Central Transfers

2.19 Transfers from centre to state comprise of tax devolution and grants. The component-wise transfers from 1995-96 to 2004-05 are shown in Table 2.9. Central transfers to the State constituted about 25 - 29 per cent of the total revenue receipts of the State. Growth in central transfers showed a declining trend on year to year basis, which adversely affected revenue receipts of the state. The average annual growth rate of the central transfers for the period from 1995-96 to 2004-05 was 10.98 per cent.

Table-2.9

Central Transfers: 1995-96 to 2004-05

(Rs in Crore)

Year	Share in Central Taxes & Duties		Grant-in-aid and other receipts from Centre for Plan & Non-Plan		Total Transfers	
	Amount	Annual Growth rate	Amount	Annual Growth rate	Amount	Annual Growth rate
1995-96	1036.96		468.43		1505.39	
1996-97	1242.65	19.84	490.13	4.63	1732.78	15.11
1997-98	1271.74	2.34	793.32	61.85	2065.06	19.18
1998-99	1382.30	8.69	608.60	-23.28	1990.90	-3.59
1999-00	1535.22	11.06	682.31	12.11	2217.53	11.38
2000-01	1585.61	3.28	615.90	-9.73	2201.51	-0.72
2001-02	1614.28	1.81	976.33	58.36	2589.59	17.62
2002-03	1715.21	6.25	938.37	-3.79	2653.58	2.47
2003-04	2012.00	17.31	907.61	-3.28	2919.61	10.03
2004-05	2404.95	19.53	1312.80	44.64	3717.75	27.34
AAGR from1996-96 to 2004-05		10.01		15.72		10.98

Source: Finance Department, Govt. of Kerala

2.20 The year to year analysis shows that the central transfers was unfavourable to the State. However, during 2004-05 central transfers amounted to Rs.3717.75 crore which constitute nearly 27.54% of the total revenue receipts and represents an annual growth rate of 27.3 per cent over the previous year. The increase was mainly due to the grants from National Calamity Contingency Fund (NCCF) towards drought relief (Rs.106 crore) and Tsunami relief (Rs.100 crore) and more receipts under Block grants (Rs.253.67 crore) for State plan schemes. Of the total transfers of Rs.3717.75 crore during 2004-05, Rs.2404.95 crore was State share in union taxes and Rs.1312.80 crore as grant-in-aid for plan and non plan purpose.

2.21 Comparative position of central transfers to the neighbouring States' of Kerala during 2002-03 are given in Table 2.10. Kerala occupies the lowest position both in terms of share of central taxes and grants from the centre. In terms of total transfers, compared to all States Andhra Pradesh is at the top (6.7%) followed by Tamilnadu (4.53%) and Karnataka (4.34%) and the lowest being Kerala (2.59%).

Table - 2.10

Comparative Position of Central Transfers to Neighbouring States

(Rs. in crore)

State	2002-03			
	Share of Central Taxes	Grant from Centre	Total	
	Amount	Amount	Amount	%
Andra Pradesh	4315.81	2540.14	6855.95	6.70
Karnataka	2786.20	1665.18	4451.38	4.34
Kerala	1715.22	938.37	2653.59	2.59
Tamil Nadu	3047.57	1586.84	4634.41	4.53
All States	**56655.32**	**45682.54**	**102337.86**	**100.00**

Source: State Finances, RBI, December 2004.

Twelfth Finance Commission

2.22 The Twelfth Finance Commission (TFC) was appointed in November, 2002 to make recommendations regarding the distribution between the Union and the States of net proceeds of shareable taxes, the principles which should govern the grants-in-aid of the revenues of the States from the Consolidated Fund of India and the measures needed to augment the consolidated fund of a State to supplement the resources of local bodies in the State on the basis of the recommendation made by the Finance Commission of the State.

2.23 The terms of reference mandated the Commission to review the state of the Finances of Union and States and to suggest plan by which Governments collectively and severally may bring about a restructuring of Public Finances, restoring budgetary balance and achieving macro economic stability and debt reduction along with equitable growth. To this, the objective of achieving debt reduction along with the equitable growth was added. The terms of reference (TOR) of Twelfth Finance Commission (TFC) lay emphasis on certain efficiency factors such as adjustment of user charges, relinquishing non priority enterprises through privatisation/ disinvestment and resource mobilisation in order to improve tax GDP/GSDP ratios. Further, commission was also asked to suggest corrective measures for debt sustainability and to review Fiscal Reforms Facility introduced by the central government. An additional terms of reference was also made in regard to sharing of profit on petroleum cess with the States. Apart from this, Commission was also asked to make appropriate recommendations with reference to National Calamity Fund and Calamity Relief Fund as a matter of financing disaster management.

2.24 The Commission submitted its report covering all aspects of its mandate on 17th December 2004. The recommendations include a plan for restructuring public finance of Centre and States through improvement in revenue mobilisation and bringing down the debt levels through enactment of fiscal responsibility legislation by States. The Commission recommended to do away with the present system of imposing 70:30 ratio between loan and grant for extending plan assistance to general category states (10:90 in the case of non-special category states) by Planning Commission and transfer of external assistance to the States on the same terms and conditions as attached to such assistance by external funding agencies. The share of the States in the net proceeds of the shareable Central Taxes has been raised to 30.5 per cent from the current level of 29.5 percent. The extract of the summary recommendations of the Report is given in Appendix - 2.1.

2.25 Total transfers to States recommended by Twelfth Finance Commission amounts to Rs.7,55,752 Crore (Appendix-2.2) over the five year period 2005-10. This recommended total transfer is higher by 74% over those recommended by 11th Finance Commission which amounts to Rs.4,34,905 Crore.

2.26 The Twelfth Finance Commission was very unfair to Kerala by adopting the following weightage for determining the *inter se* distribution of divisible pool.

1. Population	- 25%
2. Income Distance (backwardness)	- 50%
3. Geographic area	- 10%
4. Tax effort	- 7.5%
5. Fiscal Discipline	- 7.5%
Total	**- 100%**

2.27 By increasing the weightage for the geographic area and by retaining the predominant weightage for backwardness, Kerala, which has very little geographic area, has been seriously affected. In the last five years, we have moved further from the national average in respect of per capita income. Consequently, in TFC award our share has gone down from 3.057% in the Eleventh Finance Commission to 2.665%, the lowest since 1955.

2.28 With the emergence of backwardness as the main criteria after the Eleventh Finance Commission award, States having high social development track like Kerala, suffered badly. Similarly, with the adoption of geographic area also as a criteria, States having large geographic area have been benefited while states like Kerala suffered badly.

Table-2.11

Finance Commission Award: Share

Item	12th Finance Commission	11th Finance Commission	10th Finance Commission
Population share		3.490%	3.438%
Share of Taxes	2.665%	3.057%	3.498%
Share of Grants	2.282%	1.387%	2.498%
Share of Total Transfers	2.594%	2.832%	3.407%
Estimated reduction in transfers in the TFC, Compared to that in EFC	2400 cr in respect of share of Central Taxes		

Source: Finance Department, Govt. of Kerala

2.29 TFC has assumed that the total sharable Central pool amount for the 5 year period 2005-10 is Rs.6,13,112 crore. State's share of 2.665% of this come to Rs.16353 crore which is what we will get in the next 5 years as share of Central tax (Appendix 2.2). Share of 12th Finance Commission Award to Kerala compared to previous commission is given in Table 2.11. An amount of Rs.2400 crore is anticipated as loss the State will suffer in the next 5 years consequent upon the difference in share over that existing now ie. 3.057% - 2.665% = 0.392%. However, the actual tax will depend on the actual amount in the divisible pool. As per the recommendation of TFC, the State will get grant-in-aid in the following sectors as in Table -2.12 given below for the next five years (2005-10).

Table 2.12
Grants-in-aid to Kerala under the Twelfth Finance Commission

(Rs in crore)

Sl. No.	Particulars	Amount
1	Revenue Deficit Grant	470.37
2	Maintenance of Roads & Bridges	642.32
3	Maintenance of Buildings	103.50
4	Maintenance of Forest	25.00
5	Maintenance of Heritage(four years)	25.00
6	State specific needs	500.00
7	Local Body	1134.00
8	Calamity Relief (Centre's share)	354.32
	Total	**3254.51**

2.30 The TFC has introduced a new ground on debt relief by combining it with an incentive to reduce revenue deficit based on a three fold approach.

i) Each state should adopt a fiscal responsibility legislation if it has not;

ii) Once the fiscal responsibility legislation has enacted, past loans to it from the Centre will be consolidated as 20 year loan with uniform interest rate of 7.5 per cent;

iii) Thereafter for each year up to 2009-10, the annual repayment of loan will be written off linked to the absolute amount by which revenue deficit is reduced in each year.

Box 2.2
New Debt Relief Scheme by Twelfth Finance Commission

The Twelfth Finance Commission (TFC) offers conditional write-offs on debt repayments owed by States to the Centre and concessions on the interest rate applicable on that stock, Although, the previous Finance Commission (Eleventh Finance Commission) also recommended a Fiscal Reforms Facility conditional upon revenue deficit correction, the scheme mooted by the TFC is far more sweeping. There are two separate sets of conditionalities for the interest concessions, and the debt write-off. Interest rate reduction to 7.5 per cent requires enactment of fiscal responsibility legislation (FRBM Acts), with five required features, and the debt write-off scheme is linked to absolute reduction of the revenue deficit.

The required features of fiscal responsibility legislation include: elimination of the revenue deficit by 2008-09, reducing the fiscal deficit to 3 per cent of GSDP or its equivalent, defined as the ratio of interest payment to revenue receipts; setting out annual reduction targets of revenue and fiscal deficits; bringing out annual statements giving prospects for the state economy and related fiscal strategy, and bringing out special statements along with the budget giving in detail the number of employees in government, public sector, and aided institutions and related salaries.

The debt repayment write-offs carry a set of four separate conditionalities. For year t, the yearly write off is obtained by applying a given ratio for each state to the absolute reduction in the revenue deficit in year $_t$1-1), relative to year ($_t$-2). There is also a minimum condition. The write-off in year t is enabled only if the absolute fall in the revenue deficit in year ($_t$-1) relative to year ($_t$-2) exceeds the amount of the interest concession in year t. Both these apply to the absolute revenue deficit. There is also a requirement that the absolute fiscal deficit should be capped at the absolute amount in 2004-05. However, if a state achieves zero revenue deficit by 2008-09, it gets a full write-off in 2009-10 regardless of where its fiscal deficit is.

Source: A study of Debt sustaininability at State Level in India - Indira Rajaraman et.al, Reserve bank of India, August, 2005.

Box 2.3

Debt Swap Scheme

Under the debt swap scheme (DSS) for States offered from the Government of India, loans from the Centre bearing coupon rates in excess of 13 per cent were swapped against small savings proceeds and open market borrowings (OMB), as shown below. A debt swap scheme cannot reduce the stock of debt. It can merely change the composition such that the overall interest burden is reduced.

$$\text{Debt Swap}_t = kt*xt\text{-}1 + f*(\text{OMB}) \quad \text{----------} \quad (1)$$

where k_t is the fraction swappable from small saving loans in year 't'.

k_1 = 0.2 in 2002-03 (t=1)
k_2 = 0.3 in 2003-04 (t=2)
k_3 = 0.4 in 2004-05 (t=3)

x_t-1 = incremental small savings collections of the State in the year '$_t$-1'.

f = share of the entitlement of any state to aggregate OMB assigned for the debt swap (equal to share of the state in aggregate stock of high cost debt held by all states; defined as debt carrying coupon rates of 13 per cent or higher).

Under the DSS, states swapped high cost loans (bearing coupons in excess of 13 per cent) smounting to Rs.13,719 crore during 2002-03 against additional market borrowing of Rs.10,000 crore, and the remainder against small saviangs according to the formula above. During 2003-04, states swapped Rs.44,566 crore with additional market borrowings of Rs.26,623 crore (as per RBI arecords) and 30 per cent of the small saving transfers. Thus, of the total debt swapped amounting to Rs.58,285 crore, about 61 per cent was financed through additional market borrowings at interest rates below 6.5 per cent and the remainder through issue of special securities to the National Small Savings Fund (NSSF) with the interest rate fixed at 9.5 per cent. As per the Union Budget for 2004-05, recoveries from the states include a sum of Rs.11,000 crore under the DSS for the current fiscal year. The average interest on the debt stock aggregated across states has shown a decline from 10.5 per cent in 2001-02 to 10 per cent by the budget estimates for 2004-05.

Source: A study of Debt sustaininability at State Level in India - Indira Rajaraman et.al, Reserve bank of India, August, 2005.

Expenditure Pattern

Revenue Expenditure

2.31 Details relating to revenue expenditure are given in Table 2.13 & 2.14. The total revenue expenditure of the state government increased by about 3 times during the last ten years, the annual average growth rate being 13.2 per cent during this period. The development expenditure increased at an annual average growth of 12.4 per cent, whereas non development expenditure by 14.7 per cent. Higher growth rate in non development expenditure is partially on account of higher growth rate in debt services and pension. The revenue expenditure during 2004-05 increased to Rs.17169 crore from Rs.15496 crore in the previous year, the growth rate being 10.80 per cent compared to 5.0 per cent in 2003-04. The increase in revenue expenditure during the year was mainly due to the increase in expenditure in education (Rs.174 crore), interest payment (Rs.284 crore), pension (Rs.192 crore), Relief on Natural Calamities (Rs.210 crore) and Agriculture and Allied Sectors (Rs.126 crore) etc.

Table - 2.13
Trend in revenue expenditure

(Rs. crore)

Year	Total Revenue Expenditure		Development Expenditure		Non Development Expenditure	
	Amount	Annual Growth rate	Amount	% to total Revenue expenditure	Amount	% to total Revenue expenditure
1995-96	5826.38		3412.16	58.56	2414.22	41.44
1996-97	6788.10	16.51	4047.96	59.63	2740.14	40.37
1997-98	8241.12	21.41	5031.26	61.05	3209.86	38.95
1998-99	9228.08	11.98	5642.03	61.14	3586.05	38.86
1999-00	11565.96	25.33	6510.24	56.29	5055.72	43.71
2000-01	11877.92	2.69	6396.50	53.85	5481.42	46.15
2001-02	11662.03	-1.81	6028.34	51.69	5633.69	48.31
2002-03	14756.05	26.53	8064.80	54.65	6691.25	45.35
2003-04	15495.67	5.01	8061.94	52.03	7433.73	47.97
2004-05	17169.41	10.80	9244.46	53.84	7924.95	46.16
AAGR from 1995-96 to 2004-05		13.2				

Source: Finance department, Govt. of Kerala

2.32 Revenue expenditure constitutes 96 per cent of the total expenditure during 2004-05. The share of development expenditure which was 58.56 per cent of the total revenue expenditure in 1995-96 declined to 53.84 per cent in 2004-05 which in turn increased the share on non development expenditure. This trend adversely affect development and growth of the economy.

2.33 The share of States' expenditure on social services particularly on education is gradually declining. The share of education in State's revenue expenditure has been coming down from 24 per cent in 1995-96 to 19 per cent in 2004-05. Such a gradual reduction can also be seen in health sector also.

Table 2.14
Trend in Revenue Expenditure

Year	Development Expenditure(Rs. in crore)						Non Development Expenditure				(Rs in Crore)
	Education	Health	Agri. Allt & co-op	Industries, Labour & Employment	Others	Total	Interest Payments	Pension	Others	Total	Total Revenue Expdr.
95-96	1435.13	49.62	388.96	157.83	931.62	3412.16	924.15	716.85	773.21	2414.22	5826.38
96-97	1616.45	535.33	474.75	201.42	1220.01	4047.96	1103.41	753.67	883.06	2740.14	6788.10
97-98	1761.05	634.12	575.65	214.61	1845.83	5031.26	1286.09	913.02	1010.75	3209.86	8241.12
98-99	1957.90	694.86	615.43	191.75	2182.09	5642.03	1446.26	1154.32	985.47	3586.05	9228.08
99-00	2609.49	870.38	643.67	216.87	2169.83	6510.24	1952.27	1808.29	1295.16	5055.72	11565.96
00-01	2620.24	837.04	594.69	178.34	2166.19	6396.50	2257.60	1929.48	1294.34	5481.42	11877.92
2001-02	2471.00	861.21	487.57	176.36	2032.20	6028.34	2489.47	1837.93	1306.29	5633.69	11662.03
2002-03	2967.56	954.78	594.50	197.58	[illegible]	8064.80	2946.77	2282.90	1461.58	6691.25	14756.05
2003-04	3080.00	1062.00	498.38	283.12	3138.32	8061.94	3328.30	2408.83	1696.60	7433.73	15495.67
2004-05	3254.19	1153.76	623.93	367.10	3845.48	9244.46	3612.54	2600.77	1711.64	7924.95	17169.41
AAGR from 1995-96 to 2004-05	10.0	10.1	6.7	11.4		12.4	16.6	16.5		14.6	13.2

Source: Finance department, Govt. of Kerala

Capital Expenditure.

2.34 Capital expenditure in the State during the period from 1995-96 to 2004-05 is presented in Table 2.15 & 2.16. When the total expenditure in the state went up by an average growth rate of 12.5 per cent from 1995-96 to 2004-05, capital expenditure increased only at a very low pace of 2.9 per cent. The ratio of capital expenditure to total expenditure which stood at 8.82 per cent in 1995-96, gradually declined year after year and reached at 3.82 per cent in 2004-05. Within this decade, growth in capital outlay registered negative growth continuously from 1998-99 to 2001-02. This was because of the transfer of nearly 30-35% of plan outlay to local bodies which was under revenue head. But nearly 50 per cent of this assistance was assumed to be for asset creation. One of the major objectives of Kerala Fiscal Responsibility Act, 2003 is to effect a shift on the composition of total expenditure in favour of capital expenditure to achieve high growth projection.

Table - 2.15
Trend in Capital Expenditure

(Rs. in crore)

	Capital Expenditure		Total Expenditure		Capital expenditure as % to total expenditure
Year	Amount	Annual Growth Rate	Amount	Annual Growth Rate	
1995-96	563.47		6389.85		8.82
1996-97	622.52	10.48	7410.62	15.97	8.40
1997-98	738.87	18.69	8979.96	21.18	8.23
1998-99	651.63	-11.81	9879.71	10.02	6.60
1999-00	648.18	-0.53	12214.14	23.63	5.31
2000-01	577.20	-10.95	12455.11	1.97	4.63
2001-02	558.36	-3.26	12220.39	-1.88	4.57
2002-03	698.66	25.13	15454.71	26.47	4.52
2003-04	639.71	-8.44	16135.37	4.40	3.96
2004-05	681.75	6.57	17851.16	10.63	3.82
AAGR from1995-96 to2004-.5		2.9		12.5	

Source: Finance department, Govt. of Kerala

2.35 During 2004-05, capital outlay increased by Rs.42.04 crore (6.6%) compared to the previous year. The clubbing of revenue and capital components as plan outlay has generated tendency to use borrowings to finance revenue expenditure which mainly include committed expenditures like salaries and pensions. This compels the government to resort to cuts in capital expenditure as a short term measure sacrificing long term capital formation.

Interest, Pension and Salary

2.36 The deficit reduction in the State is constrained by obligations such as interest and other committed expenditures like salaries and pensions. Interest payment and pensions constitute largest items of non development expenditure of the State. These items, accounted 68 per cent of the total non development expenditure in 1995-96, increased to 76 per cent in 2000-01 and further to 78 per cent in 2004-05. Growth characteristics of interest, pension and salaries are given in Table 2.17. The share of salary as percentage of revenue receipt reached its peak level (56%) during 1999-2000 and there after it began to come down gradually and reached 39.5 per cent in 2004-05.

Table-2.16
Trend in Capital Expenditure

(Rs in Crore)

Year	Irrigation	Growth rate	Agriculture & Allied services	Growth rate	Industries	Growth rate	Public works	Growth rate	Others	Growth rate	Total	Growth rate
1995-96	170.34		52.49		91.50		137.05		112.09		563 47	
1996-97	187.59	10.13	51.14	-2.57	110.69	20.97	155.65	13.57	117.45	4.79	622.52	10.48
1997-98	188.29	0.37	53.57	4 75	106.11	-4.14	236.04	51.65	154.86	31.84	738 87	18.69
1998-99	177.76	-5.59	40.57	-24 27	80.06	-24.55	182.68	-22.61	170.56	10 14	651 63	-11.81
1999-00	169.57	-4.61	54.67	34.75	68.79	-14.08	241.96	32.45	113.19	-33 64	648.18	-0.53
2000-01	154.50	-8.89	36.59	-32.89	58.20	-15.39	187.99	-22.31	139.92	23.72	577.20	-10.95
2001-02	147.21	-4 72	29.18	-20.47	30 24	-48.04	222.13	18.16	129 60	-7.31	558.36	-3.26
2002-03	132.32	-10.11	44.95	54.04	33.09	9 42	287.42	29.39	200.88	55 00	698.66	25.13
2003-04	159.20	20.31	35.44	-21.16	30.55	-7.68	272.73	-5 11	141.79	-29.42	639.71	-8.44
2004-05	175.18	10.04	33.19	-6.35	74.53	143.96	260.34	-4.54	138.51	-2.31	681.75	6.57
AAGR from 1995-96 to 2004-05		-0.8		-1.6		6.7		10.1		7.6		2.9

Source: Finance department, Govt. of Kerala

2.37 Debt servicing accounted one-fifth of the total (Revenue + capital) expenditure during 2000-01. Besides, it is showing an almost steady increase. The high interest payment obligation of the State is one of the principal reasons for tremendous pressure on state's finances. The annual growth rate of interest payment has come down from 12.9 per cent in 2003-04 to 8.5 per cent in 2004-05. The State has been able to contain growth in interest burden during the year. This is due to the debt swapping of high cost loans from GIC, NCDC, NABARD and Government of India.

Debt Profile

2.38 The outstanding debt of the State and its growth characteristics are shown in Table 2.18. State's debt is composed of internal debt, small savings/provident fund and loans and advances from Government of India. While in the past a significant component of debt burden went towards the financing of State plans, in recent times a substantial portion has to be used for bridging the gap in non-plan revenue receipts and expenditure. The BCR becoming negative on account of higher rate of growth of non-plan revenue expenditure than the rate of growth of revenue receipts and plan size getting increased every year, results in higher borrowing requirement for financing the plans. Debt liability of the state increased by more than four times from Rs.10113.54 crore in 1995-96 to Rs.41877.88 crore in 2004-05. It was three times of the revenue receipt of the State. The mounting public debt is got reflected in the interest burden which have also increased about four times from Rs.924.20 crore in 1995-96 to Rs.3612.5 crore in 2004-05. There was a phenomenal increase in internal debt over the years mainly on account of raising more market loans which is high cost in nature. Out of the total debt, internal debt constituted about 52 per cent while central loan is only 13 per cent during 2004-05

(Rs. in crore)

Table - 2.18
Debt of the State

Year	Internal Debt	Growth rate	Small Savings, Provident Fund, Others	Growth rate	Loans and Advances from the Central Govt.	Growth rate	Total	Growth rate
1995-96	2486.28		3389.01		4238.25		10113.54	
1996-97	2970.85	19.49	3837.52	13.23	4612.54	8.83	11420.91	12.93
1997-98	3585.12	20.68	4292.51	11.86	4990.51	8.19	12868.14	12.67
1998-99	4424.36	23.41	5627.78	31.11	5648.13	13.18	15700.27	22.01
1999-00	5735.61	29.64	8537.67	51.71	5902.79	4.51	20176.10	28.51
2000-01	7627.34	32.98	10189.75	19.35	6101.88	3.37	23918.97	18.55
2001-02	9342.46	22.49	11261.65	10.52	6346.46	4.01	26950.57	12.67
2002-03	11747.02	25.74	12778.37	13.47	6534.88	2.97	31060.27	15.25
2003-04	17420.94	48.30	14403.33	12.72	5627.96	-13.88	37452.23	20.58
2004-05	21676.23	24.43	14790.83	2.69	5410.82	-3.86	41877.88	11.82
AAGR from 1995-96 to 2004-05		27.5		18.5		3.0		17.2

2.39 The Debt/GSDP ratio as well as per capita debt of the State is shown in Table 2.19. The deteriorating debt situation of the State is reflected both in terms of Debt/GDP ratio and ratio of interest payments to revenue receipts. The position seems particularly grim for Kerala with high Debt/GSDP ratio (ie over 30%) coupled with ratio of interest payments to revenue receipt (over 25%) especially from 2000-01 onwards. The rising debt of the state is a reflection of the

Table-2.17

Trend in Expenditure on Interest, Pension and Salary (Rs in Crore)

Year	Interest			Pension			Salary			Total		
	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expenditure	Amount	% to revenue receipt	% to revenue expenditure	Amount	% to revenue receipt	% to revenue expenditure
1995-96	924.20	17.0	15.9	716.90	13.2	12.3	2230.40	41.1	38.3	3871.50	71.4	66.4
1996-97	1103.40	18.0	16.3	753.70	12.3	11.1	2616.70	42.6	38.5	4473.80	72.8	65.9
1997-98	1286.10	18.1	15.6	913.00	12.8	11.1	2803.30	39.4	34.0	5002.40	70.3	60.7
1998-99	1446.30	20.1	15.7	1154.30	16.0	12.5	3254.70	45.2	35.3	5855.30	81.3	63.5
1999-00	1952.30	24.6	16.9	1808.30	22.8	15.6	4502.90	56.7	38.9	8263.50	104.1	71.4
2000-01	2257.60	25.9	19.0	1929.50	22.1	16.2	4491.60	51.4	37.8	8678.70	99.4	73.1
2001-02	2489.50	27.5	21.3	1837.90	20.3	15.8	4200.80	46.4	36.0	8528.20	94.2	73.1
2002-03	2946.77	27.7	20.0	2282.90	21.5	15.5	4678.99	44.0	31.7	9908.66	93.1	67.1
2003-04	3328.30	28.2	21.5	2408.83	20.4	15.5	5067.09	42.9	32.7	10804.22	91.4	69.7
2004-05	3612.54	26.8	21.0	2600.77	19.3	15.1	5336.00	39.5	31.1	11549.31	85.5	67.3
AAGR from 1995-96 to 2004-05	16.6			16.6			10.8			13.4		

deterioration in the fiscal performance of the State and signifies long term mismatch between the growth of revenue and expenditure of the State. It is the consequence of persistent increase in non plan revenue expenditure such as interest payments, salaries, pension and subsidies together with sluggish growth in Tax/GDP ratio, inadequate returns from public investments and insufficient growth in Central transfers. Large revenue deficit has led to large fiscal deficit and spiraling debt resulting in the emergence of a vicious circle of deficit, debt and debt services.

2.40 Compared with neighbouring states and all States average, Debt/GSDP ratio as well as per capita debt liability of Kerala is much higher. The per capita debt of Kerala which was Rs.4090 in 1998 increased to Rs.9248 in 2003 (RE) as against the all State level of Rs.6531. The per capita debt of neighbouring states in 2003 (RE) next to Kerala was Andhra Pradesh (Rs.6490) followed by Tamilnadu (Rs.6270) and Karnataka (Rs.5888). In the case of Debt/GSDP ratio, when the ratios of neighbouring States ranged between 22 per cent and 28 per cent in 2001-02, Kerala's position was as high as 35 per cent.

Table - 2.19

Debt Position :Comparision With Other States

State	Debt/GSDP Ratio(%)						Per Capita Debt (Rupees)						
	1997	1998	1999	2000	2001	2002	1997	1998	1999	2000	2001	2002*	2003* (RE)
Andrapradesh	19	21	21	24	26	28	2303	2722	3223	3882	4724	5542	6490
Karnataka	17	18	18	20	21	25	2256	2574	3029	3623	4254	5073	5888
Kerala	26	26	28	31	32	35	3630	4090	4940	6285	7414	8388	9248
ThamilNadu	16	16	16	19	21	22	2352	2701	3216	3877	4644	5211	6270
All State	18	18	20	22	24		2543	2944	3522	4257	4996	5639	6531

Source: Budget in Brief, Govt. of Kerala

** Based on the projected population*

2.41 Debt profile of the State is shown in Table 2.20. Wide fluctuations are discernible in both the cases of gross retention and net retention since 2000-01. It can be seen that during 2004-05 gross retention declined to the level of Rs.4425.65 crore and net retention to the level of Rs.813.13 crore.

Contingent Liabilities.

2.42 The outstanding guarantees of the state government from 1995-96 to 2004-05 are given in Table 2.21. In the event of default by borrowing units for which government is a guarantor and in such cases, contingent liabilities will become a burden of the state. The outstanding liabilities increased from Rs.2082.32 crore in 1995-96 to Rs.12315.96 crore in 2004-05. But it is to be noted that liabilities has come down from Rs.14009.18 crore in 2003-04 to 12315.96 crore in 2004-05.

Table - 2.20
Debt Profile of the State (1993-94 to 2004-05)

(Rs in Crore)

Item		1995-96	1996-97	1997-98	1998-99	99-2000	2000-01	2001-02	2002-03	2003-04	2004-05
Loans and advances from Government of India	Receipts	655.45	539.94	567.15	869.59	1072.97	483.11	780.69	1192.86	968.17	1482.11
	Disbursements	143.25	165.65	189.18	211.96	246.95	284.01	536.12	1004.44	1875.09	1699.25
	Interest	418.07	494.16	550.71	606.54	703.74	732.26	778.56	805.02	809.92	671.60
	Gross Retention	512.20	374.29	377.97	657.63	826.02	199.10	244.57	188.42	-906.92	-217.14
	Net Retention	94.13	-119.87	-172.74	51.09	122.28	-533.16	-533.99	-616.60	-1716.84	-888.74
Small Savings and Deposits	Receipts	1887.17	1988.28	2396.71	3875.61	6986.41	6295.44	5917.95	8147.87	7011.55	6317.80
	Disbursements	1824.78	1809.58	2168.57	2935.66	4981.87	5332.26	4830.22	6770.85	5824.84	6523.40
	Interest	64.62	62.46	76.70	78.92	273.00	357.84	441.64	578.50	662.46	668.33
	Gross Retention	62.41	178.70	228.14	939.95	2004.54	888.02	1087.73	1377.02	1186.71	-205.60
	Net Retention	-2.21	116.24	151.44	861.03	1731.54	530.18	646.09	798.52	524.25	-873.93
Stae Provident Funds	Receipts	800.90	880.10	972.17	1128.11	1731.92	1722.63	1268.51	1685.99	1761.58	1578.63
	Disbursements	513.36	636.32	779.95	770.01	859.97	1033.71	1284.34	1546.29	1323.33	985.53
	Interest	176.04	214.66	253.69	276.32	364.19	391.02	290.03	375.98	353.86	449.14
	Gross Retention	287.54	243.78	192.22	358.10	853.95	688.92	-15.83	139.70	438.25	593.10
	Net Retention	111.50	29.12	-61.47	81.78	489.76	297.90	-305.86	-236.28	84.39	143.96
Internal Debt	Receipts	427.64	623.01	947.81	3101.91	4858.25	6975.36	7849.70	10518.26	14120.87	14442.36
	Disbursements	20.68	138.44	333.54	2262.67	4118.37	5083.63	6134.58	8113.70	8446.95	10187.07
	Interest	253.63	318.08	388.50	465.38	589.23	747.71	941.14	1140.29	1502.06	1823.45
	Gross Retention	406.96	484.57	614.27	839.24	739.88	1891.73	1715.12	2404.56	5673.92	4255.29
	Net Retention	153.33	166.49	225.77	373.86	150.65	1144.02	773.98	1264.27	4171.86	2431.84
Total Debt	Receipts	3771.16	4031.33	4883.84	8975.22	14631.55	15476.54	15816.85	21544.98	23862.17	23820.90
	Disbursements	2502.05	2749.99	3471.24	6180.30	10207.16	11733.61	12785.26	17435.28	17470.21	19395.25
	Interest	912.36	1089.36	1269.60	1427.16	1930.16	2228.83	2451.37	2899.79	3328.30	3612.52
	Gross Retention	1269.11	1281.34	1412.60	2794.92	4424.39	3742.93	3031.59	4109.70	6391.96	4425.65
	Net Retention	356.75	191.98	143.00	1367.76	2494.23	1514.10	580.22	1209.91	3063.66	813.13

Table - 2.21
Outstanding Guarantees

(Rs in Crore)

Year	Maximum Amount Guaranteed	Amount Outstanding
1995-96	5167.48	2082.32
1996-97	5867.82	1948.97
1997-98	6656.89	3292.29
1998-99	9078.16	5112.96
99-2000	11431.59	7952.24
2000-01	12797.80	9553.17
2001-02	14222.46	11817.53
2002-03	14922.61	12623.38
2003-04	15612.67	14009.18
2004-05	14783.36	12315.96

Source: Finance Department, Govt. of Kerala.

2.43 The Kerala Ceiling on Government Guarantees Act 2003 was enacted by the Government for discouraging guarantee to PSUs and co-operatives for normal commercial operations that can be secured through appropriate arrangements by due diligence to the lenders. As per the ceiling on Guarantees Act, the outstanding Government Guarantee as on the first day of April every year shall not exceed Rs.14,000 crore. In order to achieve this objective of the Act, Government is encouraging the public sector units to secure loans on the strength of their mortgagable assets or through partial guarantees.

CHAPTER - 3

INCOME AND POPULATION

Global Scenario

The Gross World Product (GWP) increased by 4 per cent in 2004 compared to 2.8 per cent in 2003. India accounted for 1.69 per cent of the World Gross National Income. The per capita gross national income of India is US$ 620 as against the world average of US$ 6680 (World Development Report 2006). The growth rate of per capita gross national income in India during 2003-04 is 5.4 per cent as against global growth rate of 2.9 per cent. The growth rate of gross national income of Low Income Countries (per capita gross national income less than US$ 825), Middle Income Countries and High Income Countries (per capita income US$ 10065 and above) are 4.4 per cent, 5.5. per cent and 2.8 per cent respectively. It shows that the Low Income Group Countries including India registered a growth rate higher than the High Income Countries.

Table 3.1
World's 10 Largest Economies

Rank	Country	GDP($ Million)
1	United States	11667515
2	Japan	4623398
3	Germany	2714418
4	United Kingdom	2140898
5	France	2002582
6	China	1932093
7	Italy	1672302
8	Spain	991442
9	Canada	979764
10	India	691876

Source: World Bank

National Scenario

3.2 The over all growth rate in the Indian economy in 2004-05 is estimated at 6.9 per cent compared to 8.5 per cent in 2003-04 (Central Statistical Organisation). Agriculture sector registered a growth rate of 1.1 per cent. industry 7.8 per cent and services 8.9 per cent during 2004-05. The lower growth in agriculture and allied sector is on account of the lower kharif output.

3.3 World Bank has estimated a growth rate of 8 per cent for the Indian economy during 2005-06. As per CMIE statistics, GDP is to grow by 6.8% in the fiscal year 2005-06. This higher growth rate is largely due to the upward growth in the agricultural and allied sector. RBI has estimated that the real GDP will grow at around 7 - 7.5 % in 2005-06. The IMF pegged India's economic growth rate at 6.7 per cent in 2005-06. India's Gross Domestic Product (GDP) grew by slightly higher than 8% in the first half of 2005-06 with a booming manufacturing and services sector. Indian economy registered a strong 8% growth in the second quarter of 2005-06 as against 6.7 % growth in the corresponding period of last fiscal.

3.4 As per the statistics published by Central Statistical Organisation, the Quick Estimate of Gross Domestic Product of India at factor cost at constant (1993-94) prices arrived at for the year 2003-04 is Rs. 14,30,548 crore, as against the Revised Estimate of Rs.13,18,362 crore for 2002-03, indicating a growth of 8.5% during 2003-04. At current prices, the Quick Estimate of GDP at factor cost for 2003-04 is Rs. 25,19,785 crore as against the Revised Estimate of Rs. 22,54,888 crore for 2002-03, showing an increase of 11.7% during 2003-04. The Advance Estimate of GDP at factor cost at constant (1993-94) prices for the year 2004-05 is Rs 15,29,366 crore. This suggests that the GDP in real terms is expected to grow at a rate of 6.9% during 2004-05.

3.5 The Quick Estimate of national income (Net National Product at factor cost) at constant (1993-94) prices for 2003-04 is Rs. 12,66,005 crore, as against the Revised Estimate of Rs. 11,61,902 crore for 2002-03, indicating a rise of 9.0% in national income during 2003-04. At current prices, the Quick Estimate of national income for 2003-04 is estimated at Rs. 22,52,070 crore as compared to the Revised Estimate of Rs. 20,08,770 crore for 2002-03, showing a rise of 12.1 % during the year. The Advance Estimate of national income for 2004-05 at constant (1993-94) prices is worked out to be Rs. 13,54,385 crore, showing a rise of 7.0% during 2004-05.

Table 3.2

National Product, Domestic Product & Per Capita Income at Factor Cost (All India)

Sl. No.	Item	At Current Prices		At 1993-94 Prices	
		2003-04@	2004-05*	2003-04@	2004-05*
1	2	3	4	5	6
1	Gross Domestic Product (GDP) (Rs. crore)	25,19,785 (11.7%)	28,38,123 (12.6%)	14,30,548 (8.5%)	15,29,366 (6.9%)
2	Net National Product (NNP) National Income (Rs. crore)	22,52,070 (12.1%)	25,42,921 (12.9%)	12,66,005 (9.0%)	13,54,385 (7.0%)
3	Per Capita National Income (Rs)	20,989 (10.2%)	23,308 (11.1%)	11,799 (7.1%)	12,414 (5.2%)

The figures within parentheses indicate percentage change over the previous year.
@ : Quick Estimates
** : Advance Estimate*
Source: Central Statistical Organisation

3.6 The details of GDP and National Income from 1993-94 to 2004-05 with percentage change over previous year is given in Appendices 3.1 and 3.2

Per Capita National Income

3.7 The per capita real income, ie. per capita net national product at factor cost at constant (1993-94) prices, as per the quick estimates for 2003-04 turns out to be Rs.11,799 as against the revised estimate of Rs. 11,013 for 2002-03. This indicates a growth of per capita real income of about 7.1% during 2003-04. At current prices, the per capita income is seen to have grown by about 10.2% during the year from Rs. 19,040 (revised estimate) in 2002-03 to Rs. 20,989 (quick estimate) in 2003-04. The per capita real income for 2004-05, based on the Advance Estimate is Rs. 12,414 showing a rise of 5.2% over the previous year.

3.8 Annual average growth rate of National Income and Per capita National Income from First Five Year Plan to 2003-04 is given in Table 3.3.

Table 3.3
Annual Average Growth Rate of National Income

Plan Period	National Income at Factor cost		Per capita National Income at Factor cost	
	At current prices	At 1993-94 prices	At current Prices	At 1993-94 prices
1	4	5	6	7
First Five Year Plan (1951-56)	1.5	3.6	-0.3	1.8
Second Five Year Plan (1956-61)	9.4	4.1	7.3	2.0
Third Five Year Plan (1961-66)	9.5	2.5	7.1	0.2
Annual Plans (1966-69)	12.2	3.8	9.8	1.5
Fourth Five Year Plan (1969-74)	11.0	3.3	8.5	1.0
Fifth Five Year Plan (1974-79)	10.4	5.0	7.9	2.7
Annual Plans (1979-80)	8.3	-6.0	5.7	-8.3
Sixth Five Year Plan (1980-85)	15.1	5.4	12.7	3.2
Seventh Five Year Plan (1985-90)	14.2	5.8	11.8	3.6
Annual Plans (1990-91)	16.7	5.4	14.3	3.3
Annual Plans (1991-92)	14.3	0.5	12.0	-1.5
Eighth Five Year Plan (1992-97)	16.3	6.7	14.0	4.6
Ninth Five Year Plan (1997-2002)	11.1	5.5	9.1	3.6
Tenth Five Year Plan 2002-03	8.7	4.2	6.8	2.4
2003-04	12.1	9.0	10.2	7.1
Average (1951-2004)	***11.1***	***4.4***	***8.8***	***2.3***

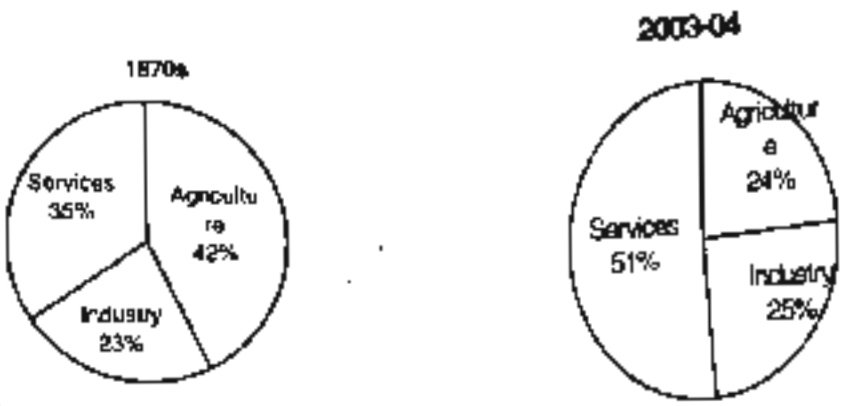
Source: Central Statistical Organisation

Sectoral Distribution of GDP

3.9 During 1970s the contribution from agricultural sector to the GDP was 42.8%, industry sector 22.7% and service sector 34.5%. The analysis of sectoral growth during the last three decades reveals that the contribution of primary sector is decreasing and that of tertiary sector is increasing. The contribution of secondary sector has only nominal variation (See Fig 3.1)

Fig 3.1

Percentage Share in GDP - All India



3.10 The sectoral distribution of GDP at current and constant prices are given in Appendices 3.3 & 3.4

Table 3.4

Gross Domestic Product at Factor Cost by Economic Activity -Percentage Distribution (All India)

Sl.No.	Industry of origin	Percentage Distribution of GDP			
		At Current Prices		At 1993-94 Prices	
		2002-03	2003-04*	2002-03	2003-04*
1	2	3	4	5	6
1	Agriculture, Forestry & Fishing	22.5	22.9	21.5	21.7
2	Mining & Quarrying	2.8	2.5	2.4	2.3
Sub Total - Primary		25.3	25.4	23.9	24
3	Manufacturing	15.6	15.6	17.3	17.0
4	Electricity, Gas & Water Supply	2.2	2.1	2.4	2.3
5	Construction	6.2	6.2	5.3	5.2
Sub Total - Secondary		24	23.9	25	24.5
6	Trade, Hotels, & Restaurant	14.8	14.9	15.6	15.7
7	Transport, Storage & Communication	7.7	8.0	9.1	9.9
8	Financing, Insurance, Real Estate & Business Services	13.7	13.5	13.0	12.9
9	Community, Social & Personal Services	14.5	14.3	13.4	13.0
Sub Total - Tertiary		50.7	50.7	51.2	51.4
	Gross Domestic Products at Factor Cost	*100*	*100*	*100*	*100*

**: Quick Estimate*

Source: Central Statistical Organisation

3.11 An analysis of the percentage distribution of GDP during 2003-04 at current prices shows that 22.9 percent of the GDP is from agriculture, forestry and fishing followed by manufacturing (15.6 percent) and trade, hotels and restaurant (14.9 %). At constant prices (1993-94) the maximum contribution to GDP during 2002-03 is from agriculture, forestry and fishing (21.7%) followed by manufacturing (17%) and trade, hostels & restaurant (15.7%). Sector-wise distribution of GDP at current and constant prices is given in Appendices 3.3. and 3.4

Table 3.5

Gross Domestic Product (All India) by Economic Activity (Percentage Change)

Sl.No.	Industry	Percentage change over the previous year			
		At Current Prices		At 1993-94 Prices	
		2002-03	2003-04*	2002-03	2003-04*
1	2	3	4	5	6
1	Agriculture, Forestry & Fishing	-0.5	13.3	-7.0	9.6
2	Mining & Quarrying	29.6	2.0	9.0	6.4
3	Manufacturing	9.9	11.7	6.5	6.9
4	Electricity, Gas & Water Supply	11.7	8.5	3.1	3.7
5	Construction	11.3	11.5	7.3	7.0
6	Trade, Hotels, & Restaurant	10.3	13.2	8.2	8.8
7	Transport, Storage & Communication	10.2	16.5	12.6	17.0
8	Financing, Insurance, Real Estate & Business Services	14.7	9.7	8.7	7.1
9	Community, Social & Personal Services	7.8	9.8	3.9	5.8
	Gross Domestic Product at Factor Cost	**8.3**	**11.7**	**4.0**	**8.5**

** Quick Estimates*

Source: Central Statistical Organization

3.12 The percentage changes in the GDP (at factor cost) in different sectors of the economy which are presented in Table 3.4 reveals a growth rate of 8.5% in GDP of the economy as a whole during 2003-04 could be achieved because of high growth in sectors namely; transport, storage and communications (17%); agriculture, forestry and fishing (9.6%); trade, hotels, and restaurants, (8.8%), financing insurance, real estate and business services (7.1%); construction (7%); manufacturing (6.9%) etc.

State Income

3.13 The quick estimate of Net State Domestic Product (State Income) at factor cost at constant prices (1993-94) is Rs. 44054.72 crore during 2004-05 as against the provisional estimate of Rs. 40327.56 crore during 2003-04, registering a growth rate of 9.2 per cent. At current prices the state income is estimated at Rs. 89451.99 crore during 2004-05 as against Rs. 80116.12 crore during 2003-04, recording a growth rate of 11.7% in 2004-05 compared to 8.7 per cent in 2003-04. (Table 3.6).

Table 3.6
Net State Domestic Product and Per capita Income of Kerala

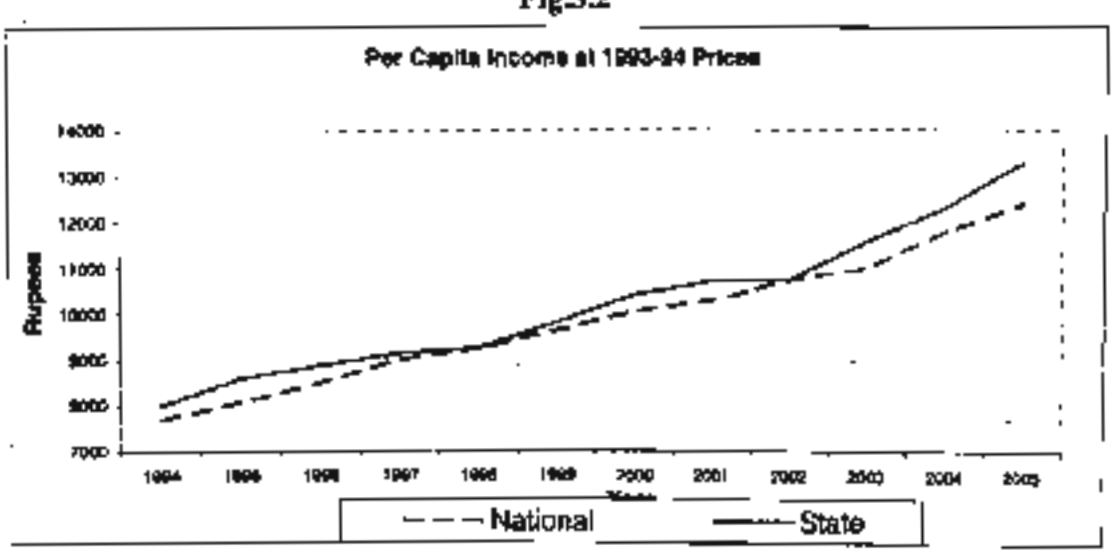
Sl. No	Item	Income			Growth rate (Per cent)	
		2002-03	2003-04 (P)	2004-05 (Q)	2003-04 (P)	2004-05 (Q)
1	2	3	4	5	6	7
1	Net State Domestic Product(Rs.in crore)					
	a) At current prices	73696.84	80116.12	89451.99	8.7	11.7
	b) At constant prices	37549.49	40327.56	44054.72	7.4	9.2
2	Per Capita Income (In Rs.)					
	a) At current prices	22776	24492	27048	7.5	10.4
	b) At constant prices	11605	12328	13321	6.2	8.1

P: Provisional, Q: Quick Estimate
Source: Department of Economics & Statistics.

Per Capita State Income

3.14 State's per capita income at current prices increased from Rs.24492 in 2003-04 to Rs.2704 2004-05, registering a growth rate of 10.4% compared to the growth rate of 7.5 % during 2003 The per capita state income at constant prices (1993-94) during 2004-05 was Rs.13321 as ag Rs.12328 during 2003-04. The growth rate in per capita income are 8.1% and 6.2% during200 and 2003-04 respectively.The per capita state income is higher than the per capita national inc (SeeFig.3.2).

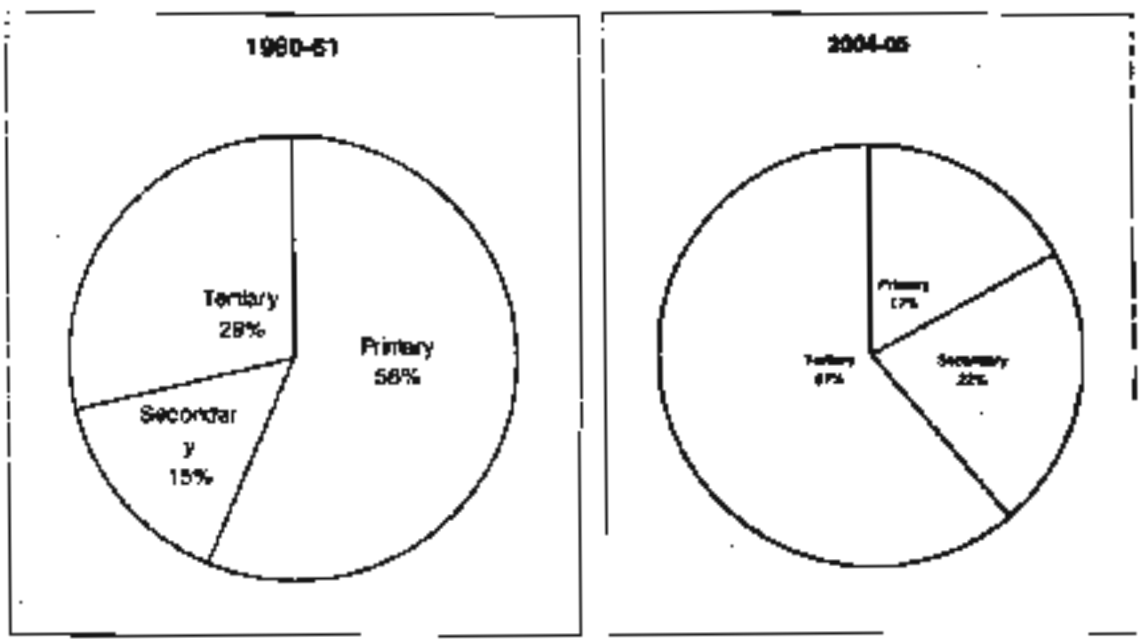
Fig.3.2



Sectoral Distribution of State Income

3.15 The contribution from primary sector to the State Income is decreasing since 1960-61 onwards. During 1960-61 it was 56%, during 1970-71, 49% ; during 1980-81, 40% and during 1990-91 it was 32%. Fig. 3.3 gives a comparison of sectoral distribution of State Income during 1960-61 and 2004-05.

Fig. 3.3
Sectoral Distribution of State Income



3.16 During 2004-05 the contribution from primary, secondary and tertiary sectors to the Net State Domestic Product at constant prices (1993-94) constitutes 16.6 %, 18.7% and 64.7% respectively. At current prices, the primary, secondary and tertiary sectors contribute 16.8%, 22.2% and 61% respectively to the Net State Domestic Product during 2004-05. While analyzing the sectoral distribution of state income during the last three years it is seen that the contribution from primary sector is decreasing and that from tertiary sector is increasing. But secondary sector remains almost stagnant. The details of sectoral distribution of state income during the last three years is given in Table 3.7

3.17 The analysis of annual sectoral growth rate of state income shows that secondary sector recorded the highest rate of growth of 16.9% in 2004-05 at current prices followed by tertiary sector (13.5%). The primary sector recorded a negative growth of 0.1%. At constant prices (1993-94) the tertiary sector recorded a growth rate of 13.8% in 2004-05 followed by primary sector (2.5%) and secondary sector (1.3%).

Table 3.7

Sectoral Share of Net State Domestic Product (NSDP)

at Factor Cost (2002-03 to 2004-05)

(Rs. Crores)

Sl. No.	Industry of origin	At Current Prices						At Constant Prices ('93-94)					
		2002-03		2003-04(P)		2004-05 (Q)		2002-03		2003-04(P)		2004-05 (Q)	
		NSDP	%	NSDP	%	NSDP	%	NSDP	%	NSDP	%	NSDP	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Agriculture	11867.99	16.1	12197.88	15.2	12479.35	13.9	5394.47	14.4	5492.29	13.6	5585.81	12.7
2	Forestry & Logging	1284.18	1.7	1420.57	1.8	1054.26	1.2	846.68	2.3	884.15	2.2	906.75	2.1
3	Fishing	1244.9	1.7	1323.12	1.6	1376.53	1.5	608.17	1.6	652.66	1.6	709.29	1.6
4	Mining &Quarrying	124.62	0.2	142.01	0.2	156.02	0.2	93.46	0.2	108.86	0.3	113.26	0.2
Sub-Total	**Primary**	**14521.69**	**19.7**	**15083.58**	**18.8**	**15066.16**	**16.8**	**6942.78**	**18.5**	**7137.96**	**17.7**	**7315.11**	**16.6**
5	Manufacturing	6054.71	8.2	6093.7	7.6	6015.84	6.7	3051.82	8.1	3269.67	8.1	3458.37	7.9
6	Electricity, Gas & Water Supply	1884.44	2.6	2534.59	3.2	3304.2	3.7	937.88	2.5	1134.07	2.8	1536.29	3.5
7	Construction	8411.74	11.4	8334.12	10.4	10516.66	11.8	3356.38	9.0	3725.79	9.2	3237.60	7.3
	Sub-Total: Secondary	**16350.89**	**22.2**	**16962.41**	**21.2**	**19836.7**	**22.2**	**7346.08**	**19.6**	**8129.53**	**20.1**	**8232.26**	**18.7**
8	Transport, Storage & Communication	6043.43	8.2	7127.44	8.9	8352.3	9.3	4831.45	12.9	5633.35	14.0	7296.17	16.6
9	Trade, Hotels & Restaurants	16432.36	22.3	18921.89	23.6	20894.96	23.4	8050.92	21.4	8558.73	21.2	9276.43	21.1
10	Banking, Insurance & Real Estate	4882.58	6.6	5382.87	6.7	6182.64	6.9	3076.02	8.2	3305.14	8.2	3587.71	8.1
11	Real Estate ownership Business, legal	4578.41	6.2	5477.33	6.8	6505.11	7.3	1716.5	4.6	1808.61	4.5	1870.23	4.2
12	Public Administration and other services	3536.82	4.8	3580.38	4.5	3970.27	4.4	2308.86	6.1	2368.46	5.9	2865.13	6.5
13	Other Services	7350.66	10.0	7580.22	9.5	8643.85	9.7	3276.88	8.7	3385.78	8.4	3611.68	8.2
Sub-Total-Tertiary		**42824.26**	**58.1**	**48070.13**	**60.0**	**54549.13**	**61.0**	**23260.63**	**61.9**	**25060.07**	**62.2**	**28507.35**	**64.7**
Total-NSDP		***73696.84***	***100***	***80116.12***	***100***	***89451.99***	***100***	***37549.49***	***100***	***40327.56***	***100***	***44054.72***	***100***

Source:- Department of Economics & Statistics

Table 3.8
Sector wise Annual Growth Rate of State Income

Sl. No.	Industry of Origin	Percentage change over Previous Year			
		At Current Prices		At Constant Prices	
		2003-04 (P)	2004-05 (Q)	2003-04 (P)	2004-05 (Q)
1	2	3	4	5	6
1	Agriculture	2.8	2.3	1.8	1.7
2	Forestry & Logging	10.6	-25.8	4.4	2.6
3	Fishing	6.3	4.0	7.3	8.7
4	Mining &Quarrying	14.0	9.9	16.5	4.0
	Primary Sector	**3.9**	**-0.1**	**2.8**	**2.5**
5	Manufacturing	0.6	-1.3	7.1	5.8
6	Electricity, Gas & Water Supply	34.5	30.4	20.9	35.5
7	Construction	-0.9	26.2	11.0	-13.1
	Secondary Sector	**3.7**	**16.9**	**10.7**	**1.3**
8	Transport, Storage & Communication	17.9	17.2	16.6	29.5
9	Trade, Hotels & Restaurants	15.2	10.4	6.3	8.4
10	Banking, Insurance & Real Estate	10.3	14.9	7.4	8.5
11	Real Estate ownership Business, legal	19.6	18.8	5.4	3.4
12	Public Administration and other services	1.2	10.9	2.6	21.0
13	Other Services	3.1	14.0	3.3	6.7
	Tertiary Sector	**12.2**	**13.5**	**7.7**	**13.8**
	State Income	***8.7***	***11.7***	***7.4***	***9.2***

3.18 The sector-wise contribution of state income from 1993-94 to 2004-05 is shown in Fig.3.4

Gross value of output originating from major crops in Kerala during the period from 2001-02 to 2003-04 is given Table 3.9. There has been very steep increase in the gross value of output from rubber, coconut and banana mainly due to increase in the prices of these commodities.

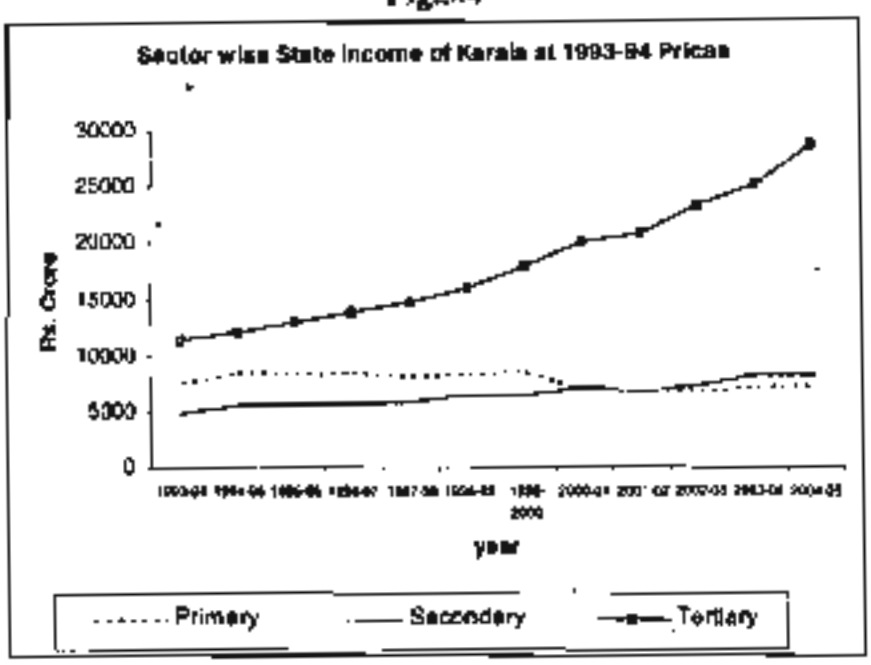
Table – 3.9

Income originating from Major Crops, Kerala 2001-02 to 2003-04

Sl. No.	Crop	Production (MT)			Price (Rs)			Gross value of Output (Rs.Lakhs)		
		2001-02	2002-03	2003-04	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04
1.	2	3	4	5	6	7	8	9	10	11
1	Paddy	1070782	1048492	867648	5737	6579	7092	61431	68980	61532
2	Rubber	580350	594917	655134	28026	39638	49626	162649	235813	325114
3	Tapioca	2455880	2413217	2540790	3232	3914	3768	79399	94453	95731
4.	Banana	375903	421809	442220	8995	9322	11191	33812	39321	49489
5.	Coconut (Million)	5479	5709	5876	3266400	4531000	5771520	178966	258675	339135
6.	Other Plantain	393182	409282	39077	5652	5883	6264	22223	24078	25040
7.	Black Pepper	58240	67358	69015	71956	79840	68950	41907	53779	47586
8.	Cardamom	8380	8680	8553	627460	637460	NA	52581	54464	NA

Source: Economics and Statistics

Fig.3.4



District-wise Income

3.19 District-wise distribution of Net State Domestic Product at factor cost at current prices shows that Ernakulam District continues to have the highest income of Rs. 11169.44 crore in 2004-05 as against Rs. 9839.69 crore in 2003-04 registering a growth rate of 13.5%. At constant prices it comes to Rs. 5526.53 crore compared to Rs. 5046.05 crore during 2003-04. Thiruvananthapuram District stands second with an income of Rs. 9738.57 crore in 2004-05 at current prices followed by Thrissur (Rs. 8881.34 crore), Kozhikode (Rs. 8190.92 crore), Kollam (Rs. 7030.19 crore) and Malappuram (Rs. 6786.24 crore). The lowest income of Rs. 2108.74 crore was recorded in Wayanad District at current prices during 2004-05 preceded by Kasaragod (Rs. 3316.09 crore), Pathanamthitta (Rs. 3516.02 crore) and Idukki (Rs. 3780.73 crore).

Table 3.10

District-wise Distribution of Net State Domestic Product

(Rs. Crore)

Sl No	District	Net State Domestic Product at Factor Cost				Growth Rate (%)	
		At 1993-94 Prices		At Current Prices		At 1993-94 Prices	At Current Prices
		2003-04 (P)	2004-05 (Q)	2003-04 (P)	2004-05 (Q)	2004-05	2004-05
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	4388.57	4863.56	8594.58	9738.57	10.8	13.3
2	Kollam	3165.01	3458.76	6340.59	7030.19	9.3	10.9
3	Pathanamthitta	1612.11	1748.10	3200.50	3516.02	8.4	9.6
4	Alappuzha	2723.64	2987.79	5422.90	6075.68	9.7	12.0
5	Kottayam	2757.79	3019.40	5547.60	6227.63	9.5	12.3
6	Idukki	1724.00	1838.39	3557.32	3780.73	6.6	6.3
7	Ernakulam	5046.05	5526.53	9839.69	11169.44	9.5	13.5
8	Thrissur	4025.20	4409.04	7924.34	8881.34	9.5	12.1
9	Palakkad	2866.27	3144.90	5642.89	6255.34	9.7	10.9
10	Malappuram	3023.13	3286.70	6076.08	6786.24	8.7	11.7
11	Kozhikode	3695.55	4056.25	7278.59	8190.92	9.8	12.5
12	Wayanad	945.89	1011.59	1946.27	2108.74	6.9	8.3
13	Kannur	2872.80	3117.14	5719.02	6375.06	8.5	11.5
14	Kasaragod	1481.55	1586.57	3025.75	3316.09	7.1	9.6
	State	**40327.56**	**44054.72**	**80116.12**	**89451.99**	**9.2**	**11.7**

P - Provisional, Q - Quick Estimate,Source- Department of Economics & Statistics

District-wise Per Capita Income

3.20 The analysis of district wise per capita income shows that Ernakulam district stands first with the per capita income of Rs 34709 at current prices in 2004-05 as against Rs. 30913 in 2003-04 . Idukki District has the second largest per capita income of Rs. 32259 in 2004-05 at current prices followed by Kottayam (Rs 30693), Thiruvananthapuram (Rs.28975), Thrissur (Rs.28733) and Alappuzha (Rs.27781). The lowest per capita income was recorded in Malappuram District (Rs 18001) in 2004-05 at current prices preceded by Palakkad (Rs. 23014), Kannur (Rs. 25439) and Wayanad (Rs.25811)

3.21 The highest rate of growth of per capita income of 12.3% was recorded in Ernakulam District in 2004-05 followed by Thiruvananthapuram (12.1%), Kozhikode (11.3%), and Kottayam (11%) The lowest growth rate was recorded in Idukki District (5.2%) preceded by Wayanad (7.2%), Kasargode (8.4%) and Pathanamthitta (8.7%). The district wise per capita income with growth rate is given in Table 3.11.

Table 3.11

District-wise Per Capita Income at Current Prices

Sl. No.	District	2003-04 (P) (Rs)	Rank	2004-05 (Q) (Rs)	Rank	Growth Rate (%) 2004-05
1	2	3	4	5	6	7
1	Thiruvananthampuram	25856	5	28975	4	12.1
2	Kollam	23882	11	26193	10	9.7
3	Pathanamthitta	25300	6	27490	7	8.7
4	Alappuzha	25071	7	27781	6	10.8
5	Kottayam	27655	3	30693	3	11.0
6	Idukki	30667	2	32259	2	5.2
7	Ernakulam	30913	1	34709	1	12.3
8	Thrissur	25922	4	28733	5	10.8
9	Palakkad	20985	13	23014	13	9.7
10	Malappuram	16294	14	18001	14	10.5
11	Kozhikode	24615	8	27394	8	11.3
12	Wayanad	24088	10	25811	11	7.2
13	Kannur	23070	12	25439	12	10.3
14	Kasaragod	24480	9	26529	9	8.4
	State	**24492**	-	**27048**	-	**10.4**

P: Provisional

Q: Quick Estimate

Source: Department of Economics & Statistics

District Wise Sectoral Income

3.22District wise analysis of sectoral income shows that the highest contribution from primary sector income of Rs. 1819.25 crore at current prices was in Idukki district during 2004-05 followed by Kollam (Rs. 1359.25 crore), Ernakulam (Rs. 1248.18 crore) and Kozhikode (Rs. 1241.42 crore). During 2004-05 the lowest primary sector income was in Wayanad district (Rs. 748.04 crore). The highsest income from secondary sector during 2004-05 was in Ernakulam district (Rs. 3164.53 crore) followed by Thiruvananathapuram (Rs. 2235.44 crore), Thrissur (Rs. 2209.72 crore) and Kozhikode (Rs. 1840.26 crore). Lowest secondary sector income was in Wayanad district (Rs. 178.82 core). Regarding tertiary sector the highest income during 2004-05 was in Ernakulam district (Rs. 6756.73 crore) followed by Thiruvananthapuram (Rs. 6497.6 crore), Thrissur (Rs. 5736.14 crore) and Kozhikode (Rs. 5109.24 crore). Lowest tertiary sector income was in Wayanad district (Rs. 1181.88 crore).

Table 3.12

District wise Rate of Growth of Sectoral Income during 2004-05 at Current Prices

Sl. No.	District	Primary		Secondary		Tettiary	
		Income (Rs. crore)	Annual Growth Rate (%)	Income (Rs crore)	Annual Growth Rate (%)	Income (Rs crore)	Annual Growth Rate (%)
1	2	3	4	5	6	7	8
1	Thiruvananthampuram	1005.53	0.6	2235.44	19.6	6497.60	13.5
2	Kollam	1359.25	0.5	1638.16	14.2	4032.78	13.5
3	Pathanamthitta	862.61	-4.0	596.67	20.5	2056.74	13.9
4	Alappuzha	685.12	2.7	1607.20	13.1	3783.36	13.5

5	Kottayam	1084.46	2.1	1382.52	18.9	3960.65	13.5
6	Idukki	1819.25	-2.8	546.57	23.3	1414.91	13.9
7	Ernakulam	1248.18	2.5	3164.53	18.5	6756.73	13.5
8	Thrissur	935.48	-1.5	2209.72	15.2	5736.14	13.4
9	Palakkad	1036.85	-2.4	1224.44	15.3	3994.05	13.5
10	Malappuram	1149.17	-0.7	1230.98	18.5	4406.09	13.6
11	Kozhikode	1241.42	1.6	1840.26	18.8	5109.24	13.3
12	Wayanad	748.04	-1.5	178.82	19.4	1181.88	14.0
13	Kannur	1008.92	0.8	1471.36	15.4	3894.78	13.1
14	Kasaragod	881.88	2.3	710.03	10.6	1724.18	13.3
	State	**15066.16**	**-0.1**	**19836.70**	**16.9**	**54549.13**	**13.5**

Source: Department of Economics and Statistics

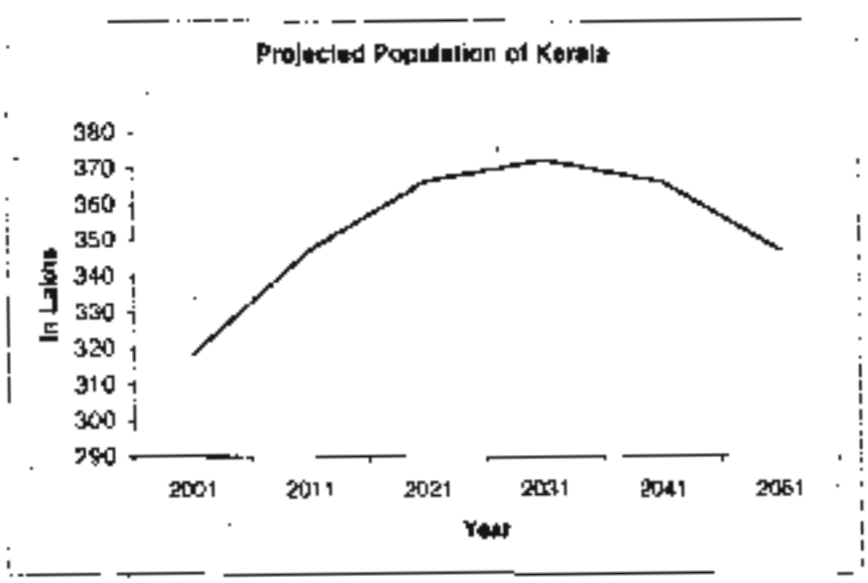
3.23 Six districts shows negative growth rate in primary sector which range between 4% in pathanamthitta and 0.7% in Malappuram district. Growth rate in secondary sector is lowest at 10.6% in Kasargode, highest at 23.3% in Idukki. Growth rate in tertiary sector is between 13.1% in Kannur and 14% in Wayanad. The district wise details of sectoral income and growth rate are presented in Table 3.12

Population

3.24 The World Population in 2004 is 634.51 crores (World Development Report 2006) and the population of India is 107.97 crores accounting for 17% of world population.

3.25 The population of India as per 2001 Census was 102.7 crore comprising of 53.13 crore males and 49.57 crore females. Kerala's population as per Census 2001 was 318.41 lakh consisting of 154.69 lakh males and 163.72 lakh females. Kerala's share in the population of India is 3.1%. In Kerala, 74% of the population live in rural areas. Projected population of Kerala is 330.72 lakhs in 2004.

Fig.3.5



Decadal Growth of Population

3.26 An analysis of the decadal growth rate of all India population shows that it increased from 1921 to 1981 and since then it started declining gradually. In Kerala the decadal growth rate had been at higher rate from 1941 to 1971 and since then growth rate has been declining. The details of

decadal growth rate of population at All India and Kerala from 1901 to 2001 are given in Table 3.13.

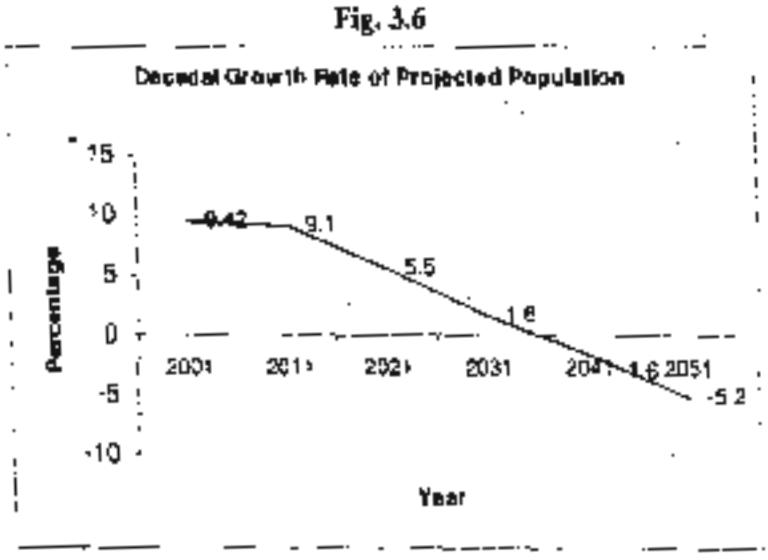
Table 3.13
Population and Its Growth from 1901 to 2001

Census Year	All India				Kerala			
	Population (lakhs)			Decadal Growth Rate(%)	Population (lakhs)			Decadal Growth Rate(%)
	Rural	Urban	Total		Rural	Urban	Total	
2	3	4	5	6	7	8	9	10
1901	2125.4	258.5	2383.9	-	59.4	4.5	63.9	-
1911	2261.5	259.4	2520.9	5.75	66.2	5.3	71.5	11.75
1921	2232.3	280.9	2513.2	-0.31	71.2	6.8	78.0	9.16
1931	2455.2	334.6	2729.8	11.0	85.9	9.2	95.1	21.85
1941	2745.1	441.5	3186.6	14.22	98.3	12.0	110.3	16.04
1951	2986.5	624.4	3610.9	13.31	117.2	18.3	135.5	22.82
1961	3602.9	789.4	4392.3	21.64	143.5	25.5	169.0	24.76
1971	4390.5	1091.1	5481.6	24.8	178.8	34.7	213.5	26.69
1981	5238.7	1594.6	6833.3	24.66	206.8	47.7	254.5	19.24
1991	6286.9	2176.1	8463.0	23.86	214.1	76.8	290.9	14.32
2001	7416.6	2853.6	10270.2	21.34	235.7	82.7	318.4	9.42

Source: Census of India

3.27 Among the Districts in Kerala, Malappuram has the highest population of 36.3 lakhs followed by Thiruvananthapuram (32.35 lakhs) and Ernakulam (30.98 lakhs). Wayanad is the lowest populated district in Kerala with a population of 7.87 lakhs preceded by Idukki (11.29 lakhs) and Kasaragod (12.03 lakhs). Among the districts, Pathanamthitta had the lowest decadal (1991-2001) growth rate of population of 3.72% and Malappuram the highest growth rate of 17.22%. All districts in Kerala showed a decrease in decadal growth rate (1991-2001) compared to 1981-1991 decade. Malappuram district achieved a deduction of about 11 points between the two decadal growth rates which is the highest among the districts in Kerala. Decadal growth rate of projected population is shown in Fig 3.6.

Fig. 3.6



3.28 The details of State-wise all India population and District-wise Kerala population are given in Appendices 3.15 and 3.16

Annual Growth Rate

3.29 The annual average growth of world population is 1.2 per cent in 2004 and it is 1.5 per cent in India (World Development Report 2006)

3.30 he average annual growth in population of Kerala during 1991-2001 was 0.91 per cent as against the average annual growth rate of 1.93 percent in India In addition to achievements, such as low infant mortality rate and high life expectancy the population growth rate in the state remains the lowest in the country. High migration of people of the state to other parts of the world is also a contributing factor for the low growth rate of population.

3.31 Kerala's Population consists of 82.96 lakhs in the age group 0-14, 201.82 lakhs in the age group 15-59 and 33.35 lakhs above the age of 60. Between 1991 and 2001, children in the age group 0-14 have declined by 4.24%. Population in the15-59 age group increased by 12.91% and people above 60 years increased by 30.22%. In Kerala when the number of children (0-14 years) decreased, their number increased over 22 per cent in India The proportion of people in the working age group is 63.4 % in Kerala as against 55.6% in India This indicates very high potential for economic growth. The age group population in 2001 and their percentage distribution is given in Appendix 3.17.

3.32 The proportion of children (0-14) to the total population is 26.1 percent in Kerala which is the lowest among the major states in India. In the proportion of people in the working age group (15-59) Kerala is second only to Tamil Nadu (63.7%). The proportion of population above 60 years in Kerala is 10.5 percent which is the highest among the major states in India.

Table 3.14
Age Group Population of India & Kerala

Sl.No.	Age Group	Population 1991		Population 2001		Growth Rate (%)	
		India (crore)	Kerala (Lakhs)	India (crore)	Kerala (Lakhs)	India	Kerala
1	2	3	4	5	6	7	8
1	0-14	31.96 (37.76%)	86.64 (29.78%)	39 (37.3%)	82.96 (26.1%)	22.02	-4.24
2	15-59	47.03 (55.57%)	178.74 (61.42%)	57 (55.6%)	201.82 (63.4%)	21.19	12.91
3	60+	5.64 (6.66%)	25.61 (8.8%)	7 (6.7%)	33.35 (10.5%)	24.11	30.22
	Total	***84.63 (100%)***	***290.99 (100%)***	***103 (100%)***	***318.41 (100%)***	***21.7***	***9.42***

Source: Census of India

Population Density

3.33 The World Population Density in 2004 is 49 persons per sq km. and it is 363 persons per sq. km. in India (World Development Report 2006). The density of population in low income countries, middle income countries and high income countries are 80, 44 and 30 respectively. Higher population density puts greater pressure on infrastructure and environment but reduces the per capita costs of supply of public goods and services.

3.34 As per 2001 Census, the density of population for India as a whole is 324 persons per sq. km. where in Kerala it is 819 persons per sq km. Among the Indian States, Kerala is in third position in

respect of density, the first being West Bengal (904) and the second Bihar (880). In 1881, Kerala's population density was 134 persons per sq. km. During the last 120 years, the density of population has gone up almost 6 times.

3.35 Among the Districts in Kerala, Alappuzha has the highest density with 1489 persons per sq. km. followed by Thiruvananthapuram with 1476 persons per sq. km. Idukki District has the lowest density of 252 persons per sq. km. Eight districts have densities higher than the State average and six Districts lower than the State average.

Sex Ratio

3.36 Sex ratio is measured as the number of females per thousand males. It is a measure of the degree of gender bias. Gender inequity causes preference for male children. Practice of female infanticide has been reported from some states. Migration of male workers, women literacy, access to medical service etc. influence the sex ratio.

3.37 Kerala has a unique position in regard to sex ratio. In all the Censuses, females outnumbered males in Kerala, which is contrary to All India pattern. The sex ratio of Kerala has gradually increased from 1004 in 1901 to 1028 in 1951 and then to 1058 in 2001. The 2001 Census shows that Kerala is the only state in India where sex ratio is above the equality ratio and is a 100 year high with 1058 females per 1000 males. District-wise analysis shows that the highest sex-ratio of 1094 is in Pathanamthitta District and the lowest in Idukki District with 993 females per 1000 males. Details of sex ratio for India and Kerala from 1951 to 2001 is given in Table 3.15

Table 3.15
Sex Ratio - India & Kerala(1951 to 2001)

Year	Sex Ratio	
	India	Kerala
1	2	3
1951	946	1028
1961	941	1022
1971	930	1016
1981	934	1032
1991	927	1036
2001	933	1058

Source: Census of India 2001

3.38 Child Sex ratio measures the number of female children (0-6 age group) per 1000 male children. The child sex ratio for India stands at 927 girls per 1000 boys according to 2001 Census. This indicates discrimination against the girl child with regard to access to food, nutrition, health care and medical support service. Even in Kerala, which is considered to be one of the least gender -biased states, child sex ratio is below 1000.

Table 3.16
Age Group Sex Ratio of Children – Kerala

Sl.No.	Age Group	1991			2001		
		Male (in lakhs)	Female (in lakhs)	Sex Ratio	Male (in lakhs)	Female (in lakhs)	Sex Ratio
1	2	3	4	5	6	7	8
1	0-4	14.1	13.49	957	14.09	13.56	962
2	5-9	14.53	13.98	962	12.96	12.49	964
3	10-14	15.37	15.17	987	15.24	14.63	960
4	***0-14***	***44.0***	***42.64***	***969***	***42.29***	***40.68***	***961***

3.39 The sex ratio of children in 0-14 age were 969 and 961 respectively during 1991 and 2001 as against the over all sex ratio of 1036 and 1058.

Ageing Population

3.40 India is home to 10 per cent of the total senior citizens of the world. The economic consequences of ageing population are:

- enhanced pension payment over long period
- a lower savings rate with possible erosion of savings for providing care with in the family
- reduction in consumer expenditure on certain types of goods and services.
- In the long term, a possible reduction in the availability of workers with the consequent increase of labour costs.

3.41 The young – old balance of population is shifting throughout the world. The increasing proportion of aged people is accompanied by a falling proportion of young persons. The average annual global growth rate of older population (60 +) is 1.9 percent, which is higher than the total population growth at 1.2 percent (2000-02). The average annual global growth rate of persons aged 80 years and above (3.8 per cent) is currently twice as high as the growth rate of the population over 60 years of age (1.9 percent).

3.42 India has the second largest number of elderly persons after China. There were about 4.3 crore elderly in 1981, comprising 6.5% of the population. Their number increased to 5.7 crore (6.7%) in 1991 and again increased to 7.0 crore (6.7%) in 2001. The proportion of elderly to total population in rural areas is higher than that in urban areas.

3.43 It is a noteworthy feature of Kerala that the percentage of aged population (above 60 years) is increasing fast. During 1961, the aged population constituted only 5.9% of the total population in Kerala. It increased to 6.2% in 1971, 7.5% in 1981, 8.8% in 1991 and to 10.5 % in 2001.

3.44 In Kerala the highest percentage of old age population is in Alappuzha district followed by Ernakulam, Kottayam, Thrissur and Thiruvananthapuram. The lowest is in Kozhikode and Wayanad Districts.

3.45. The relatively higher proportion of elderly persons in the population has several implications in relation to health needs, work participation rate, dependency rate and pension and social security requirements. Focussed attention needs to be given in the development and other programs to meet the needs of the elderly.

CHAPTER – 4

AGRICULTURE

The objective of accelerating economic growth depends critically upon a reversal of the recent declining trend in agriculture. The capital formation is one of the engines of agricultural growth . The deceleration in the growth of Indian agriculture in the 1990s is generally attributed to the inadequate investment. This is supported by the fact that the share of agriculture in total Gross Capital Formation (GCF) had progressively came down from 15.4 per cent in 1980-81 to about 8 per cent by the end of Ninth Plan and as per cent of GDP it has declined from 3.5 in 1980-81 to 1.6 in 2001-02. The real public sector GCF in agriculture and allied sectors has actually declined in the last two decades for the country as whole.

4.2 However, real private sector investment was able to make up much of the slack in public sector investment, resulting in acceleration of overall growth in GCF from about 1.6 per cent per annum in the period 1980-81 to 1996-97 to over 2.6 per cent during 1996-97 to 2003-04.At the national level the private sector had increased its share in GCF in agriculture from about 54 per cent in 1960-61 to about 76 per cent in 2002-03.

Investment in Agriculture

4.3 A recent state wise analysis has shown that the growth rate in Public sector investment in agriculture over a period of 1987 to 1999 was 2.36 percent and private sector investment 5.85 percent in Kerala. (Table 4. 1) The rate of growth of private sector investment in agriculture is lower than the national average as well as to that of major states. In monetary terms, the per hectare private investment is the highest in Kerala among all the states except Union Territories. The investment requirements of perennial and plantation crops predominant in Kerala are also much higher than those for the annual crops cultivated in other states. The Public investment as per cent of agricultural GDP was 3.6 and 7.41 per cent for Private investment. The Public sector investment in the State is above the national average with 7th position among the state level per hectare public sector investment.

4.4 There is a need for stepping up investment both by Public and Private sectors in the State. The role of Private sector is crucial considering the heavy investment requirements of perennial crops. Studies by ICAR further demonstrated that terms of trade for agriculture and institutional credit advanced to farmers for asset building have positive and significant impact on private capital formation in agriculture. The share of private sector in capital formation has been increasing over time.

4.5 During the ten year period spanning from 1993-94 to 2002-03, the ratio of gross capital formation in agriculture to real GDP originating in agriculture increased by only one percentage point from 6.1 percent to 7.1 percent in the country. The role of investment credit in capital formation assumes critical for reviving agriculture. Reserve Bank of India under took a number of initiatives in augmenting credit flow to agriculture following the announcement by the Union Finance Minister in 2004 on doubling of credit flow to agriculture in three years. With a view to evolving a conscious strategy for increasing investments in the agriculture sector and to suggest a road map for banks for increasing investment credit to agriculture, an expert group on Investment

Credit to agriculture was set up by RBI. The expert group submitted its report in June 2005. The major recommendations of the group are shown in BOX : 4.1

Table – 4.1
Public- Private Investment intensity and Investment Growth in Agriculture: (State-wise Analysis – 1987/1999) at 1980-81 Prices)

	States	Investment intensity (Rs./ha)		Investment Growth Rate (per cent)	
		Public Sector	Private Sector	Public Sector	Private Sector
1.	Andhra Pradesh	2.40	2.16	0.48	6.10
2	Assam	2.16	59	-6.18	1.66
3.	Bihar	200	86	-11.00	2.65
4	Gujarat	244	-	1.56	5.6
5.	Haryana	238	407	3.01	8.97
6.	Himachal Pradesh	408	531	0.00	6.87
7.	Jammu & Kashmir	1369	146	0.88	7.43
8	Karnataka	165	409	5.28	6.18
9.	**Kerala**	**340**	**591**	**2.36**	**5.85**
10	Madhya Pradesh	119	313	-4.95	10.82
11	Maharashtra	367	311	1.39	8.93
12.	Orissa	207	49	-1.68	2.77
13.	Punjab	543	397	10.89	9.45
14.	Rajasthan	109	272	2.91	10.06
15	Tamil Nadu	174	564	0.64	7.22
16	Uttar Pradesh	325	337	0.11	5.18
17	West Bengal	20	147	0.76	7.06
18	North-Eastern States	1132	22	-1.08	6.91
19	Union Territories	1007	1034	-2.36	2.9
20	Union Government	21	-	-0.95	-
	All India	**265**	**288**	**0.43**	**7.44**

Source: Roy and Suresh Pal (2002)

BOX : 4.1

Major recommendations of the Expert Group on Investment Credit to Agriculture

- State Governments to make legal provisions/computerisation of land records, provide legal support for recovery, introduce reforms in agricultural marketing, improve credit absorption capacity by supporting infrastructure, strengthen infrastructure and extension network and develop marketing links.
- NABARD to design appropriate products for financing rural infrastructure.

- Banks to make efforts to reach the' unreached' areas, integrate short term with term credit, promote supplementary credit delivery channels, outsource monitoring services, provide loan support for diversified agriculture, review HR policies, share the pool of technical expertise and make use of the model bankable projects prepared by NABARD.

- The Reserve Bank and banks may adopt agency models for credit delivery.

- Government of India/State Governments and organisations engaged in agricultural research and development (R&D) to reorient R&D activities.

- NABARD to promote R&D in agriculture.

- To mitigate the risk in financing of agriculture, the Group recommended, development of suitable financial products, commodity exchanges, allowing banks to operate on behalf of farmers and participate in commodity futures, establishment of a risk fund for fragile agriculture, designing of special risk mitigation packages for low asset based borrowers, use of warehousing receipts with price hedging instruments, use of technology for dissemination of market intelligence, sharing of borrower information, and financing value chain by banks through RIDF.

Source : RBI, 2005

4.6 The total amount of investment credit provided in the state in agriculture during 2004-05 was only Rs. 1182 crore, indicating a share of 17 per cent of total credit to agriculture sector. In fact share of investment credit in total agriculture credit declined over a period of time. The share was 20 per cent in 2000-01. The declining share of investment credit has to be reversed to augment growth in agriculture.

4.7 Apart from investment credit, investment in agricultural extension and irrigation and water management are also crucial for the revival of agriculture in the State.

Agricultural Extension

4.8 Agricultural extension is the key to augment productivity of crops to a great extent and extension should begin to broad base its programmes by utilising a farming systems approach, and suitably address marketing and value addition. Wider use of electronic mass media through optimising the strengths of public-private sectors has to be adopted. It is becoming increasingly evident that public extension alone may not be able to respond to the multifarious demands of farming systems. In response to growing demand for knowledge in intensive agriculture in selected areas, organisations started payment based private extension in the states like Maharashtra, Tamil Nadu, Andhra Pradesh etc. The wide ranging response to agricultural extension shows the importance of investment in agricultural extension.

4.9 The result of a state wise analysis of investment in agricultural extension is shown in Table-4.2. The growth rates in investment in agricultural extension in Kerala is much below to national average and even negative in eighties and nineties. The recently launched Agricultural

Technology Management Agency (ATMA) model of Agricultural extension could be popularized in the state with appropriate convergence at the higher level with coordination at the lower level among the departments in the productive sector. The investment of local governments also could be dovetailed in the model.

Table - 4.2
Growth and intensity of investment in agricultural extension by States

State	Investment Rs. per 1000 ha. at 81-82 Prices		Growth rate (per cent) of real investment	
	1980-82	1992-94	1974-94	1984-94
Andhra Pradesh	645	1045	5.30	4.00
Karnataka	1200	1330	2.90	-0.01
Kerala	**2627**	**3253**	**2.40**	**-0.01**
Maharashtra	2396	8005	12.90	1.70
Tamil Nadu	9022	24195	11.60	8.30
West Bengal	6423	4354	6.20	-0.06
Punjab	1817	823	-3.50	-0.09
All India	**2958**	**6475**	**9.14**	**4.37**

Source: ICAR

4.10 The growth rate in investment in agricultural extension had declined substantially as shown in Table-4.2. Revival of agricultural dynamism will call for corrective steps to deal with investment in extension coupled with support services including water management.

Water Management

4.11 Poor water supply service to farmers usually stems from inadequate operational rules, inadequate hydraulic control infrastructure and inappropriate institutional arrangement between the water supply and users. Typically the problem manifests itself by untimely water deliveries, inadequate amount of water or unreliability of water supply. The main deficiencies of the present irrigation projects arise from the dilapidated condition of a large proportion of the infrastructure, which warrants higher public sector investment.

4.12 There is good potential for water productivity gains in rainfed and irrigated areas. This will require agronomic, economic and social interventions including soil management and irrigation water management. In rainfed areas mitigation of dry spells with on farm water harvesting or supplemental irrigation can potentially increase water productivity.

4.13 Overall irrigation efficiency in 93 developing countries was estimated at 45 per cent in late 1990s, which means a loss of more than half the water used for irrigation (World Bank 2005). The amount of water that could be saved by achieving 70 per cent irrigation efficiency on the world's gross irrigated areas could meet about half the demand for additional water supplies (FAO 2001). Such savings are the main option for addressing water shortage challenges in many developing countries. The primary task now is to find ways to make the fixed capital more productive. It is necessary to invest more on better water management, complete incomplete irrigation projects, investment in non command areas through the watershed development approach. The best opportunities for producing more with less water require shifting to demand driven water management and using improved on farm water management hardware and software. Appropriate blending of surface irrigation and micro irrigation could be used for this

purpose. Affordable micro irrigation technologies have proven cost effective and competitive. They are adapted to small holdings.

4.14 In order to bring more area under micro irrigation, it has become necessary to increase area under micro irrigation for economising the use of water and increase productivity per unit of water. The estimated potential of drip/sprinkler technology in the country is 27 and 42.5 million hectares. The Tenth Plan schemes covers an area of 1.5 million ha under drip irrigation and 0.5 million ha under sprinkler irrigation. The objective of the scheme is to increase the coverage of area under micro irrigation in the country for improving crop productivity with efficient use of water resources. Initially the focus will be on horticulture crops.

4.15 It is important to take measures to improve water use efficiency at both farm and community levels. The Tenth Plan had visualized large investment in micro irrigation on a technology driven method to conserve water at the farm level and also to improve yields. Government of India has sanctioned a major scheme for the State on micro irrigation.

4.16 Traditionally governments have supported farmers through agricultural extension service, but they have concentrated on crops, fertilisers and pesticides rather than water. Irrigation have focussed at the engineering and management of the main distribution system, not at what happens at farm. There is considerable scope for improving the efficiency and productivity of water utilisation in agriculture. Poor management has been cited as the most frequent cause of inefficient water use in irrigation schemes. Depending on the local conditions in the irrigation system, a series of agronomic, technical, managerial and institutional improvements can have large positive impacts on water use efficiency. Water management advisory services could also be integrated with the regular agricultural extension in the State.

Mid term appraisal of Tenth Plan

4.17 The targeted growth rate in agriculture and allied sectors for the Tenth Plan period at the national level was 4 per cent with a corresponding rate of 3.05 per cent for the State. But the national agricultural growth averaged only 0.90 per cent for the first two years of the plan period. While the average growth rate recorded for the state for three years was 2.21 per cent. The major recommendations of the Mid term appraisal of Tenth Five Year plan at the national level is shown in BOX : 4.2. The document highlighted the need for additional investment in agriculture.

BOX : 4.2

Major recommendations of Mid Term Appraisal of Tenth Five Year Plan

- Increase investment and input use and improve the use efficiency of the latter.
- Step up Public investment, particularly in irrigation and water resources management, watershed development, reclamation of degraded land, and provision of essential infrastructure such as roads, markets and electricity.
- Focus on reducing those subsidies that lead to distortions and have deleterious effects on natural resources and cropping pattern.

- Work out innovative mix of proper utility pricing, community control and provision of subsidies on water conservation techniques in the regions displaying acute water stress.
- Reexamine fertilizer subsidies in order to improve the nutrient balance and also to target this more to small holdings.
- Reform and rejuvenate support systems such as agricultural research, extension, credit and delivery systems of inputs
- Focus on demand side problems and in order to increase rural incomes, diversify cropping pattern.
- Restore the growth rate of yields per acre of cereals to levels actually attained during the 1980s, from the current negligible levels.
- Improve the National Agricultural Insurance Scheme by transition to actuarial rates, and by increasing accuracy and timeliness of crop estimation methods.
- Change agriculture market laws of the States and facilitate contract farming

Source: Planning Commission 2005, Mid Term Appraisal

Agricultural Income

4.18 Growth of real GDP originating from agriculture and allied activities in the country decelerated sharply to 1.1 per cent during 2004-05 from 9.6 per cent a year ago. This was essentially the outcome of the uneven and deficient South West monsoon besides the base effect of the high growth in 2003-04 (RBI 2005). Overall GDP growth in 2004-05 was 6.9 per cent at the national level.

4.19 The trends in agricultural income in Kerala during the last five years is shown in Table-4.3. The provisional estimate for 2003-04 indicated an increase of 1.8 per cent in growth. The quick estimate for 2004-05 showed an increase of 1.7 per cent over the previous year.

Table - 4.3

Growth of Agricultural Income in Kerala (at 1993-94 Prices)

Sl.No.	Year	Agricultural income (Rs. in crores)	Rate of change over previous	Percentage contribution to State income
1	2000-01	5448	-22.36	16.23
2.	2001-02	5312	-2.50	15.39
3	2002-03	5394	1.5	14.36
4	2003-04 *	5492	1.8	13.62
5.	2004-05 **	5586	1.7	12.68

Source: Directorate of Economics and Statistics * *Provisional* ** *Quick*

4.20 Eventhough the sector has recorded positive trend in growth performance in nineties, it has not been consistent. Food crops in general have suffered a set back in area and production

despite a sizeable investment. The contribution of agriculture to State income (share) has been on the decline as the other sectors registered higher rates of growth.

Rainfall

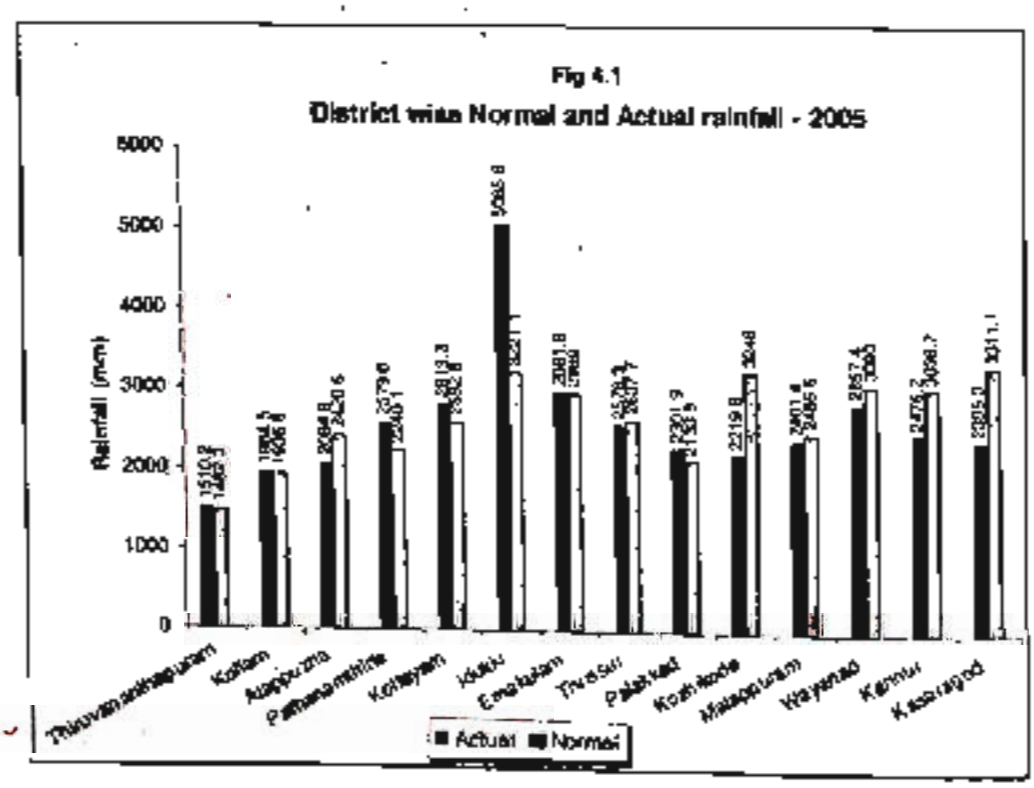
4.21 In Kerala, the rainfall was only 2878.0 mm in 2004, against the normal of 2953.9 mm. in this period, indicating a deviation of 3 per cent from the normal. Highest deviation from normal was recorded in July and shortage of Southwest Monsoon was to the extent of 19 per cent from the normal (Table-4.4). In Kerala the highest departure from the normal in the last two decades was recorded during the Southwest Monsoon of 2002. The deviation in rainfall, apart from affecting production and productivity of annual crops, also affects the productivity of perennial crops such as coconut, rubber and pepper in the long run. During the South West Monsoon of 2004, deficient rainfall was recorded in 8 districts. Even though the district wise disparities continued, there is an improvement in the overall rainfall of 2005. Deficient rainfall was recorded in four districts during South West Monsoon and four districts during North East monsoon of 2005 (Appendix 4.4).

Table 4.4

Percentage Departure of Rainfall from Normal (1998 to 2005)

Sl. No.	Year	Annual	South West Monsoon	North East Monsoon
1	1998	0	2	30
2	1999	-8	-25	23
3	2000	-21	-18	-27
4	2001	-6	-13	0
5	2002	-14	-33	32
6	2003	-14	-24	5
7	2004	-3	-19	12
8.	2005	0	-2	2

Source: IMD website



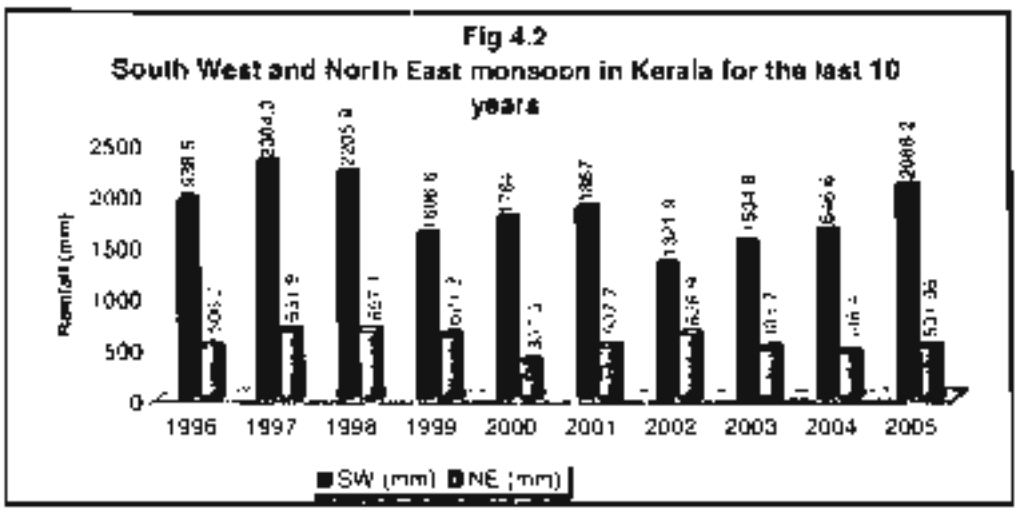


Fig 4.2
South West and North East monsoon in Kerala for the last 10 years
Rainfall (mm)
2500
2000
1500
1000
500
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
SW (mm)
NE (mm)

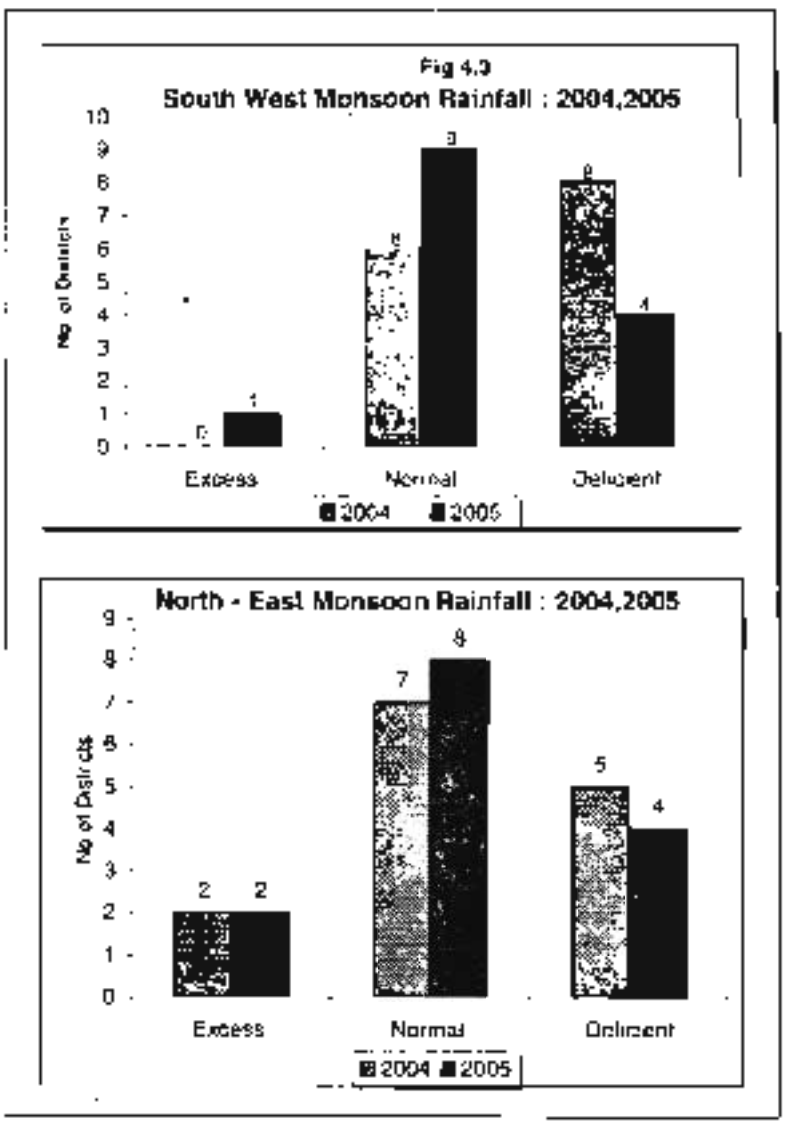


Fig 4.3
South West Monsoon Rainfall : 2004,2005
No of Districts
Excess
Normal
Deficient
2004
2005
North - East Monsoon Rainfall : 2004,2005
No of Districts
Excess
Normal
Deficient
2004
2005

Land Use

4.22 Data on land use pattern of Kerala for the year 2003-04 is given in Table 4.5. Out of a total geographical area of 38.85 lakh ha. net sown area is about 56 per cent. Forest occupies around 28 per cent. Agriculture and forest sectors together account for over 84 per cent of the land area. There was no perceptible improvement in the extent of land use for agriculture. Land under non-agricultural uses was 9.10 percent in 1999-00 and has increased to 10.52 per cent in 2004-05. There was an increase in the area under current fallow (11060 ha) and a decrease in the area under fallow other than current fallow (3672 ha). during 2004-05 over 2003-04. The area under cultivable waste also decreased by 6346 ha and barren and uncultivated land declined by 707 ha. The land use pattern in Kerala during 2004-05 are shown in Fig 4.4.

Table - 4.5

Landuse Pattern in Kerala

(in Ha.)

Sl. No.	Classification of Land	2002-03	2003-04	2004-05	per cent of Geographical Area	Change in Area between 2003-04 and 2004-05	
						Actual	Percentage
1	Total Geographical Area	3885497	3885497	3885497	-	-	
2	Forest	1081509	1081509	1081509	27.83	-	-
3	Land put to non agricultural uses	393341	387848	408727	10.52	20879	5.38
4	Barren and uncultivated land	29580	29510	28803	0.74	-707	-2.40
5	Permanent Pastures and Grazing land	263	447	316	0.01	-131	-29.31
6	Land under miscellaneous tree crops	13022	11939	10831	0.28	-1108	-9.28
7	Cultivable waste	69266	70823	64477	1.66	-6346	-8.96
8	Fallow other than current fallow	39181	39376	35704	0.92	-3672	-9.33
9	Current fallow	70798	70535	81595	2.19	11060	15.68
10	Net area sown	2188537	2193510	2172787	55.92	-20723	-10.73
11	Area sown more than once	781847	782892	769644	19.81	-13248	-1.69
12	Total Cropped area	2970384	2976402	2942431	75.73	-33971	-1.14
13	Cropping intensity	136	136	135			

(Source: Directorate of Economics and Statistics)

Trend in Area, Production and Productivity of Crops

4.23 Data regarding the area, production and productivity of important crops grown in Kerala are shown in Table 4.6 and Appendix 4.5. Out of a gross cropped area of 29.42 lakh ha. in 2004-05, food crops comprising rice, pulses, minor millets and tapioca occupy only 13.6 per cent. Kerala state which had a low base in food production is facing serious challenges in retaining even this meagre area. Kerala agricultural economy is undergoing structural transformation from the mid seventies by switching over a large proportion of its traditional crop area which was devoted to subsistence crops like rice and tapioca to more remunerative crops like coconut and rubber

Table - 4.6

Area, Production and Productivity of Principal crops

Sl. No	Crops	Area (ha)		Production (MT)		Productivity (kg/Ha.)	
		2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
1	Rice	287340	289974	570045	667105	1984	2301
2	Pulses	5998	5798	4930	4754	820	820
3.	Pepper	216440	208984	69015	68362	327	327
4	Ginger	8516	8863	32972	30567	3449	3449
5	Turmeric	2774	2797	5652	5814	2079	2079
6	Cardamom	41332	41067	8875	8931	217	217
7	Arecanut	102504	97568	105490	106389	1090	1090
8	Banana	55906	55742	442220	425192	7910	7628
9	Other Plantains	53496	55129	399717	414769	7472	7524
10	Cashewnut	86376	86105	65655	63701	760	740
11	Tapioca	94297	104388	2540790	2436771	26945	23343
12	Coconut *	898498	897767	5876	5727	6540	6379
13	Coffee	84684	84644	63850	54300	754	642
14	Tea	38327	NA	57553	NA	1502	NA
15	Rubber	478402	480543	655134	690711	1369	1437

** Production million nuts and Productivity in nuts/ha.*

Source: Directorate of Economics and Statistics and UPASI

4.24 **The area under rice has increased from 2.87 lakh ha. in 2003-04 to 2.90 lakh ha.** in 2004-05. In the case of tapioca the area has increased from 0.942 lakh ha. to 1.04 lakh ha during this period. The area under commercial crops in general and rubber in particular has increased considerably during the last two decades. The trend seems to have slowed down recently. During Ninth plan average annual increase in area under rubber was 1951 ha while during 2004-05 area increased by 2141 ha compared to previous year and the increase was mainly due to upsurge in prices. The index of area, production, productivity of crops in Kerala for the year 2002-03 to 2004-05 with the base of triennium ending 1993-94 is shown in Appendix-4.6. The index of food grain production increased by 8.96 points and non-food grains increased slightly.. While index of area of foodgrains declined by 0.24 points and productivity increased by 16.72. However non-food grains showed slight decline and the indices declined by -0.77, -3.86 and -3.00 respectively. The production of plantation crops showed slight improvement during the year by 16.62 points. (Appendix-4.6)

4.25 In the case of coconut, area was at its peak during 2000-01. During the year 2004-05 declined by 731 ha. over 2003-04. Major commercial crops which had recorded expansion of area during 2004-05 from previous year include ginger (347 ha). tapioca (10091 ha) and turmeric (23ha). The major crops with considerable loss in area include cashewnut (271 ha) cardamom (265 ha) pepper (7456 ha), arecanut (4936 ha), coffee (40 ha) and banana (164 ha).

4.26 Crops which have failed to sustain the production level in 2004-05 compared to previous year include cashewnut (-1454 MT), ginger (-2405 MT), tapioca (-104019 MT), coconut (-149 m. nuts), Pepper (-653 MT) Banana (-17028 MT) and coffee (-9550 MT). Increase in production reported during this period include rubber (60833 MT), Cardamom (56 MT),), rice (97060 MT), Arecanut (899 MT), Turmeric (162 MT) other plantains (15052MT)

Crop wise analysis

Rice

4.27 The average annual decline in area under rice during the Eighth Five year Plan was around 22000 ha, whereas it has come down to an average of 13000 ha. during the Ninth Plan period. However during 2004-05, a slight increase in area was recorded by 2634 ha. from 2.87 lakh ha. in 2003-04 to 2.90 lakh ha and rice production increased from 5.70 lakh MT to 6.67 lakh MT, an increase of 17 per cent during this period compared to a reduction of 17 per cent in 2003-04 with that of 2002-03. The unprecedented drought in recent years has contributed to this decline of paddy production during 2003-04 which was reversed in 2004-05. During 2004-05 maximum increase in rice production was recorded in Alappuzha (+75 per cent) and Palakkad (+37 per cent) compared to previous year (see Fig. 4.5). The lease land farming project implemented by Kudumbashrec is one of the reasons for the increase of area and production under rice. During 2004-05, the total area under lease land cultivation was 21554 ha indicating an increase of 3979 ha over 2003-04. Rice is the major crop cultivated in these lands. During 2005-06 department of Agriculture has started another scheme on rice cultivation in fallow lands by utilizing the services of unemployment youths.

Fig. 4.4

Landuse pattern in Kerala (2004-05)

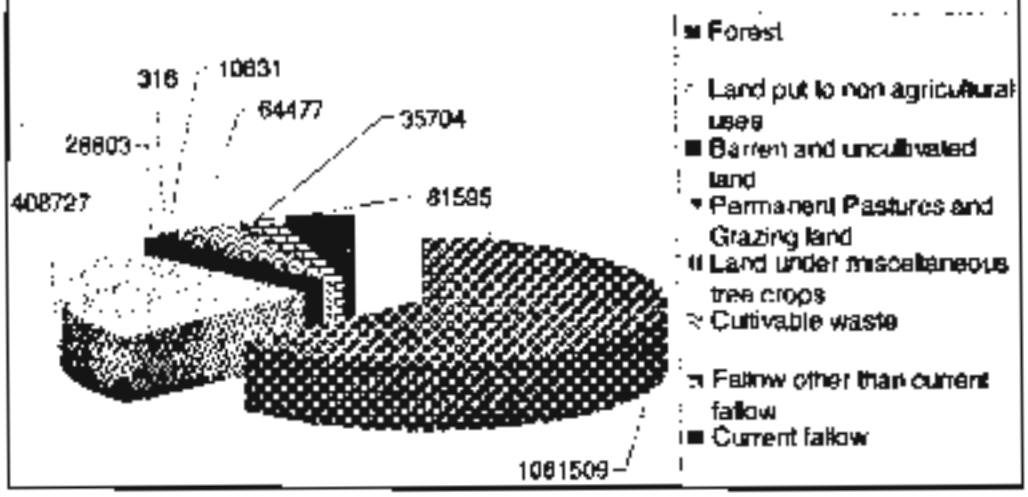
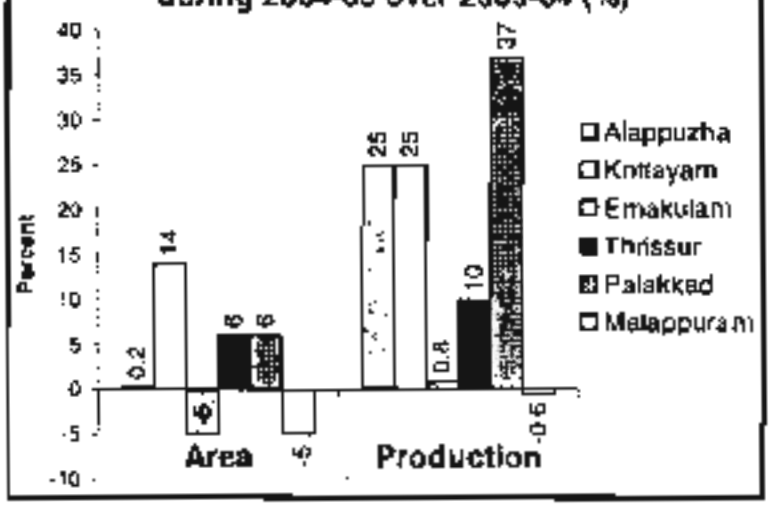


Fig 4.5

Deviation in Area and Production of Rice in the major districts of Kerala during 2004-05 over 2003-04 (%)



4.28 The average productivity which was stagnant at around 2.2 MT/ha for the last four years has increased to 2.3 MT/ha in 2004-05 (Table-4.7). Maximum increase in productivity during the year to the tune of 30 per cent was recorded in Palakkad district. Rice productivity at current level is sub optimal. The productivity in major rice producing states of Punjab, West Bengal and Tamil Nadu based on CMIE data are shown in (Fig 4.6). Instead of providing area based subsidies, suitably designed incentive system is essential to promote productivity of rice in the state.

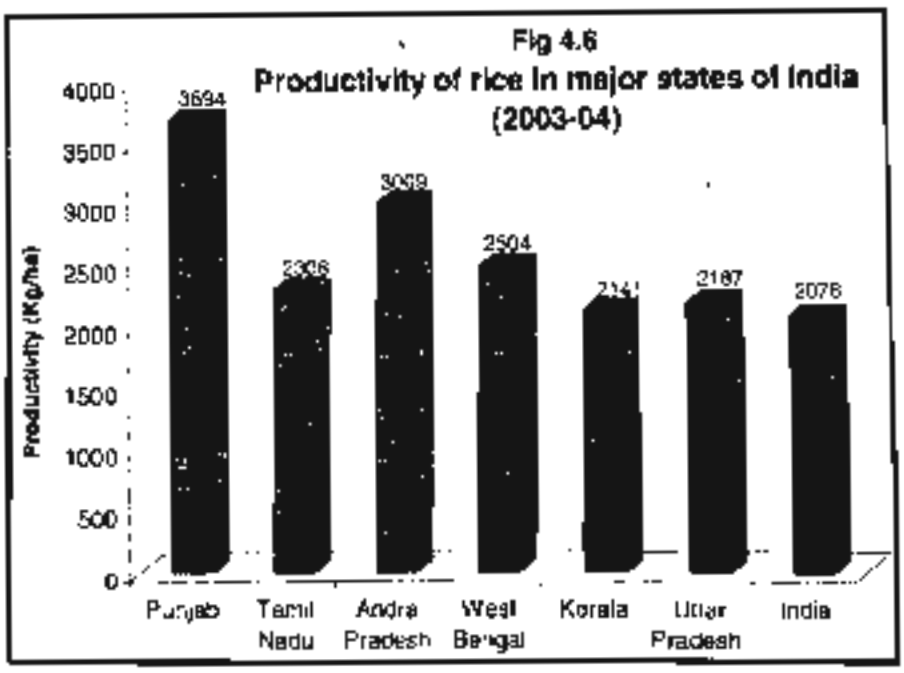


Fig 4.6

Table - 4.7

Area, Production and Productivity of Rice in Kerala and India

	Year	Area (000' ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	347	44710	751	84980	2162	1901
2	2001-02	322	44620	704	93080	2182	2086
3	2002-03	311	40410	689	75720	2218	1874
4	2003-04	287	42410*	570	87000*	1984	2051*
5.	2004-05	290	-	667	-	2301	-

Source : Directorate of Economics and Statistics
** Provisional*

4.29 The sharp increase in the prices of fertilizers and wages and non-availability of labour in peak seasons in certain locations, the failure of the irrigation system to serve the areas to the extent desired etc. are problems to be tackled to sustain this crop.

4.30 Local governments are also investing a significant amount for the promotion of rice. However there is no apparent coordination between the schemes of State Plan and those of local governments. A coordinated approach is needed for the development of rice in the State.

4.31 The future of rice production in the state lies in improving productivity through promotion of high yielding varieties under scientific management in potential areas. Strengthening of

group farming samithies with the required facilities and gradually raising them to the level of self supporting institutions is perhaps one way to circumvent these problems. However past experience with the group farming programme suggests that neither input subsidies nor infrastructure support *per se* can bring about substantial change in area and production. Instead of pumping in more money by way of additional incentives, appropriate institutional arrangements for organising common services coupled with partlcipatory irrigation management, local water resources development and selective mechanisation could improve the situation. Applied research on emerging technologies and participatory technology development are also equally important. The recommendations of the expert committee constituted by the Government of Kerala have to be seriously considered in promoting rice cultivation in the state. Area based strategies are essential to sustain this crop.

4.32 Organic rice cultivation is an option for the farmers since the reported price is around 20 per cent higher. The experiment in Kuttanand (Ayyanadu Padasekharam) was a success.

System of Rice Intensification (SRI)

4.33 The System of Rice Intensification (SRI) first developed in Madagascar and now being tested in many countries is an example of an on-farm water productivity enhancing approach (BOX : 4.3). However the results of the studies show mixed response. Even though the technique could be utilized for increasing productivity of rice , inherent problems associated with SRI like increased labour use as well as facilities for water management needs to be considered before large scale popularisation. In Kerala also some of the farmers as well as the department of Agriculture initiated popularization of SRI in various districts.

BOX : 4.3

System of Rice Intensification

The SRI was developed in Madagaskar by Rev. Fr. DeLaularie, a French Priest and agriculturist who worked closely with farmers. SRI is not a package of fixed technical specifications, it is rather a system of production formulated on the principles of Soil Chemistry and biology and rice physiology. The main components of SRI are planting method, soil fertility management, weed control and water management.

Studies in Africa, Asia and Latin America provide mixed results. But most of these studies are anecdotal in nature or are limited to experimental and demonstration activities. There was a wide variation in the way that farmers practiced the SRI, with the majority of the adopters using the methodology on only a portion of their farms. However, as found in other studies, many farmers discontinued after a season or two largely because of heavy labour requirements (about 3 times more than that for conventional rice cultivation)

SRI farmers in Sri Lanka reported an yield increase of 44 per cent, which is lower than that reported in many other countries. The average profit was double that of a conventional practice.

The success depends on improving the efficiency of or mechanizing the transplanting and weeding operations and improving the reliability of irrigation supply.

Source: IWMI, 2004

4.34 However a cautious approach is required since the success of SRI depends to a great extent on the availability of family labour and water management. In Kerala at Thiruvalla and Mattathooor (Thrissur dist) SRI method was experimented. High water level and difficulties in weeding were the main obstacles.

Speciality rice

4.35 Concerted efforts are needed to promote scented rice cultivation in Wayanad, organic rice production in Pokkali lands and medicinal rice in identified potential panchayats with necessary brand promotion and marketing support in association with LSGs. Adequate processing facilities have to be established before launching a major project for the development of scented rice in Wayanad district. Value added products from medicinal rice could also be promoted on SHG basis in collaboration with ayurvedic industry.

Season wise performance

4.36 Season wise data on the performance of rice during the last three years is shown in Appendix 4.7 Data shows increase in area in Virippu, and Mundakan seasons with decline in Puncha season. There was 2.5 per cent increase in area during Virippu season in 2004-05 compared to previous year and 3.9 per cent reduction in Punja season. Area under Virippu is gradually shrinking and about 45000 ha out of double cropped land are remaining fallow during Virippu season. Group farming samithies should concentrate their efforts in such areas with a view to bringing such areas under double cropping. Mundakan season accounts for highest share in production with 50 per cent followed by 36 per cent in Virippu and 13 per cent in Punja season. The productivity recorded in Punja is the highest with 2512 kg. per ha. during 2004-05 which is 12 per cent higher than that in 2003-04.

High Yielding Varieties

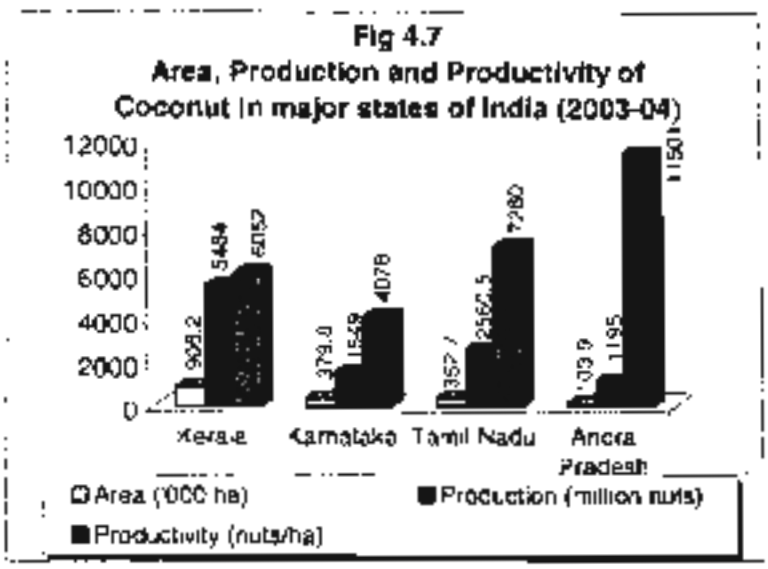
4.37 The coverage with high yielding varieties is given season wise in Appendix.4.8 Inspite of sharp decline in the area under rice, the coverage under high yielding varieties remains steady and is increasing. The coverage which was stagnating in the range of 1.65 to 1.77 lakh ha during the last decade, has registered marked improvement in the last five years. During 2004-05, a slight increase of 4.2 per cent in area compared to previous year was recorded. This is part of increase in area under rice in 2004-05 (1 per cent). It increased from 1.77 lakh ha in 1998-99 to 2.48 lakh ha in 2004-05. Maximum high yielding variety coverage was in Punja season with 99 percent. followed by Virippu (92 per cent) Mundakan (78 per cent)and overall coverage was 86 percent. (Appendix-4.8). The average productivity of high yielding varieties during 2004-05 was 2388 kg/ha indicating 12 per cent decline during the year.

4.38 Eventhough Mundakan season accounts for the largest share in coverage of area under rice its share in high yielding varieties is lower compared to Virippu season. This is mainly because of inadequate research support to evolve varieties with multiple disease resistance suitable for cultivation in different localities in Kerala during Mundakan season.

Coconut

4.39 Coconut is cultivated in 12.8 million hectares world wide with a production of 10.9 million tonnes of copra equivalent. Coconut is grown in over 93 countries. Indonesia is the largest producer (27 per cent) followed by Philippines (23 per cent) and India's share in world production is 22 per cent , fourth being Sri Lanka with 5 per cent share.

4.40 In India, coconut is grown in an area of 1.93 million ha. producing 12148 million nuts with a per hectare productivity of 6285 nuts. (Table 4.6) Kerala's share in area as well as production of coconut in the country is declining over a period. The share of area declined from 57 per cent in 1991-92 to 47 per cent in 2003-04, while share of area in Karnataka and Tamil Nadu together increased from 29 per cent in 1992-93 to 38 per cent in 2003-04 (Fig. 4.7).



4.41 With a coverage of 9 lakh ha, coconut occupies 41 per cent of the net cropped area and provides livelihood to over 3.5 million families in Kerala. Production declined by 3.9 percent in 2003-04 compared to the previous year and declined by 2.5 per cent in 2004-05 compared to previous year. The average productivity has also slightly declined in 2004-05 by 2.5 per cent to 6379 nuts/ha compared to 2003-04. (Table 4.8) The productivity levels in Kerala are also lower than other major producing states

Table - 4.8

Area, Production and Productivity of Coconut in Kerala and India

Sl. No	Year	Area (000'Ha.)		Production (Million Nuts)		Productivity (Nuts/ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	926	1840	5536	12597	5980	6847
2	2001-02	906	1890	5479	12822	6049	6776
3	2002-03	899	1922	5709	12535	6349	6523
4	2003-04	898	1933	5876	12148	6540	6285
5	2004-05	898	-	5727	-	6379	

Source: Directorate of Economics and Statistics, CDB

4.42 Apart from sizeable percentage of senile and unproductive palms and the higher incidence of root wilt affected palms, the share of younger non-bearing palms is around 25 per cent as

reported in the survey of Department of Economics and Statistics. Over population of palms in holdings (231 nos. per ha) is another reason for low productivity of palms.

4.43 Though India is among the leading producers of coconut in the world, its relative share in the international trade of value added products is insignificant as compared to other major producing countries like Philippines, Indonesia and Sri Lanka. More concerted efforts are needed to promote value addition in coconut. Promotion of Hitech ventures in cooperative sector as well as micro enterprises offer scope in the state.

4.44 However it should be recognised that mere diversification and value addition will not make the Indian coconut economy internationally competitive, unless the cost of production of coconut is contained and brought down in real terms over time. For this the primary task is to raise the yield of coconuts for which technology adoption is crucial. The present level of adoption suggests the need for further intervention to enhance technology adoption. Generation of technologies for different agro ecological situations may improve the level of adoption. Integrated farming system with due emphasis on multi tier cropping systems needs to be promoted in different agro ecological situations.

BOX : 4.4
Consumption of Edible Oils in India

The composition of India's edible oil consumption has shifted away from groundnut and rape seed oils, which accounted for 53 per cent and 25 per cent of consumption in the early 1970s, to greater consumption of Palm oil and Soybean oils. In 2003, Palm and Soybean oils made up 34 per cent and 16 per cent respectively of all oil consumption. The share of coconut oil was 4 per cent and groundnut oil 15 per cent.

IFPRI, 2005

Pepper

4.45 Vietnam is the largest producer with a share of 29 per cent followed by India (21 per cent) in 2004. India became the second largest producer from the first position in 2002. A 5 per cent decline in production was recorded in India during 2004 while World pepper production had registered a 12 per cent decline during 2004. In 1991, Vietnam was in seventh position with a share of just 3.8 per cent of world production. There is consistant increase in area, production and productivity in Vietnam over the period and productivity in Vietnam is around 1.3 MT /ha.

4.46 The state continues to enjoy a near monopoly in area and production of pepper, accounting for 98 per cent each in the country. The productivity achieved its peak level of 376 kg. per ha during 1998-99. The productivity of pepper recorded during 2004-05 was only 327 kg, per ha. The production declined from 69015 MT during 2003-04 to 68362 MT in 2004-05. Pepper produced in Kerala fetches a premium price in international market in view of its intrinsic quality. However consequent to the liberalisation of imports, there are reports of low quality pepper arriving from other producing countries. The import of pepper has increased from 4028 MT in 2000-01 to 17725 MT in 2004-05 affecting the interests of pepper farmers of the State. The Indo Sri Lankan Free Trade Agreement allowing free import of pepper has to be modified to safeguard the interests of Kerala farmers.

4.47 Government of India could build in adequate safety mechanism and monitoring system to see that the issue of certification of origin and the condition relating to origin of the goods are not violated. Similarly in respect of import for re-export of pepper which enjoys duty free status, a minimum value addition needs to be prescribed.

4.48 India could export 42806 MT of pepper in 1999-00, which declined to 16635 MT in 2003-04. Export performance dissipated further and quantum of exports declined to 14150 MT in 2004-05. The value realization was also lower at Rs. 121.40 crores compared to Rs. 142.77 crores in 2003-04 and unit value realization is almost stagnant at Rs. 85.83 to Rs. 85.80 per kg. respectively in the corresponding period. USA is the major export market for India accounting for 45 per cent followed by Canada (11 per cent) in 2002-03. Vietnam is the leading exporter with 43 per cent followed by Indonesia with 20 per cent, Brazil 18 per cent and India 6 per cent. Vietnam exports around 91 per cent of its production, while Indian exports account for only 23 per cent of its production.

4.49 Price of pepper moved consistently upwards from early nineties and reached a peak level in 1999-00 with Rs. 215 per kg. Since then declined to Rs. 174 per kg. in 2000-01, further down to Rs. 80 per kg. in 2001-02 to Rs. 60/kg. in 2004-05. Pepper prices continued its declining trend since 2000.

4.50 The state has to bestow specialised attention for upgrading the productivity through an organised replanting programme. The productivity in India is the lowest among the major producing countries. It is the highest in Thailand with 4.3 MT/ha. followed by Malaysia with 2 MT/ha in 2001. Application of soil conditioners, plant nutrients including micronutrients and biofertilizers under a framework of yield targeting in combination with plant growth promoting bacteria and Trichoderma as demonstrated by Indian Institute of Spices Research (IISR)could be adopted for enhancing productivity of pepper. The varietal selection and improvement through genetic upgradation is also important for stabilizing and retaining its lead share in global trade.

4.51 The quality issues reported in consignments exported from India include presence of pesticide residues, mycotoxins and microbial contaminations. In the liberalised policy regime, exporters with the status of trading house, star trading house or with in process quality control system can export spices without preshipment inspection and certification. Quality control is very important in the post WTO context to retain the market share and the SPS norms are gradually becoming a weapon to discriminate trade, and the role of Spices Board assumes crucial, in enforcing quality control norms. Spices Board may take further initiatives to fix maximum pesticide residue limits at the Codex level.

4.52 The pattern of global demand for the crop is undergoing changes. The consumer preference is for value added form of pepper such as white pepper, pepper in brine, oleoresin etc. Kerala could not take full advantage of the emerging opportunities for want of raw material of desired quality.

4.53 Emerging trends and market potential indicate that both supply and demand for organic spices are growing throughout the world. India has developed the national standards for organic production and prescribed the guidelines for production of organic spices. Accreditation criteria for inspection and certification agencies are stipulated. Production programmes for promotion of organic spices in collaboration with Spices Board can go a long way in exploiting the world organic spice market. A major portion of Wayanad and Idukki could be brought under organic production of pepper.

Cashew

4.54 India is the second largest producer and exporter of cashew in the world (Fig 4.8). India's share in world production is 17 per cent with a production of 4.6 lakh MT in 2004. Area under the crop in Kerala has been declining steadily from 1.25 lakh ha. in 1988-89 to 0.86 lakh ha in 2004-05 and the production declined from 1.08 lakh MT to 0.63 lakh MT during the period (Table 4.9). The share of Kerala in the area under cashew in the country has come down from 23 per cent in 1987-88 to 12 percent in 2003-04 and the corresponding decline in share of production from 31 per cent to 12 per cent. Area and production are increasing steadily in other producing states in the country. Maharashtra is the leading producer with 31.99 percent share in production during 2004-05, whose share was only 10 per cent in 1990-91

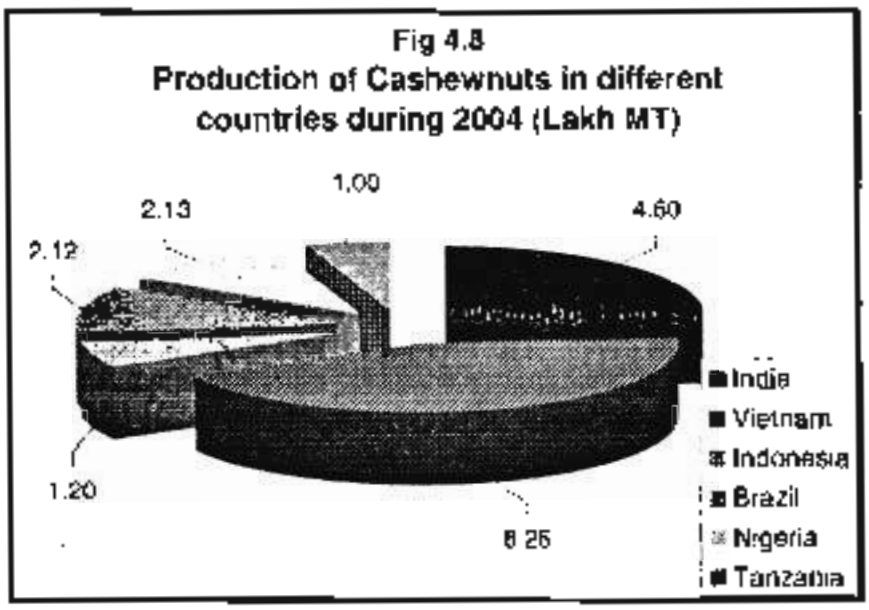


Table - 4.9

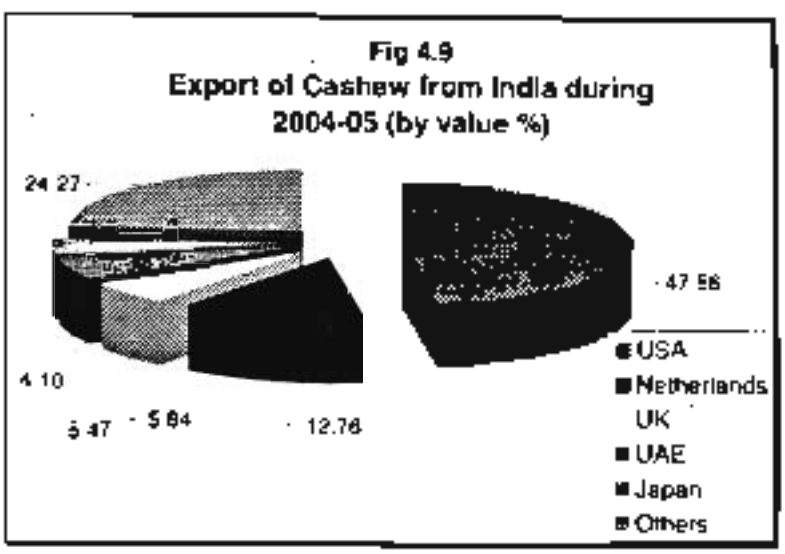
Area, Production and Productivity of Cashew in Kerala and India

Sl. No	Year	Area (000'Ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	92.1	720	66.2	450	718	625
2	2001-02	89.7	750	65.8	470	734	710
3	2001-03	88.5	770	66.1	500	746	760
4	2003-04	88.4	730	65.2	535	737	733
5	2004-05	86.1	-	63.7	544	740	-

(Source: Directorate of Economics and Statistics and Directorate of Cashew, GOI)

4.55 In spite of operating special schemes for expansion of area under cashew, the coverage has been steadily declining during the last two decades. The decline in area from 1980-81 to 2004-05 was to the tune of 55160 ha. Productivity of the crop, which was around 900 kg. per ha. during late eighties has also started declining from 1995-96 onwards, reaching 562 kg per ha. during 1998-99 and thereafter hovering around 740 kg..

4.56 India exported cashew kernels worth Rs. 2709.24 crore during 2004-05 and imported raw nuts worth Rs. 2183.26 crore resulting in a net foreign exchange earning of Rs. 525.98 crore indicating 28 per cent increase in value terms compared to 2003-04. 2.4 per cent increase in quantity of cashew kernals exported and 13 per cent increase in the quantity of raw nuts imported. U.S.A. is the major export market with 48 per cent export share followed by Netherlands (12 per cent) (Fig. 4.9). The unit export price of cashew kernels went down during the year 2004-05 by 19.52 per cent compared to 2003-04. The total raw nuts imported into India during 2004-05 was 5.79 lakh MT. Around 23 per cent of total raw nuts imported is from Ivory Cost followed by Guinea Bissau (15.14 per cent). Indonesia has emerged as another supplier of raw cashew nuts with a share of 11.70per cent of total imports. Out of imported nuts 49 per cent of imported raw nuts is bought to Kerala during 2004-05 which was 46 per cent in 1998-99. Cashew processing industry is finding it extremely difficult even to maintain the present level of capacity utilization because of the lower availability of local raw cashew nuts. Concerted efforts are needed to nurture this crop in the state with programmes to promote high density planting with high yielding cashew grafts. Cashew could form one of the major crops supported under the new Horticulture Mission.



Organic Agriculture

4.57 The size of global organic market is estimated at US$25-30 billion. The most important organic product groups in the EU market are vegetables, fruits, potatoes, beverages, spices, milk products and cereals. Retail sales of organic food and beverages accounting to about $ 8 billion in 2000 in USA alone is projected to reach $ 20 billion by 2005-06. While the demand for organic foods is increasing, supply continues to lag behind. The shortfall in supplies of organic products against growing demand in OECD countries provides opportunities for developing country exporters. There are particular opportunities for tea, coffee, cocoa, spices, tropical fruits, meat and dairy products. Organic produce imported by the EU originates from atleast 60 countries. In 2000, agricultural land under certified organic agriculture averaged 2.4 percent of total agricultural land in Western Europe, 1.7 percent in Australia, 0.25 per cent in Canada and 0.22 per cent in US. In 2003, India's organic exports stood at US $ 15.5 million and had about 2.5 million hectares under organic farming. The value of Chinese exports grew from less than US $ 1 million in the mid 1990s to about US $ 142 million in 2003. In most developing countries, agricultural land reported under organic agriculture is minimal and less than 0.5 per cent of total agricultural lands. With 3 million ha, Argentina accounts for more than 90 per cent of certified

organic land in Latin American countries and has the second largest area of organically managed land in the world after Australia. Organic coffee which accounts for 0.2 per cent of world coffee consumption, accounts for 5 per cent of US coffee market.

4.58 In 2001, Western Europe consumed more than 11000 MT of certified organic coffee. Germany led Europe with approximate consumption at nearly 3500 metric tonnes.

4.59 However, developing countries face a number of obstacles in trying to penetrate these markets. The most talked about problem facing exporters is the need for Certification and accreditation. Certification is costly where international agencies are involved and few developing countries have established their non accredited agencies. Argentina has made enormous efforts into this area. A multitude of difficult national standards in importing countries and lack of transparency constitute a practical barrier. The marginal and small farmers in China, India and Latin America and most probably in other developing countries have a comparative advantage in shifting to organic agriculture, as the technologies they use are often very close to organic practices (IFAD, 2005). Still many will face a nucleus of obstacles to becoming certified organic producers, including lack of technical knowledge, inadequate market information, limited storage and processing facilities and complex certification processes. This is where IFAD, the World Bank and other donors can help the developing countries (World Bank , 2005)

4.60 The size of the price premium varies between countries, level of market development and product, but a premium of 20-30 per cent is common. In Costa Rica for example, organic Cacao producers received 150 per cent more for their products than conventional producers in 2001, while 22.5 percent to banana producers in Dominican Republic. Now organic agriculture is moving into the economic main stream and many large food companies are developing organic products as an element of their business. A portion of the price premium alone are reaching to farmers, but the down stream supply chain typically accounts for a large share of higher price.

4.61 The efforts of IFOAM and Codex Alimentarius commission to harmonize the international guidelines and Certification have been laudable. A Survey by the international Accreditation assistance shows that 56 countries are at some stage of regulating the organic sectors, 32 countries have fully implemented regulation and 15 countries have draft guidelines.

4.62 Kerala could exploit the growing international markets especially in pepper, tea, coffee etc. Detailed action plan to promote organic agriculture in collaboration with Commodity Boards and Non-Governmental organizations would help in exploiting the emerging international markets. It should be ensured that the price benefits of the premium reach the farmers so that they are motivated to take to organic farming. It is important to provide access to technical and market information on organic production and strengthen producer organizations (World Bank 2005)

4.63 Effective steps are also required for supporting farmers during the transition period for 2-3years as well as for augmenting supply of organic inputs.

BOX : 4.5

Organic Uttaranchal: A success story

- The Uttaranchal Organic Commodity Board (UOCB), a nodal agency of the government of Uttaranchal for promotion of organic farming, was registered under the Societies Act in May 2003. A project called Centre for Organic Farming (COF), "Himotthan Pariyojna" funded by the Sir Ratan Tata Trust was anchored within the Board for providing technical and marketing expertise for product development, supply chain management, market linkages, certification etc.

- Crop certification is being facilitated under the internal control system supported by COF. Regular training is being provided by the field staff available with different programmes. The certification is done by a team of field staff, internal inspectors and Quality Managers in coordination with an External Certification agency.

- Initially, a pilot programme of demonstration of certain technologies was taken up in 16 villages of Uttaranchal. Later, it was expanded to 212 villages. The term bio-village has evolved along with the development of demonstration villages to 100 per cent saturation villages where commodity production, certification and market linkage has been established. Presently, 1200 bio-villages are covered under the organic programme and 20,000 farmers have been sensitized.

- The tangible results are: export of 100 tonnes of organic rice to Germany and a product expansion plan for 400 tonnes of commodities like kidney beans, lentils, buckwheat and millets. An increase of 35-40 per cent in unit price has been realized for the farmers. The groups logged domestic market sales to the tune of Rs. 35 lakhs in 2004. Organic producer groups have been trained to semi process and package the products at the village level itself. A total of 40 organic commodities have been developed, including organic detergents.

- A number of farmer groups are actively engaged in exploring organic opportunities and some NGOs are also active in linking farmers with health food activist.

Source: MTA, Planning Commission, 2005

Plantation crops

4.64 Plantation crops in general are either export oriented or import substituting and therefore assume special significance from the national point of view. It is estimated that nearly 14 lakh families are dependent on the plantation sector for livelihood. Each of the four plantation crops of South India has its distinct characteristics and economic problems. Consequent to the removal of quantitative restrictions on import, plantation crops in general are facing the threat of low quality imports.

4.65 Kerala has a substantial share in the four plantation crops of rubber, tea, coffee and cardamom. These four crops together occupy 6.42 lakh ha, accounting for 29 per cent of the net cropped area in the state and 42 per cent of the area under these crops in the country. Kerala's share in the national production of rubber is 92 per cent, cardamom 78 per cent, coffee 20 per cent and tea 6 per cent.

Rubber

4.66 Global production recorded 8.62 million tonnes in 2004, which was about 8 percent higher than the production in 2003. Production in Thailand, the world's largest producer, reached another new record of 2.96 million tonnes from 2.88 million tonnes in 2003, reflecting about 3 percent rise in output. Higher prices have been the major factor to induce intensive tapping. The two leading producers, Thailand and Indonesia continue to dominate the market, accounting for 34 and 24 per cent each, followed by Malaysia and India with 14 and 9 per cent. After declining for several years in the late 1990s, production in Malaysia recovered to reach nearly 1.2 million tonnes in 2004, about 53 percent higher than that in 1999. The higher price of natural rubber resulted in a shift in the comparative advantage of rubber production against other crops, in particular oil palm, which attracted small holders to revive rubber tapping. Indonesia also experienced a significant increase in production in the past few years.

4.67 Consumption of natural rubber was around 8.25 million tonnes in 2004, about 4 percent higher than the level of the previous year but nearly 24 per cent higher than that in 1999. Nearly half the natural rubber used globally is for tyre production. Higher demand for motor vehicles, and hence for tyres, stimulated by the stronger economic growth in several key markets, especially in China and Asian countries, together with the spike of oil prices which resulted in higher price for synthetic rubber, contributed to the stronger demand for natural rubber. China continued to experience strong growth over the past few years. In 2004, natural rubber consumption in China reached nearly 1.63 million tonnes, 10 per cent more than the previous year and nearly 91 percent higher than that in 1999. Other major consuming countries, including India, Japan, the Republic of Korea and Malaysia, also registered increased consumption in 2004. North America (the United States and Canada), has seen consumption ranging between 1.13 and 1.20 million tonnes for the past few years largely to supply its mature automobile markets. China became the world's largest natural rubber importer in 2004, importing 1.21 million tonnes, nearly 5 per cent more than 2003.

4.68 India is the fourth largest producer of natural rubber with a share of nine per cent in the world after Thailand, Indonesia and Malaysia. The production of natural rubber in the country was 7.50 lakh MT in 2004-05, registering a 5.3 per cent growth compared to the previous year while it was 9.6 per cent growth over the previous year during 2003-04. India is at the same time the fourth largest consumer of natural rubber after China, USA and Japan. Indian industry comprising 29 tyre manufacturing units and 250 medium scale and 5500 small scale units in the organised sector offers 35,000 diversified products, but over 95 per cent of the industry is outside Kerala. The long experience in the manufacture of such a large number of diversified products and the low cost man power available have to be considered as the relative advantages the country possesses on the promotion of rubber based industries for export purposes and steps should be taken to attract such units to Kerala.

4.69 Kerala accounts for 83 percent of the area under rubber in the country. The coverage under the crop in 2004-05 was 4.81 lakh ha, higher by 2141 ha. over the previous year. The production of natural rubber in Kerala during the year was 6.91 lakh tonnes indicating a 5 per cent increase over the previous year. The increasing trend in productivity continued during 2004-05. It was 1190 kg. per ha in 1998-99, which rose to 1437 kg. during 2004-05. In terms of tapping area, productivity recorded was 1715 kg. per ha during the year 2003-04.

4.70 Even though the domestic prices of natural rubber were more or less comparable to international prices during 2004-05 (See Appendx-4.17) the industrial sector still resorts to imports in bulk quantities since the import duty is only 25 per cent. The total quantity imported

was 44199 MT in 2003-04 which increased to 68718 MT in 2004-05. The annual average growth of the domestic natural rubber industry for the period 1996-97 to 2004-05, showed an annual average increase of 3.5 per cent in production where as consumption had increased at 3.3 per cent per annum while import of natural rubber increased by 14.7 per cent.

Table - 4.10

Consumption of Rubber during 2003-04 and 2004-05

Sl. No	Item	Consumption (in MT)		Growth per cent
		2003-04	2004-05	
	Natural Rubber			
1	Auto Tyres and Tubes	378185	406226	7.4
2	Others	341415	349179	2.3
	Total NR	***719600***	755405	***5.0***
	Synthetic Rubber (SR)			
3	Auto Tyres and Tubes	119367	131267	10.0
4	Others	90823	93383	2.8
	Total SR	***210190***	***224650***	***6.9***
	NR and SR			
5	Auto Tyres and Tubes	497552	537493	8.0
6	Others	432238	442562	2.4
	Total of NR and SR	***927790***	***980055***	***5.4***

Source Rubber Board

4.71 The higher prices in the international market is reflected in the domestic market also. The average price of RSS4 in the domestic market at Kottayam was Rs. 50.40 per kg. in 2003-04 which increased to Rs. 55.70 in 2004-05. The international price of RSS3, equivalent of RSS4 of India, increased from Rs 52.78 to Rs. 57.51 in the corresponding period. The price of RSS 4 in Kottayam reached Rs.61.73 during July 2005 and then declined to Rs.60.34 in October 2005 The Indian price (RSS4) which was higher than the international price till June 2003 started moving below the international price during the remaining months of the year owing to the sharp increase in the international price.

4.72 World rubber prices may continue to show some strength in the near future largely due to the high oil price and continuing global economic growth. If global economic growth, especially in developed countries such as the EU, Japan and the United States and large developing countries such as China and India continues at the current pace, further price strengthening could be expected. It would, however, be limited in the long run by the good potential to increase supply by more intensive tapping and by increasing yield in the major producing countries. It was estimated that global consumption in 2004 would be slightly higher than that in 2005 largely due to higher economic growth rate in both developed and developing countries. However, the magnitude of the growth in rubber consumption depends considerably on the growth in China.

Coffee

4.73 The estimated production of 2005-06 is 6.4 million tonnes recording a decline of 9.9 per cent. This decline largely reflects Brazil's lower output from last season's production. India is the sixth largest producer of coffee in the world with a share of 4.1 per cent. The top producers being Brazil (35 per cent), Vietnam (11.9 per cent) and Columbia (9.7 per cent), during 2004-05. The share of Robusta production increased from 53.7 per cent in 1995-96 to 62.5 per cent in 2004-05 indicating a 3.7 per cent annual growth while Arabica production remained more or less static.

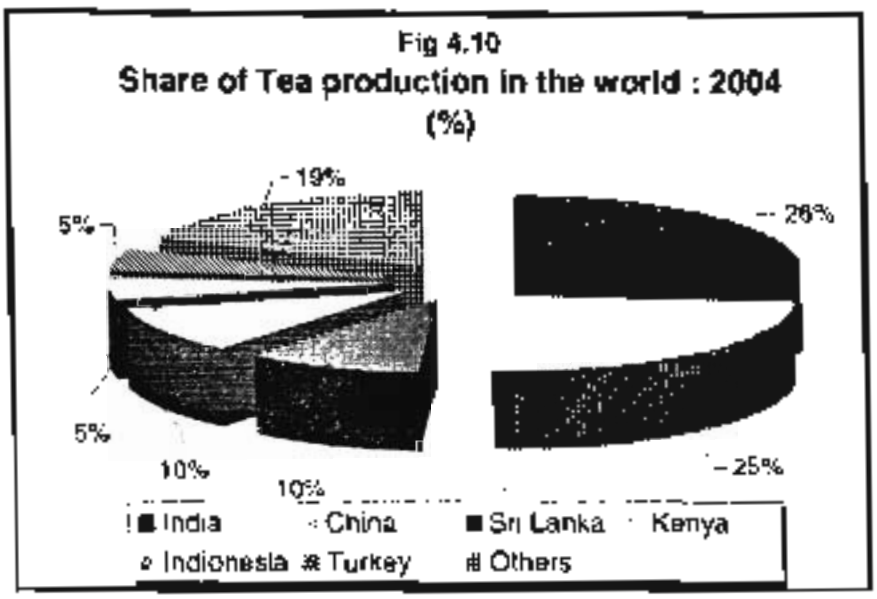
4.74 The area under coffee in Kerala was 0.846 lakh ha out of 3.28 lakh ha in the country during 2004-05, which works out to 26 per cent. The share of Kerala in production is 19.7 per cent during 2004-05. Major variety grown in Kerala is Robusta with a share of 95 per cent in planted area. Production of coffee during the year was only 0.54 lakh MT against 2.75 lakh MT for the country. Productivity of the crop in Kerala (642 kg/ha) is lower than the national level of 840 kg./ha. Area under coffee registered substantial increase during the last two decades with an annual growth rate of over 2 per cent. The increase in production recorded during the period was much higher and registered an annual average growth rate of nearly nine per cent. Coffee provides opportunities for livelihood to nearly one lakh families including agricultural labourers. In Kerala, coffee is also one of the small holder plantation crops with nearly 76,000 holdings coming under the category with an average size of 1.1 ha. Consumption of coffee has remained more or less static at around 55,000 tonnes for the past one and half decades till 1999 and then slightly improved to 70,000 tonnes in 2003.

4.75 Coffee is a highly export dependent crop and more than 80 per cent of domestic production is exported. The unit value realization has declined drastically from Rs. 95.37 per kg. in 1997-98 to Rs. 51.84 per kg. in 2003-04 which improved to Rs. 57.75 per kg in 2004-05. The quantity of coffee exported from India declined in 2004-05 to 2.12 lakh tonnes from 2.33lakh tonnes in 2003-04. Increasing stocks in consuming countries more than offset the contraction in stocks of producing countries in 2002. Coffee stocks declined in producing and consuming countries by 4 per cent in 2002 and already there is a decline of 24 per cent in stocks in producing countries during 2003-04.

4.76 International Coffee prices made a remarkable recovery during 2005 with Robusta prices averaged to $ 1.09/kg. up from $ 0.79/kg. in 2004.

Tea

4.77 World tea production increased at an annual growth rate of 2.8 per cent between 1970 and 2000 expanding from 1.27 million MT to 2.91 million MT. During the period 1997 to 2004, the annual growth rate of world production was 1.7 per cent while the world consumption was 1.31 per cent. The gap had increased from 5 million Kg. to 97 million Kgs. during the period resulting in price crisis. Most of the growth was due to the increase in productivity rather than expansion in area. Estimates indicate that world tea production in 2004 reached 3.15 million MT showing 0.2 per cent increase over the previous year. Black tea accounts for more than 70 per cent of world tea production and 22 per cent by green tea. India is the leading producer and accounts for 26 per cent of global production followed by China with 25 per cent production (Fig. 4.10). All the major producing countries realized increased output in 2004 except India, Indonesia, turkey, Japan, Bangladesh, Uganda and Zimbabwe. The output in India is estimated to have declined by 4.3 per cent in 2004 to 820M. kgs.



4.78 A declining trend in production in the State was observed for the last three years from 68.9 m. kgs. in 2000 to 49.7 m. kgs. in 2004. Against the total area of 5.11lakh ha under tea in the country Kerala accounts for only 0.37 lakh ha. In respect of production the share of Kerala declined slightly to six per cent in 2004 from seven per cent in the previous year. Tea plantations owned by big companies employ a labour force of over 84,000 in the organised sector. There is fluctuation in production and it ranged from 64.8 M. kgs. in 1995-96, reaching to 69.1 M.kgs. in 2000-01 which declined to 57.6 M kgs. in 2003-04.

4.79 After the removal of quantitative restrictions in April 2001, one of the major threats faced by the tea industry is the increased import of inferior quality teas into India particularly from Indonesia resulting in further depression in prices. Imports increased from 13.4 M. kg. in 2000 to 16.6 M. kg. in 2001 and further increased to 30.52 M kg. in 2004. However during 2003 the import declined substantially to 9.8 M. kgs. The maximum quantity of tea was imported from Vietnam (57 per cent), followed by Kenya (11 per cent) and Indonesia (9 per cent). The unit value of imported tea was the lowest from Vietnam (Rs.33/kg) while the average being Rs. 46/kg. However import from Vietnam has increased substantially in 2004 from 1107MT. to 17279MT. The disturbing fact is that most of the countries are exporting to India at low prices.

4.80 The average auction prices for 1999 at Kochi was Rs. 62 per kg. which declined to Rs. 52.14 per kg. in 2004. The price of tea in south India during January-July 2005 has slightly improved to Rs. 45.09 per kg from the Rs.43.75 during the corresponding period during 2004. The auction price of three centers (Colombo, Kolkata and Mombassa) averaged US$ 1.66 /kg. during 2005, which is slightly lower compared to 2004 level. The price fall is because of increase in supply as well as due to large carry over stocks. Prices of tea started declining from 1999.

4.81 Productivity of Tea in India is much lower than that in Vietnam. The organic tea production is a major shift in this sector. (eg. Darjeeling tea) In Kerala coverage under organic tea could be increased . Nelliyampathi (Palakkad dist) estates have already got Organic Certification.

4.82 On the types of tea imported by major countries the orthodox tea accounted for 51 per cent and CTC accounted for 39 per cent and the rest by green tea and others. The CTC market is shrinking. In South India orthodox tea production had declined from 94 per cent in 1961 to 25

per cent in 1991 and to 16 per cent in 2003. There is a need to correct this, especially in the context of the global demand for orthodox teas.

Cardamom

4.83 The total production from India and Guatemala was estimated at 22500 MT in 2002. The production in Guatemala improved by 14.4 per cent in 2002 over the previous year while it declined by 21 per cent in India and estimated at 9000 MT in 2002. On an average, Guatemala exported around 73 per cent of its production, where as India's share of export in total production is only 8 per cent.

4.84 Productivity which was more or less stagnant around 50 kg./ha. in the 1980s has improved to the level of around 203 kg. per ha by 2001 and improved to 217 kg/ha in 2004-05. Kerala was lagging hehind the national level till 1992-93 but has improved its position by raising its productivity to 217 kg. per ha over the last five years. Consequently, the share of Kerala in production at the All India level also increased from 28 per cent to 76 per cent in 2004-05. While area under cardamom in the country has declined from 0.96 lakh ha to 0.73 lakh ha. in the period. In Kerala it has come down from 65,000 ha to 41067 ha. On the export front cardamom has been facing competition from Guatemala although the quality of Guatemala cardamom is inferior. The country could tide over the challenge by expanding domestic market through market promotion. The average auction price during 2000-01 was Rs. 570 per kg. which improved to Rs. 622.96 in 2001-02 and declined to Rs. 561.13 in 2002-03 and further declined to Rs. 361.02 in 2004-05. The Indian export of cardamom has increased from early nineties and reached a peak level of 1545 MT in 2000-01 and then declined by more than 50 percent in 2004-05 to reach 650 MT. The unit price declined steadily to Rs. 366.31 per kg. in 2004-05 from Rs. 487.71 per kg. in 2003-04. It declined to Rs. 338.57 per kg. in April-May 2005-06. However the market for cardamom is largely domestic as could be seen from the declining share of exports and the share of exports is only 6 per cent of the production.

Price Stabilisation Fund (PSF) Scheme

4.85 Price Stabilisation Fund Scheme was launched by the Government of India in April 2003. The scheme is being operationalised through the Price Stabilisation Fund Trust, New Delhi. The Price Spectrum Band for the year 2003 has been finalized by the Trust. The scheme was launched by the Department of Commerce, GOI with a view to providing sustained long term support to the small growers of Tea, Coffee, Rubber and Tobacco. The scheme provides Rs. 1000/- as financial assistance to enrolled growers in the event of price decline below the Price Spectrum band. The Price Spectrum band is estimated on the basis of international price of each commodity. Except for international price for coffee, which is based on futures prices, international price for other commodities would be with reference to auction prices. Seven years moving average is calculated on the basis of international price of seven calendar years. The Price Spectrum band means plus or minus 20 per cent of seven years moving average of international price. If average domestic price is within the price spectrum band, the year would be categorized as normal year.

4.86 During 2003-04, Rs. 200.00 crores and during 2004-05 Rs. 232.88 crores have been made to the PSF Corpus fund by GOI and the entry fee deposit of members were Rs. 1.16 crores and Rs. 0.30 crores respectively. During 2005-06 entry fee deposit was Rs. 0.77 crores. At the end of March 2005, 2867 coffee growers, 12 tea growers and 16151 rubber growers were enrolled from Kerala against a total of 44784 numbers in the country. Of the total, 42 per cent is enrolled from Kerala.

4.87 At present growers upto 4 ha are eligible for support. However instead of fixing a fixed amount of Rs 1000, different slab system could be tried out. GOI have constituted a committee to review the scheme as it has not helped the vast majorities of cultivators. Major recommendations of the Committee are shown in Box. 4.6

BOX : 4.6

Major recommendations of the Interim report by Expert Committee on Price Stabilisation Fund Scheme

- Price Spectrum band should be based on the moving average of international prices for 7 years excluding the current year. In place of Upper price band of +20 per cent, +15 per cent may be adopted. In place of lower band of -20 per cent, -15 per cent may be taken
- During distress year 2, the PSF trust will contribute an amount upto Rs. 2000/- in the PSF savings bank accounts of the members.
- Price Spectrum band be computed and announced well in advance of the crop season. Classification of the year as boom, normal or distress year should be made as soon as 70 per cent of the estimated annual output is actually sold in the market, on the basis of price data for the previous 12 months.
- Payments to the members be made within 2 months of the announcement of the classification of the year
- During distress years, the members may be permitted to draw any amount out of the accumulated balance in their PSF.
- Group membership may also be permitted.
- Members contribution to the Corpus fund may not be required.

Source: Planning Commission, 2005

National Horticulture Mission (NHM)

4.88 Past interventions in horticulture have been in a schematic mode. In order to tap the potential in horticulture and double production, GOI has launched the National Horticulture Mission with effect from 2005-06 for holistic development of horticulture duly ensuring horizontal and vertical linkages with the active participation of all the stake holders. The thrust of the Mission will be on area based regionally differentiated cluster approach for development of horticulture crops having comparative advantage. A number of activities are proposed to be taken up for improving production and productivity besides ensuring proper post harvest management of produce. NHM will also involve the active participation of various agencies at the national level and those of the state Governments, Research institutions and organizations, farmer associations, SHGs, marketing boards etc.

4.89 Programmes for the development of coconut will be implemented by the Coconut Development Board, independent of the Mission. This is a 100 per cent Centrally Sponsored

Scheme during Tenth Plan and during XI Plan, GOI assistance will be 85per cent with 15 per cent contribution from the State Government.

4.90 At the national level there is a General Council chaired by Minister for Agriculture supported by an executive committee. At the State level also similar structure is included. At the district level district Mission committees are proposed. State will be required to prepare a State Horticulture Mission Document (SHMD) Projecting a Plan of action for the X Plan and XI Plan periods. The SHMD will form the basis for preparing Annual action plans. The Annual Action Plan will be area based on the basis of the existing potential for horticulture development.

4.91 Directorate of Cashew and Cocoa Development, Kochi will be responsible for coordinating and monitoring the activities relating to plantation crops excluding coconut and Arecanut. Directorate of Arecanut and spices Development, Calicut is responsible for coordinating and monitoring the activities on development of arecanut, spices and aromatic plants. National committee on Plasti culture Application in Horticulture will be responsible for coordinating and monitoring activities relating to precision farming and hi tech horticulture through the Precision Farming Development Centers. Coconut Development Board will implement the schemes on development of coconut apart from programmes involving coconut based farming systems. National Medicinal Plants Board will implement schemes relating to development of Medicinal Plants in coordination with the Mission.

4.92 A major project on replanting of senile and old plants could be undertaken with 50 per cent assistance under this Mission.

Lease land farming through Kudumbashree

4.93 'Harithashree', the lease land farming promoted by the State Poverty Eradication Mission, Kerala, through 'Kudumbasree', has helped women farmers to stay on in agriculture for their livelihood. The number of Grama Panchayats involved in the programme has increased to 895, with 183 more Grama Panchayats got involved, compared to the previous year. There are about 33519 NHGs and 327063 families presently involved in the 'Harithashree' programme covering an area of 21554 ha. The area under leased land farming increased from 17575 ha. during 2003-04. The details are given in Table - 4.11

4.94 Paddy, Tapioca, other tuber crops, vegetables etc. are the major crops cultivated under lease land farming. Certain innovative groups are experimenting fewer other crops such as water melon in Pathanamthitta district and Basmathi and scented rice in Wayanad district. Many Grama panchayats are also promoting organic farming through their women groups.

Consumption Expenditure of farmers

4.95 The national survey on consumption expenditure of farmers conducted by CSO has shown highest Monthly Per Capita Expenditure (MPCE) for the farmers of Kerala. The monthly expenditure was Rs, 901, while the national average was only Rs. 503.00 in 2003 The per capita monthly medical expenditure of the farmers was also the highest in Kerala. The major findings are shown in BOX : 4.7

Table - 4.11
District wise Details of Farming undertaken by Kudumbasree

Sl. No.	Name of District	No. of GPs	No. of NGHs	No. of Families	Area in ha
1	Thiruvananthapuram	68	1664	21704	742.62
2	Kollam	69	1839	9268	406.00
3	Pathanamthitta	50	1562	12435	1662.71
4	Alappuzha	68	5129	64886	2988.29
5	Kottayam	64	1206	12211	618.96
6	Idukki	48	6956	63388	3639.27
7	Ernakulam	80	3239	34029	2880.97
8	Thrissur	78	1024	15020	797.09
9	Palakkad	91	2415	19674	1698.38
10	Malappuram	66	1059	6872	2096.03
11	Kozhikode	69	1416	10061	675.09
12	Wayanad	26	1073	15662	1451.82
13	Kannur	79	3018	26189	1174.73
14	Kasaragod	39	1919	15664	721.58
	Total	**895**	**33519**	**327063**	**21553.54**

Source: Kudumbasreee

BOX : 4.7
Major findings of a Survey on Consumption Expenditure of Farmer households in India

- The average MPCE for farmer households at all India level during the year 2003 was Rs. 502.83 .
- About 36 per cent of farm households in Nagaland, 35 per cent in Kerala, 28 per cent in Punjab and 23 per cent in Haryana have MPCE more than Rs. 950
- Per capita monthly medical expenses was highest for the farmer households in Kerala (Rs. 97.98) followed by Punjab (Rs. 63.04), and Tamil Nadu (Rs 48.76)
- Per capita monthly expenditure on education was highest in Nagaland (Rs. 77.21) followed by Haryana (Rs. 48.01),)Punjab (Rs 42.87) and Kerala (Rs. 42.36)
- The average MPCE during 2003 was highest for the farmers in Kerala (Rs. 900.59) followed by Nagaland (Rs. 882.93) and Punjab (Rs. 828.01) and lowest for the farmers of Orissa (Rs. 341.75)

Source: CSO, 2005

Crop Husbandry

Crop Development Programme - Review of Annual Plan 2004-05

4.96 During the Annual plan 2004-05 an amount of Rs. 9996 lakhs was provided to crop husbandry which include Rs. 3669.00 lakhs for partially aided schemes and Rs. 1427.00 lakhs under 100 per cent Centrally sponsored including Macro management schemes. (Table 4-12). The State sector schemes incurred an expenditure of Rs. 4916.71 lakh (100.34 per cent).

Table- 4.12
Financial Performance of Crop Husbandry during 2004-05

(Rs. in Lakhs)

Sl. No.	Item	Outlay	Expenditure	per cent of Expdr. to outlay
1.	State Plan Schemes	4900.00	4916.71	100.34
2.	Partially Assisted Central schemes	3669.00	3242.76	88.38
3.	100 per cent Centrally Sponsored Schemes including MOU	1427.00	1406.66	98.57
	Total	**9996.00**	**9566.13**	**96.70**

4.97 A number of schemes were implemented for the development of agriculture during the year 2004-05. Major scheme wise expenditure is shown in Table 4.13. Major crop wise achievements made during the period is furnished below.

Table - 4.13
Major Scheme wise Expenditure during 2004-05

(Rs. in Lakhs)

Sl.No.	Schemes	Expenditure
1.	Rice development	1104.64
2.	Coconut development	1677.6
3.	Pepper development	943.00
4.	Cashew development	353.27
5.	Vegetable and Fruit Production Council	365.00
6.	Vegetable development	90.00
7.	Fruit development	182.75
8.	Women development	115.00
9.	AEZ	450.13

Rice

4.98 Rice development activities in the State were carried through State schemes and Centrally sponsored schemes. The ultimate objective of rice development programme during the Tenth Plan period is to sustain rice cultivation in 4 lakh ha and to augment the average productivity to more than 2.8 tonnes per ha. Revitalisation of group farming samithies in predominant rice growing areas like Palakkad, Thrissur, Ernakulam and Alappuzha, assistance to paddy development agencies and assistance to seed development agencies were continued under State plan for attaining the targeted level of rice production and productivity. During the year 2004-05, it was targeted to introduce revitalisation activities in 1.00 lakh ha and attained progress in 1.00 lakh ha

4.99 Major items implemented for rice development through Macro management schemes were seed production programme, cultivation of HYV, green manure seed, scented rice development etc. During the year seed production programme was implemented in 3318 ha. against the target of 3500 ha. distribution of HYV seed production achieved 1726 MT against

the target of 8000 MT and Green manure seed production achieved 100 MT against the target of 100 MT.

Coconut Development

4.100 During the year 1236 ha. under integrated nutrient management was implemented in 1236 ha and fertilizer was applied to 25 lakh palms. As part of the scheme, 2134 pump sets were distributed and 1115 wells were constructed for irrigating coconut palms during the year.

4.101 As per the Centrally sponsored scheme the Coconut Development Board provides assistance for production and distribution of quality hybrid coconut seedlings. During the year 0.66 lakh coconut hybrid seedlings were produced and distributed against the target of 0.75 lakh seedlings.

Pepper

4.102 Pepper development programme include production and distribution of pepper cuttings, area expansion, rehabilitation of old pepper gardens, promotion of organic pepper, integrated pest management for pepper and promotion of soil conservation measures. During the year 58.86 lakh pepper cuttings were produced and distributed, Pepper rehabilitation was introduced in 4440.9 ha. Promotion of organic pepper was introduced in 1500 ha and IPM demonstration was done in 340 ha. Along with pepper other spices such as ginger, turmeric, chillies and tree spices also received support during this period.

Cashew

4.103 In the case of cashew development, rehabilitation, plant protection and establishment of cashew nurseries were given importance during the Annual plan 2004-05. Through Centrally Sponsored programme an area of 1160 ha was brought under rehabilitation programme against the annual target of 1310 ha. Plant protection measures were implemented in 914.5 ha.

Vegetable development

4.104 Vegetable promotion programmes are implemented through State and Centrally sponsored schemes which include promotion of commercial cultivation, seed multiplication programme, providing irrigation facilities, promoting vegetable cultivation in educational and public institutions, infrastructure support for marketing etc.

4.105 During the year 2004-05, 1500 ha was brought under vegetable cultivation through 'Haritha Sanghom', 500 of vegetable gardens were established in educational institutions through State schemes. Financial assistance was given for promoting vegetable cultivation in 1500 ha. during 2004-05. Vegetable development programme received priority in local level planning of panchayats also.

Vegetable and Fruit Promotion Council's Programme

4.106 Vegetable and Fruit Production Council, Keralam, was also involved in the implementation of vegetable and Fruit Promotion Programme. The programme covers production, formation of SHGs, credit management and marketing.

4.107 During the year 18000 farmers were inducted and 1053 SHG's were formed. 27farmers markets were established. 20000 farmers were covered under the,'Karshaka Raksha' medical insurance scheme. Vegetable insurance scheme has been extended to all the districts. 150 tons of fruit and vegetables were exported to Gulf countries.

4.108 During the year Rs. 3922lakh was disbursed as crop loan. An area of 1210 ha was brought under vegetable cultivation.

Fruit development

4.109 The agro climatic endowments and topographical features of Kerala offers excellent prospects for fruit production. The total area under fruit crops in Kerala comes to 3.2 lakh ha.

4.110 Through Centrally Sponsored programme Banana cultivation was done in 1125 ha, pineapple and other fruits in 185 ha against 200 ha and mango and papaya in 50 ha. during the year 2004-05.

Supplies and Services

4.111 The State has a strong network for supplies and services. This include Krishi Bhavans in all the Grama panchayats for transfer of technology and organising agricultural services. Planting material delivery system has been developed which includes 33 state seed farms, 10 district farms, 10 special farms and 8 coconut nurseries. The paddy seed farms and the District Agricultural Farms are under the control of the District Panchayats for facilitating appropriate seed planning at the grass root level. Inspite of such elaborate progeny support, supply of quality seeds of paddy and other seasonal crops remain as a weak link in the production front.

4.112 During 2001-02, the consumption of fertilisers increased from 1.73 lakh tonnes from the previous year to 1.77 lakh tonnes and by 2002-03 increased to 2.05 lakh tonnes. The trend of fertilizer consumption shows fluctuations and it reached a peak level during 1997-98 and reached lowest level during 2000-01. The per hectare consumption during 2004-05 was 68.21 kg. (see Appendix 4.20). The State average is lower than the national average. The necessary steps are to be taken to reverse the situation so as to augment the productivity of major crops.

4.113 In plant protection, the strategy was one of need-based adoption of chemical control. The mite attack on coconut which emerged as a very serious threat for coconut warranted chemical intervention. With the active involvement of the local bodies, state government organised massive control programme for coconut mite and the menace could be contained to a great extent. However, a long term solution lies in evolving biological control measures.

Agricultural Insurance

4.114 A survey conducted by FAO in the early 1990s revealed that various types of crop insurance programmes are present in more than 140 countries. Low insurance penetration despite high premium subsidies, mostly captured by large farmers, poor financial performance with claims consisting exceeding to premiums, inappropriate pricing methodologies are few of the key endemic problems that plague national insurance programmes worldwide.

4.115 Two crop insurance schemes are currently in operation in the State, viz., The State Crop Insurance Scheme and The National Agricultural Insurance Scheme. The State Crop Insurance Scheme, being implemented since 1995. provides insurance cover to 24 major crops against crop

loss due to natural calamities like drought, storm, cyclone, flood, landslip, forest fire, sea erosion, earth quake and lightening. The National Agricultural Insurance Scheme (NAIS), was introduced from 1999-2000, replacing the Comprehensive Crop Insurance Scheme (CCIS) which was in operation since 1985. NAIS is implemented in the State through the GIC of India, and provides insurance cover to Paddy, Banana, Tapioca, Pineapple, Ginger and Turmeric against risks such as natural fire and lightening, storm, hailstorm, cyclone, typhoon, tempest, hurricane, tornado, flood, inundation and land slide, drought, dry spells, pests and diseases. Small and marginal farmers are eligible for 50 per cent subsidy on premium, which is equally shared by the State and Central Governments. The scheme is being implemented in 23 States and 2 Union Territories.

4.116 The State Crop Insurance Scheme, has so far enrolled 124263 farmers. It is also required to include more perennial crops like, Coconut, Rubber, Pepper etc. in the National Agricultural Insurance Scheme, and withdraw these crops from the State Insurance Scheme. An amount of Rs.75.00 lakhs, provided under the State budget has been credited to the Crop Insurance Fund during 2004-05.

4.117 At present State Insurance Scheme and NAIS are operation in the State. As on March 2005, 1,93,858 farmers were enrolled and an amount of Rs. 433.84 lakhs was collected as premium. An amount of Rs. 433.84 lakhs was disbursed as compensation for crop loss to 35361 farmers. The Agricultural Insurance Corporation has prepared a pilot scheme for the insurance of coconut in the state.

Weather based insurance

4.118 Recently Private insurers have executed Pilot projects to sell rainfall insurance to farmers as a substitute for or complement to Crop insurance provided by government. ICICI Lombard has designed rainfall insurance policies with suppost from the World Bank and IFC. The pilot project was carried out in Andhra Pradesh through a Local Area Bank. The pilot scheme was launched in June 2003 for the kharif season of 2003-04. The insurance policy makes payment if the cumulative rainfall during the season falls below the historical average. This is implemented through a rainfall index. The Agriculture Insurance Company of India is planning the introduction of Varsha Bhima as Pilot project in about 25 rainguage stations across four states.

4.119 The State has to generate reliable rainfall data from different locations within the districts to address variations in microclimates. Satellite based automatic weather stations could be established on a pilot basis in selected districts. Simultaneously meteorological studies also to be initiated to analyse the rainfall yield relationship in various crops.

BOX : 4.8
Weather based Insurance

Weather based index insurance is a relatively new insurance instrument whose payments are based on the occurrence of a weather event, rather than on actual crop losses. In the case of drought, insurance contracts would be written against severe rainfall shortfalls (Say 30 per cent or more below normal) measured at agreed regional weather station. The insurance would be sold in standard units and all buyers would pay the same premium and would receive the same indemnity payment per unit of insurance if the pre defined rain shortfall happens.

There are yet only few applications of weather based index insurance in the World. There is an insurance plan in Canada in the province of Ontario that uses rainfall indices and

another one in Alberta for maize that uses temperature - heat units. One insurance Company in Argentina is offering a rainfall insurance producing co-operative. There is strong positive correlation between rainfall and milk yields.

There are certain challenges in developing weather insurance, particularly in developing countries. First there is a need for reliable historic data that would allow accurate pricing of the insurance. Automated weather stations and increasingly remote sensing could reduce the risk of tampering with weather observations at local weather stations. Farmers may face basis risk. That is if rainfall at the weather station is not highly correlated with rainfall at the individual farms. This may be a problem in areas with diverse microclimates. World Bank is examining ways to facilitate the use of weather insurance markets by developing countries. The IFC of the World Bank Group is working toward developing weather indices in developing countries. Results from the World Bank Project study indicate that local rainfall observations and yields showed a correlation of around 60-90 per cent in parts of Mexico, Morocco and Tunisia.

World Bank, 2004

4.120 A recent survey of farmers in India by World Bank showed that producers regard weather and prices as their main concerns regardless of their farm size.

Agricultural Research and Education

4.121 The Kerala Agricultural University is the principal institution in the state providing human resources and technology required for the sustainable development of agriculture, encompassing all production activities based on land and water, including crop production, animal husbandry, forestry and fisheries. The University fulfils its obligations and commitments through a network of 36 big and small campuses spread through out the state consisting of ten colleges, six Regional Agricultural Research Stations, twenty six research stations, five Krishi Vigyan Kendras (KVK) and three centres of advanced studies. The Central Training Institute, the Centre of Excellence in Training for Plantation Crops and the Communication Centre support the training activities. The University has a strong technical manpower consisting of 1,000 academics and over 800 technical staff. The Statewise analysis of Public investment in agriculatural research and education are shown in Table-4.14

4.122 The rate of growth in real investment in agricultural research and education in the State is higher than the national average during 1970s and 1980s while considering the investment from State and Central institutions. The investment per hectare is also the highest in eighties in the State among the major States.

4.123 Research initiatives undertaken in the university are focussed on increasing the productivity of crops, livestock and fish currently raised in the state through manipulation of the genetic base improvements in the management practices; control and management of pests; diseases and parasites; increasing the efficiency of the bio-physical and human resources, and inputs used in production; the introduction of new crops, animals, and machines; evaluating and designing policies, programmers, institutions and infrastructure; and analysis and appraisal of the value systems and gender equation which are conducive or inhibitory to the adoption of technologies and innovations evolved through research. The research support for the sustainable development of the agriculture sector of the state is rendered in a partnership mode in close

association with the research institutions managed by ICAR, Commodity Boards and Departments of the State and Central Government. Over 700 research projects are currently in operation, under the different research faculties of the University.

Table – 4.14

State wise growth rate and intensity ratios of Government investment in Agricultural Research and education.

State	Growth rate (per cent) of real investment			Investment (Rs/ha)	
				1981-82 Prices	
	1960s	1970	1980	1980-82	1982-84
Andhra Pradesh	-0.09	12.18	7.48	5.40	12.90
Karnataka	-0.15	13.75	7.79	4.99	10.88
Kerala	2.06	21.12	7.42	18.10	47.94
Maharashtra	16.62	-0.01	5.65	9.27	16.16
Punjab	-0.01	4.70	7.16	10.62	20.57
Tamil Nadu	1.37	3.68	12.28	7.67	24.57
West Bengal	5.58	13.52	2.35	8.31	9.68
All India (Central & State)	6.52	9.51	6.29	10.65	20.65

Source: ICAR

4.124 The extension network, for the transfer of latest technological innovations of the University is operationalised through the Agricultural Technology Information Centre (ATIC), University Communication Centre, KAU Press, Central Training Institute and the Centre of Excellence for Training in Plantation Crops. Extension activities are also taken up through the 10 teaching institutions, 6 zonal research stations and 26 other research stations of the University. The ATIC envisages to provide a single window delivery system for products and technologies developed by the University, to strengthen farm advisory services, to provide a mechanism for feedback and to function as a repository of agricultural information. During the financial year 2003-04, the transactions through ATIC has exceeded one crore. The communication centre, apart from its farm advisory services and media publications, is instrumental in brining out the 2 research journals and publication of many books and periodicals. The KVKs located in the major-agro-ecological zones of the state cater to the specific technology and socio-economic requirements of the respective regions.

4.125 **A number of research stations were established under the KAU decades back and a restructuring of the stations with changes in mandate as well as incorporation of new courses in agricultural education are needed if they have to play any useful role in the changed and changing agricultural scenario.**

4.126 A number of research institutions funded both by Government of Kerala as well as Government of India are located in the state. The contributions made by these institutions over a period of time are substantial. However in the changing scenario of post WTO context and shrinking financial support to these institutions a consortium approach has to be adopted for the identification of research problems and recommendations especially in farming systems research. Institutional synergies in transfer of technologies also have to be implemented for realising the maximum benefits to the farmers. The newly launched World Bank aided National Agricultural Innovations Project (NAIP) could lead in this direction.

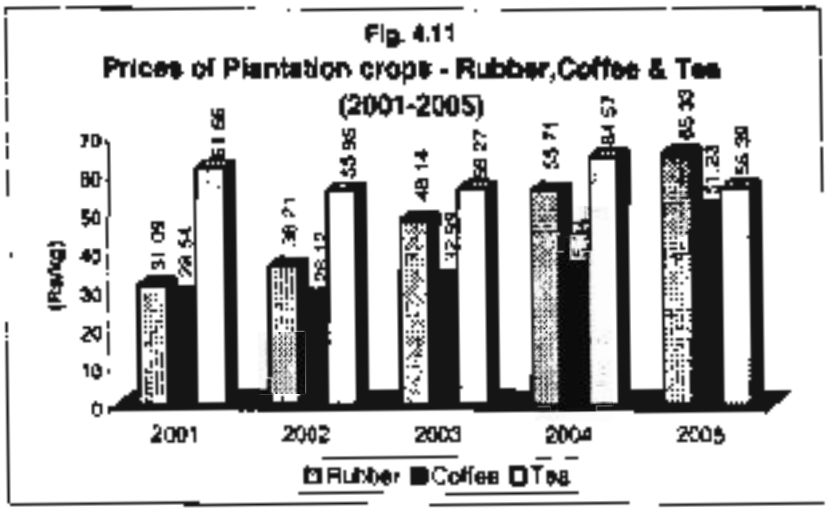
Farm Commodity Price

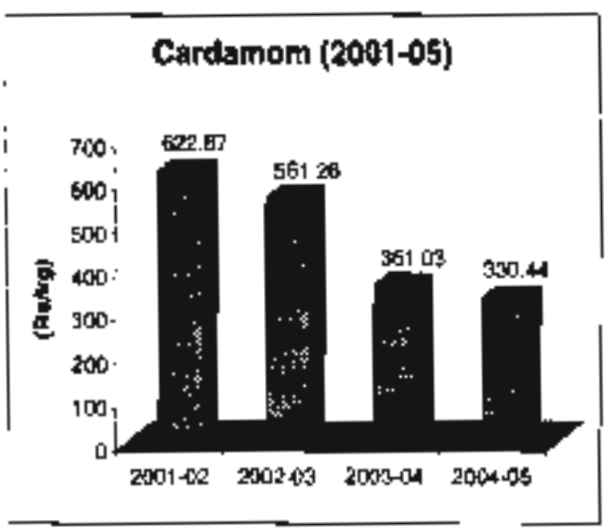
4.127 Data on average farm price of principal crops grown in Kerala are shown in Table 4.15 The table shows increase in 2004-05 compared to previous year in respect of most of the commodities, namely arecanut (15.54 per cent), coconut (8.96 per cent) ginger (27 per cent) cashewnut (24.76 per cent), and tapioca (3.8 per cent); Paddy (-6.3 per cent), tapioca (-1.18 per cent) and Pepper (-11.33 per cent). and banana (-4.7 per cent). Decline was reported to pepper. Global agricultural prices have also indicated a recovery path from the later half of 2002 onwards. Data on month-wise prices of the commodities during 2004-05are shown in Appendix 4.18. The prices of plantation crops for the last four years are shown in Fig. 4.11

Table – 4.15
Average Farm Price of Important Agricultural Commodities

Year	Paddy (qtl.)	Coconut with husk (in 00' nos.)	Arecanut (00' nos.)	Cashewnut (qtl.)	Banana (00' nos.)	Tapioca (qtl.)	Pepper (qtl.)	Rubber (qtl)
2000-01	646.36	281.43	41.88	2368 81	1042.51	397.24	12401 24	3036
2001-02	600.27	340.64	32.81	2569 33	949.51	321.01	6745.43	3228
2002-03	649.76	475 63	32.11	2730.30	971.34	394.01	7692.17	3919
2003-04	694.69	582.73	34.62	2831.75	1167.00	389.36	6802 46	5040
2004-05	651.00	635.00	40.00	3533.00	1112	404	6032	5224
Change in 2004-05 over 2003-04 (%)	-6.3	8.96	15.54	24.76	-4.7	3.8	-11.33	3.65

Source: Directorate of Economics and Statistics





4.128 The average farm prices of paddy, banana and pepper showed decline during 2004-05 compared to the previous year.

Futures Trading

4.129 An efficient agricultural marketing system is indispensable for the overall development of the economy. In the changing scenario, the nature of marketing support required for safeguarding the interest of the small and marginal farmers is different. In an increasingly globalised market arising out of trade liberalisation, *inter alia* through WTO Agreement, impact on Kerala agriculture needs to be analysed in the context of both exports from Kerala and imports into Kerala especially spices and plantation crops.

4.130 With the issue of notification dated 1.4.2003, Futures Trading is not prohibited in any commodity. Futures Trading can be conducted in any commodity subject to the approval and recognition of the Government of India.. 91 commodities are in the regulated list. Futures trading is taking place in 78 commodities through 25 exchanges/associations.

4.131 These exchanges have introduced various innovations which would increase efficiency of agricultural marketing in the country. The development of a system of Physical delivery of commodities backed by warehouse receipt system is expected to help eliminate rigidities inherent in the trading of physical goods by providing for a judicious mix of protection against both price and quality risks. The National Commodity and Derivative Exchange, Mumbai has launched Pilot Projects in the States of Gujarat, Madhya Pradesh and Andhra Pradesh to help farmers understand the concept and benefits of hedging the price risk on the trading Platform of the Exchange Prior to harvesting.

4.132 International futures market in pepper and castor oil were developed by upgrading the existing exchanges at Kochi and Mumbai. A multi commodity Nationwide exchange has also been started in Ahmedabad.

4.133 Indian Commodity futures markets are still at a nascent stage. They are dispersed and fragmented with small turnover and catering to separate trading commodities in different regions. Apart from physical infrastructural constraints such as limited online trading, online surveillance and monitoring, the non availability of a fool proof legal system of contracts relating to the warehouse receipt system is impeding the development of futures markets in India. Furthermore, the hawala markets, which have been operating since decades, trade 20-30 times the volume of official with low transaction costs and hence attract many speculators and small hedgers. Efforts are being made to bring informal forward trading into the ambit of the Forward Markets Commission to ensure their orderly integration with the formal marketing structure. Effective co-ordination and interface between the exchanges, banks and the warehousing agencies is crucial in evolving the necessary framework for a mature warehousing system based on legally enforceable contracts and supporting transferability and negotiability.

4.134 As proposed in the National Agricultural Policy, 2000, more agro commodities are being identified and added to the list of permitted commodities for futures trading. The overall level of trading in all exchanges is indeed marginal compared to the production levels and value added remains abysmally low. In order to succeed in futures market, quality certification and related procedures along with availability of quality warehouses, transparency and professionalism are essential. Professional methods have to be followed in predicting prices of futures for which marketing wing of department of Agriculture should be strengthened with specialists, to facilitate dissemination of information which may form as a base in price fixation. Conventional practices may lead to exploitation also.

4.135 Major users of the commodity futures continue to be traders in commodities, exporters and food processing units. Banks are not permitted to deal in commodities or commodity derivatives. Use of commodity futures by individual farmers is almost non-existent. Warehouse receipts are useful to the farmer in securing timely finance from banks at economical rates. Warehouse receipts can be used to lower access barriers. It would be linked to futures trade.

4.136 In order to exercise the role of banks in providing loans against warehouse receipts and evolve a framework for participation of banks in the commodity futures market, a Working Group on Warehouse Receipts and Commodity Futures was constituted by RBI.. The major recommendations of the Group are shown in the BOX: 4.9

BOX : 4.9

Major recommendations of the Working Group on Warehouse receipts and Commodity futures

- Banks may be permitted to deal in agricultural commodities including derivatives.
- Warehouse receipts should become freely transferable between holders to reduce transaction costs and increase usage.
- Creation of an umbrella structure which may act as a closed user Group for everyone engaged in the agricultural commodities business.
- Forward Markets Commission may evolve a suitable framework for option trading in India.
- Banks may offer non-standard contracts to farmers to suit their needs including commodity derivative based products.
- A limit may be placed on a bank's total exposure or gross options regardless of maturity, in all the commodities in relation to net loans and advances and/or capital or network of the bank.

Source: RBI, 2005

Outlook

Tea

4.137 Prices are expected to remain unchanged in 2006 as demand remain strong. However prices are vulnerable to decline if export supplies continue to increase and demand weakens in the Middle East and other Petroleum exporting countries. Emerging exporters like China and Vietnam could also expand production and exports and drive prices lower. Nominal prices are projected to remain largely unchanged from 2007 to 2010, while real prices are expected to decline about 7 per cent between 2005 and 2010. Higher output was reported in 2005 from India, Sri Lanka and Indonesia. In 2005-06, the auction average price is expected to rise to 166 cents which is slightly lower compared to 2004.

Coffee

4.138 Global coffee production for the season 2005-06 is expected to exceed 113 million, 60 kg. bags about 6.5 million bags lower than the 2004-05 crop. This decline largely reflects Brazil's lower output from last season's 42.4 million bags to 36.5 million bags this season. Coffee consumption is expected to increase by about 2 per cent during 2006 and 2007. Most of the increase is expected in the form of speciality and instant coffee. The scope for further increase in coffee prices for even sustaining the current price level is limited Although arabica prices have weakened recently, they are expected to average $ 1.24/kg. during 2006 but are expected to decline slightly in 2007 to $ 1.0/kg. during 2007. Robusta prices are expected to average $ 1.09 /kg. during 2006.

Rubber

4.139 Global natural rubber production reached a record high of 8.6 million tonnes in 2004. Global production of Synthetic rubber increased to 11.9 million tonnes in 2004 up from 11.5

million tonnes in 2003. International rubber prices averaged $ 1.50/kg. during 2004, but are expected to decline to $ 1.19/kg. during 2006 as the growth in demand for tyres is expected to soften, especially in China. A major uncertainty however is the price of crude oil. If current high oil prices persist, then the costs of production of synthetic rubber will increase and consumer may partially switch over to natural rubber.

Cocoa

4.140 Global output during the current year is expected to be slightly lower from last years production of 3.5 million tonnes. Cocoa prices are expected to average $ 1.55/kg during 2005 (final) , identical to their 2004 level, but 70 per cent higher than the record low of 2000. However, the annual averages mask considerable volatility that has been a characteristic of the cocoa market during the last few years alone, Primarily to the Civil conflict in Ivory Coast, the World's largest cocoa supplier. Cocoa prices are projected to average $ 1.62/kg during 2006 and may be little higher during 2007. However long term real prices are projected to decline slightly as supplier increase more rapidly than demand.

Palm Oil

4.141 After increasing more than 60 per cent from the low level in 2001 Palm oil prices retreated during 2005 and are expected to be averaged about $ 420/tonne. Production is expected to reach a record high of 34.9 million tonnes during 2005-06, more than 4 million tonnes from 2004-05. Palm oil prices are expected to remain at similar levels to 2005 for the next two years. Palm oil prices depend on the global outlook of other oils and oil seeds and trade policies of India and Pakistan.

LIVESTOCK DEVELOPMENT

Livestock sub sector is a part of a dynamic development process and has emerged as one of the key components of agricultural growth in developing countries in recent years. At World level consumption of livestock products is growing even faster than the increase in world population. Rising affluence, particularly in the developing countries where average real incomes have doubled since the early 1960's, means that more people can afford the high-value protein that livestock products offer. Over 80 per cent of the world's population growth occur in the cities of the developing countries, and urban population consumes more animal products than those based in rural areas.

4.143 An analysis of trend over the last two decades indicates that growth in poultry and milk production has far exceeded the growth in cereal production mainly due to rapid urbanisation, population growth, rise in levels of income and fall in prices of livestock products. At present livestock numbers world-wide are increasing. The cattle and sheep population in the developing countries grow slower than the human population in the same areas. The goat, pig and poultry population is increasing fast in developing areas, mainly in Asia, whereas these are slightly declining in the developed world. Remarkable is the fast increase of large sized industrial pig and poultry units in peri-urban areas of Asia.

4.144 Livestock production system of India have been mostly unorganised. As a result of gradual transition from subsistence to market system, the economic dimensions of livestock keeping have assumed increasing significance in house hold behavior. Over 70 per cent of the rural households in India depend on livestock farming for supplementary income. The sector is

highly gender sensitive and over 90 per cent of activities related to care and management of livestock are carried out by family's women folk.

4.145 In Kerala majority of livestock owning farmers are either small and marginal or even land less. In view of its suitability for combining with crop sub sector and sustainability as a household enterprise with the active involvement of women, it is emerging as a very popular supplementary avocation in the small farms.

4.146 The livestock sub sector which makes significant contribution to the State's economy is now facing serious constraints due to inadequate fodder base as a result of sharp and continuous decline in the area under livestock-supporting seasonal crops especially paddy and the limited scope for fodder cultivation in the State. The biggest challenge faced by the State in the livestock sector is the threat of foot and mouth disease because of large scale inflow of cattle from the adjoining states.

4.147 Also there has been poor credit flow into the sector with ground level credit in the AH Sector declining from Rs. 144 crore to Rs. 82 crore between 2000-01 and 2003-04. Of the sub sectors dairying has shown maximum decline with 55 per cent lower credit uptake.

4.148 Tenth Plan strategy of Kerala is framed in consonance with the national strategy with due adaptation to the Kerala context giving due importance for upgradation of standards of veterinary institutions and services, establishment of disease free zones, extending health cover and stock upgradation and increasing production through scientific and better management. Enhancing fodder availability, promotion of farming systems approach, development of micro enterprises for poverty reduction is also given importance.

4.149 Establishment of Disease Free Zone, Conservation and promotion of malabari goats, promotion of buffalo, popularisation of backyard poultry are some of the initiatives of the department of Animal Husbandry during the first three years of the plan period to increase the animal and poultry population and for realising the potential of the sub sector.

4.150 The major recommendations of the mid term appraisal of Tenth Five year plan by the Planning Commission are shown in BOX: 4.10

BOX : 4.10

Major recommendations of Mid term appraisal in Animal Husbandry and Dairy development

- Undertake policy changes in the area of management of common property resources in the villages for addressing the problem of the lack of green fodder. Greater thrust on revitalising milk co-operatives to solve the problem of marketing of dairy products.

- The National project on cattle and Buffalo Breeding phase I is implemented for genetic up gradation, as well as conservation of indigenous cattle and buffalo breeds. Conservation part has been neglected in implementation and an evaluation may be done before extending the Phase II of the project.

- The poultry production model of high input high output is becoming ineffective due to high feed cost, non-availability of credit at reasonable interest and lack of adequate marketing support. Demand management should be the main focus in the remaining

period of the plan. There is a need to restructure all the poultry schemes with the aim of creating the necessary infrastructure.

- Meat sector is neglected primarily due to lack of a policy on the utilization of surplus male animals. The issue of effective utilization of surplus and culled animal needs to be resolved.

- Evaluate the status of barren lands and evolve a work plan for convergence of all relevant schemes/programme implemented by the ministerial departments for cultivation of fodder crops. The department of DAHD is yet to finalise a new scheme on feed and fodder development in the Tenth plan.

- There is a lack of coordination between the animal disease diagnostic and forecasting system of ICAR and the policy unit of DAHD.

- The quality control mechanism of biological products like vaccines, diagnostics, embryo, semen etc is not adequate.

- The department should gradually withdrew from the areas like direct participation in the FMD control programme because states like Haryana and Kerala are doing reasonably well on their own in disease control. The scheme on ASCAD may be restructured.

Source: Planning Commission 2005

Trend in Livestock Population

4.151 As per the report of FAO, the World's livestock population in 2003 (Prov.) comprised of 1371 million cattle, 171 million buffaloes, 1024 million sheep, 768 million goats and 956 million pigs. During 2003 the poultry population was estimated at 16.6 million and duck population 1.1 million. An analysis of the figures from 1990 to 2003 reveals that over the period a continuous declining trend was noticed in sheep population alone. Over 2000, the worlds' cattle population increased by 1.6 per cent during 2003. During the same period buffalo population increased by 3.6 per cent, goat population by 6.7 per cent and pig by 5.3 per cent and sheep population declined by 3.2 per cent.

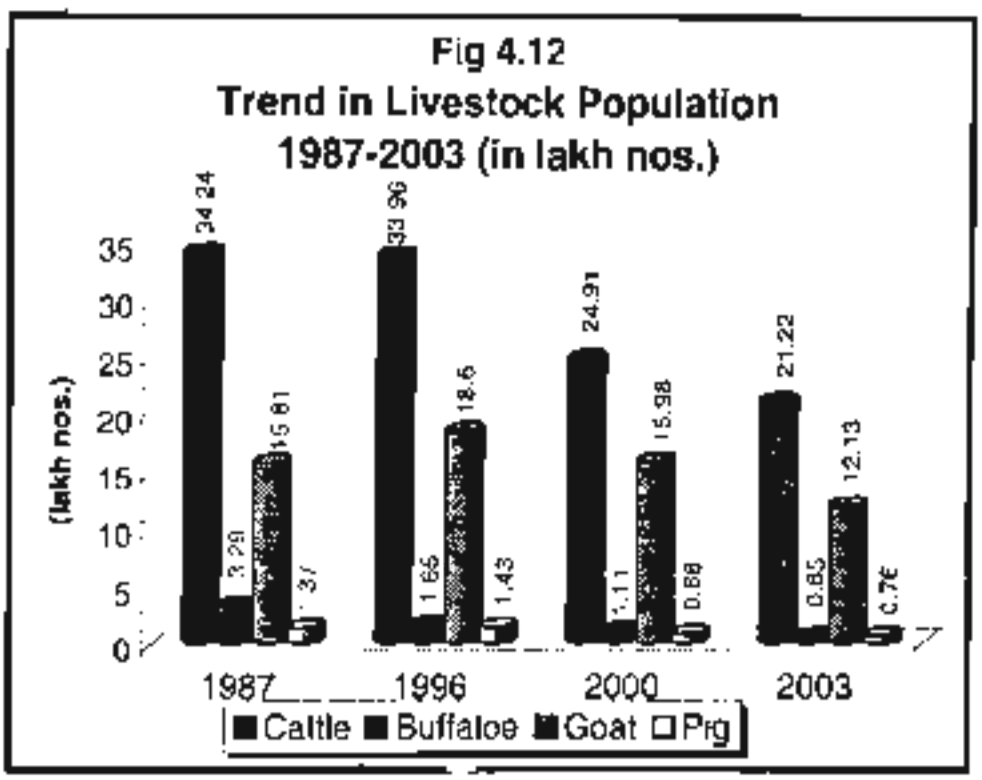
4.152 As per the provisional figures of 2003 livestock census, India has 187.38 million cattle, which are about 14 per cent of the world cattle population. Out of the 187.38 million cattle, 22.63 million were crossbred, which is 12.07 per cent of the total cattle population. Between 1997 and 2003, crossbred population increased by 12.6 per cent. The states of Tamilnadu, Maharashtra, Kerala, Uttar Pradesh, Karnataka and Punjab account for about 60 per cent of the crossbred cattle population. The country has 96.62 million buffalo population, which is about 56.5 per cent of the world buffalo population. Between 1997 and 2003, the buffalo population increased by 7.5 per cent. In spite of India's position as highest producer of milk, productivity per animal is very poor. It is only 987 Kgs/lactation as compared to the world average of 2038 Kgs/lactation This is mainly due to poor level of nutrition as well as low genetic potential for milk production and health care.

4.153 The trend in livestock population of India and Kerala has been examined on the basis of quinquennial livestock Census data. All types of livestock have been showing a declining trend in

Kerala after 1996, while in India (1992 on wards) cattle population alone is declining. This may be due to the preference of people for high yielding cross-bred varieties, India has the highest cattle and buffalo population in the world. There are 181.88 million small ruminants in the country in 2003 consisting of 61.78 million sheep and 120.10 million goat In terms of population India ranks second in world in goats and third in sheep. More than 70 per cent of them are reared by small/marginal farmers and land less labourers. Contribution of the sub sector to the economy is estimated at Rs.2400 crores per annum. The pig population increased from 13.29 million in 1997 to 14.14 million in 2002-03 with an annual growth rate of 1.25 per cent and during 1951 – 2003 period it increased from 4.40 million to14.14 million registering a growth of 219 per cent.

4.154 In Kerala, as per 2003 Census, nearly 94 per cent of the livestock population (32.83 Lakh) is concentrated in rural areas. 80 per cent of the livestock farmers are marginal farmers and agricultural labourers. Women constitute 60 per cent of the workforce in this sector Most of the cattle holdings are single cow farms. Nearly 65 per cent of the meat required is met from animals brought from neighbouring States

4.155 The last two Census periods witnessed a drastic decline in the livestock and poultry population n the State. Trend in livestock population during 1987-2003 is shown in Fig -4.12



4.156 It is assumed that the factors attributed to the decline are scarcity of cheap and quality fodder, rapid increase in the price of feed and feed ingredients, inflow of cheap and low quality livestock products from neighbouring states, indiscriminate slaughter of animals and threat from contagious diseases like FMD etc., contributing to this is the lower credit uptake of this sector which has impacted the replacement of declining stock impossible and rapid sale of dry cow is taking place.

4.157 As per 2003 figures, Kerala's share in all India cattle population is 1.13 per cent. Buffalo population accounts only for 0.07 per cent, goats 1.01 per cent and pigs 0.54 per cent.

The distribution trend of livestock and poultry during 1966 – 2003 is presented in the Appendix 4.25. Livestock and Poultry Population in Kerala during last three Census are given in Table 4.16

4.158 The composition of livestock population as per 2003 Census is as follows. Of the total, cattle constitutes 61 per cent, goat 35 per cent, buffalo 2 per cent and pig 2 per cent. Of the poultry population, 90 per cent are fowls, 5.4 per cent ducks and 4.6 per cent other birds. Of the fowl population ,70 per cent are desi fowls and 30 per cent are improved fowls .

4.159 Compared to 2000, 2003 livestock Census showed a decline of 18.92 per cent in total livestock. The bovine population declined by 15.95 per cent, of which cattle by 14.79 per cent and buffaloe by 42.03 per cent. The goat population declined by 24.09 per cent and pig population by 13.16 per cent. The Poultry population consisting mainly of fowl and duck declined by 18.09 per cent

Table- 4.16

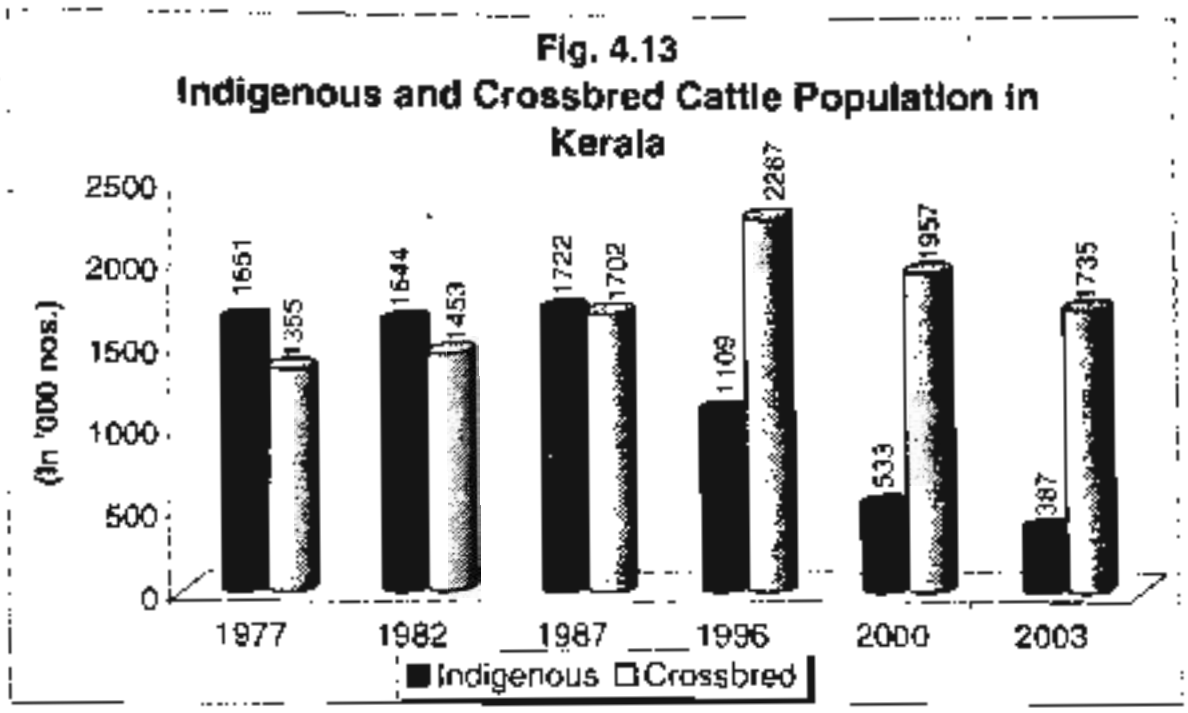
Livestock and Poultry Population in Kerala during last three Census periods

(Lakh Nos)

Species	1996	2000	2003
Cattle	33.96	24.91	21.22
Buffalo	3.29	1.10	0.65
Goat	18.61	15.98	12.13
Pig	1.43	0.88	0.76
Poultry	295.25	169.08	131.89
Duck	11.87	10.43	6.61

Source: Census Reports of AH Department

4.160 The cattle population in the State was 21.22 lakh of which 17.35 lakh were crossbred (i.e., 81.8 per cent of the total cattle population) (See Appendix 4.23). Trend in crossbred and indigenous cattle population is given in Fig. 4.13 .



4.161 Over the Census periods buffalo population is the most affected one. Concerted efforts are to be undertaken for implementing buffalo development programme. KLD Board has been producing frozen buffalo semen and the same is made available through AI units for artificial insemination. Goat population is also on the decline mainly due to indiscriminate slaughter, shrinking of grazing lands and urbanisation. A programme for the development of buffaloes has been initiated during 2005-06.

4.162 Of the total cattle population Palakkad district accounts for 12.4 per cent (highest) and Wayanad for 4.89 per cent (lowest). Higher number of buffaloes is concentrated in Malappuram (19%), goat in Thiruvananthapuram (12%) and pig in Idukki (30%). Regarding poultry Malappuram accounts for 13 per cent of fowls and Alappuzha for 38 per cent of ducks.

Trend in Production of Major Livestock Products

4.163 As per CSO estimates the value of output from livestock sector to Indian economy during 2001-02 at current price is about Rs.1495.8 billion which increased to Rs.1560.8 billion during 2002-03. The major contributor is the milk group and the per cent share increased from 67 per cent to 69 per cent during 2002-03, an increase of 4.35 per cent over the previous year. During 2001-02 the contribution to meat group was 17 per cent which declined to 16 per cent during 2002-03.

Table - 4.17
Value of Output from Livestock sector (All India)
(At current prices in Rs. Billion)

Item	1999-2000	2000-01	2001-02	%age share	2002-03	%age share
1 Milk Group	876.08	944.91	1000.19	67	1075.44	69
2 Meat Group	230.38	241.66	260.07	17	248.76	16
2.1 Meat	196.47	208.59	225.19	15	213.72	14
2.1.2 Mutton	78.29	67.84	73.92	5	73.1	5
2.1.4 Poultry Meat	81.85	105.18	117.11	8	106.27	7
3 Eggs	38.53	44.43	49.75	3	52.38	3
5 Dung	109.37	117.31	126.53	8	127.37	8
Total	**1299.52**	**1399.81**	**1495.8**	**100**	**1560.8**	**100**

Source: Central Statistical Organisation, GOI

4.164 As per a study conducted by NDDB, based on milk production in 1999 (All India), of the total milk produced 45 per cent is consumed as liquid milk followed by ghee (28 per cent) butter and Khoa (6 per cent), dahi (7 per cent) and milk powder (2.6 per cent). In general the monthly private consumption expenditure on milk and milk products is next to cereals and is rising steadily over years. Milk and milk products are both income and price elastic in India (more so in rural) and the demand elasticity estimates of the Indian dairy industry for milk and milk products combined are 1.65 in rural and 1.15 in urban India (Datta and Ganguly 2002). Expenditure elasticity of demand for milk and milk products for lower income class is considerably greater. Therefore rising income will maintain a robust demand growth in the dairy sector. Demand forecasts based on differential growth rates of GDP up to 2020 are given in Table 4.18.

Table 4-18
Demand forecasts for milk 2010-2020
(million tonnes)

GDP growth %	2010	2020
4	95.60	126
5	103.70	142.70
7	122.00	182.80

Source: NDDB

4.165 Trends in requirement and availability (based on domestic production) of major livestock products in Kerala are given in Table 4.19. A wide gap is existing between the requirement and production of animal products. A comprehensive strategy needs to be put in place to augment production of all major livestock products in the state with appropriate linkage with plans of the

local governments. Block level credit plans are also to be prepared realistically by incorporating these concerns since credit absorption potential is projected to be high in the animal husbandry sub sector.

Table - 4.19

Requirement and production of Livestock Products in Kerala

Sl. No.	Year	*Milk (Lakh MT)*		*Egg (Million Nos.)*		*Meat ('000 MT)*	
		Requirement	*Production*	*Requirement*	*production*	*Requirement*	*Production**
1	1991	21.24	17.85	3471	1710	208	120.65
2	2001	23.24	27.18	4230	2002	249	172.80
3	2002**	23.46	24.20	4301	1347	253	181.02
4	2003**	23.69	21.11	4395	1277	260	182.32
5	2004**	23.91	20.25	4519	1197	278	195.27

Source: Animal Husbandry Department

*including unauthorised sector ** Provisional based on projected population figures

4.166 The total milk production of the State is showing a declining trend from 2001-02 onwards, from 27.18 lakh tonnes to 20.25 lakh tonnes in 2004-05. Compared to previous year the decline is 4.07 per cent. At the same time at national level the milk production is continuously increasing. Kerala's contribution to national milk production which stagnated around 3.2 per cent during 1993-94 to 2001-02 declined to 2.2 per cent during 2004-05.

4.167 The gap between the production and requirement of egg is widening at an alarming rate. Meat production alone is increasing over the years to keep in pace with the demand.

4.168 The average annual growth rates of milk and egg production in Kerala and India for the period from 1950-51 to 2004-05 are given in Table -4.20

Table - 4.20

Average Annual Growth Rate of Milk and Egg Production

(Per cent)

Sl.No.	Year	Milk		Egg	
		Kerala	India	Kerala	India
1	1950-51 to 1960-61	2.50	1.64	NA	4.63
2	1960-61 to 1970-71	2.52	1.15	NA	7.91
3	1970-71 to 1980-81	12.52	4.51	NA	3.79
4	1980-81 to 1990-91	6.41	5.50	4.89	7.70
5	1990-91 to 2000-01	4.24	4.16	2.75	4.59
6	1996-97 to 2001-02	3.78	4.32	(-) 0.22	7.09
7	2001-02 to 2004-05	-9.34	2.54	-15.76	1.97

4.169 In spite of a shrinking fodder base, the dairy sector in Kerala could maintain a growth rate of 4.24 per cent in the 1990s, compared to India (4.16 per cent). But during the Ninth Plan

period (1997-02) it came down to 3.78 per cent while that of India increased to 4.32 per cent. Compared to 9th Plan period during 2001 –05 a negative growth rate is reflected in the milk production of Kerala (- 9.34%) and at India level the growth rate declined to 2.54 per cent.

4.170 The egg production of Kerala, which recorded a growth rate of 4.89 per cent during 1980 – 90 period continuously, declined subsequently and by 2001 –04 it reached a negative growth rate of 15.76 per cent

Dairy development

Dairy industry in India has made significant progress from 8th plan onwards. India is the largest producer of milk in the world. During 2004, world milk production was estimated at 612 million tonnes, nearly 0.5 per cent higher than the previous year and India contributed 15 per cent to this. The contribution of cow milk was 84 per cent and buffalo milk was 12.5 per cent. Government of India's efforts to increase the productivity of livestock resulted in significant increase in milk production to the level of 85.7 million tonnes at the end of 2001-02 (terminal year of 9th Plan) compared to 17 million tonnes in 1950.51. As per the estimates it reached 91million tonnes during 2004-05. Even though India is the largest milk producer in the world the per capita availability of milk is low at 231g/day at 2003-04 production and is below the world average of 285g/ day. It is because the production /animal in India is very low. It is only 987 kg/lactation compared to the worlds' average of 2038kg/lactation. This is mainly due to poor level of nutrition, health care as well as low genetic potential for milk production.

4.172 Though the per capita availability of milk is low compared to world average a substantial increase in this regard is attained over a period of ten years from 195gm/day to 231 gm/day. This increase together with attainment of near self sufficiency in milk and milk products has been achieved mainly on account of the tremendous amount of marketing support and technical inputs provided and the infrastructure developed in the country through the network cooperatives. More than 50 per cent of the milk in the country is produced by small and marginal farmers and landless labourers, producing about one to three litres of milk per day.

4.173 By the end of third phase of Operation Flood Programme about 72,700 dairy cooperative societies with 93 million farmer members were organised. In OF areas, the country has at present about 1 lakh organized primary village dairy cooperatives with an aggregate membership of 1.1 crore producers. These primaries are federated into 170 district cooperative milk unions and further to state cooperative dairy federations. And ensuring a remunerative price to the producers and a reasonable price for quality milk and milk products to the consumers. According to NDDB Annual report 2004-05, the co-operative milk procurement crossed 20 million kg per day for the first time, a 15 percent increase over 2003-04. At the same time the enhanced procurement was not matched by liquid milk marketing which rose by only about 5 per cent.

4.174 There are significant inter state differences in productivity of cows and buffaloes. The milk yields of indigenous cows were highest in Gujarat (7.5 kg. per day), followed by Punjab (7.4 kg. per day) and Maharashtra (6.6 kg. per day). the average yield of buffaloes was highest in Punjab (5.7 kg. per day). In general, the milk yields of both cows and buffaloes were lowest in Orissa. The year wise estimate of production is shown in Table 4.21. The season wise milk production is shown in Table 4.22. The maximum share in production in the state is during the rainy season.

Table - 4.21
Year-wise Estimate of Milk production

Sl.No.	Year	Milk Production (Lakh tonnes) India	% change over previous year	Kerala	% change over previous year	% contribution of Kerala
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	2000-01	806	2.9	26.05	3.2	3.2
2	2001-02	844	4.7	27.18	4.3	3.2
3	2002-03	867	2.7	24.20	-11.0	2.8
4	2003-04	881	1.6	21.11	-12.8	2.4
5	2004-05	910	3.3	20.25	- 4.1	2.2

Source. Economic Survey and Department of Animal Husbandry
Figures relating to India for 2003-04 is provisional and 2004-05 is (Anticipated)

Table 4.22
Season wise Estimated Production of Milk

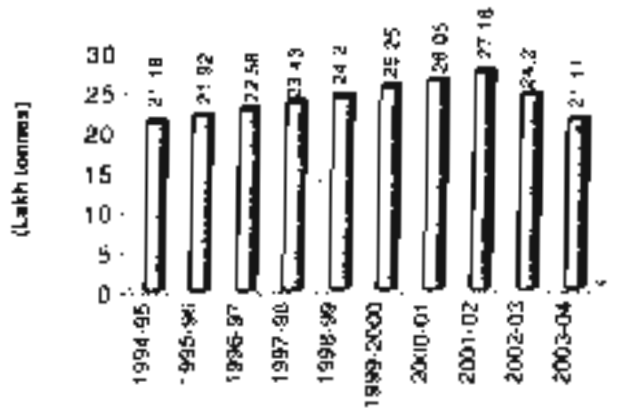
(Lakh MT)

Sl. No.	Year	Summer Quantity	% to total	Rainy Quantity	% to total	Winter Quantity	% to total	Total
1	2000-01	8.21	31.52	9.39	36.05	8.45	32.43	26.05
2	2001-02	8.43	31.02	9.74	35.84	9.01	33.14	27.18
3	2002-03	7.77	32.12	8.59	35.51	7.83	32.37	24.19
4	2003-04	6.88	32.59	7.46	35.34	6.77	32.07	21.11
5	2004-05	6.68	32.99	7.25	35.80	6.32	31.21	20.25

Source: Integrated Sample Survey

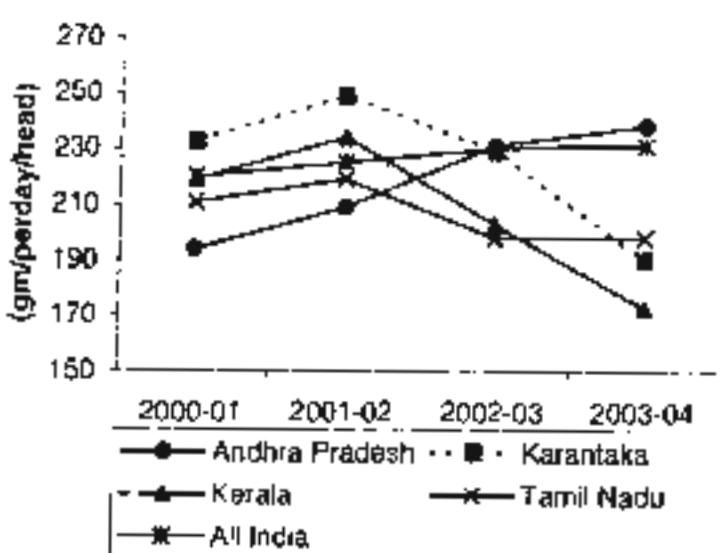
4.175 Trend in Year-wise milk production for the period from 1993-94 to 2004-05 is given in Fig 4.14

Fig 4.14
Milk Production of Kerala (1994-2004)



4.176 Regarding the per capita production of milk based on 2003-04 figures for the southern states viz., Andhra Pradesh, Karnataka, Tamil nadu and Kerala Andhra Pradesh ranks first with a per capita of 238g/day and Tamil Nadu ranks second with 193g/day. (Trend is shown in Fig.4.15) Kerala has the lowest figure of 173g/day (See Appendix-4.31) Among the major states at all India level Punjab ranks first with 898g/day and the lowest in the case of Orissa and Assam with 71g/day.

Fig. 4.15
Trend in Percapita Production of Milk in Four Southern States and All India



Dairy Development Plan for 2010

4.177 The National Dairy Development Board has drawn up a plan for dairy development up to 2010 for Cooperative Milk Unions, with the objective to raise milk procurement and increase cooperatives' share in marketing of milk and milk products. (Box - 4.11)

BOX: 4.11
Dairy Development Plan for 2010

This perspective launched in 2000-01, supports dairy co-operative milk procurement and liquid marketing in four thrust areas :

- Strengthening the dairy cooperative businesses by striving for better governance and sound management.
- Enhancing productivity
- Quality Assurance in Milk and Milk Products.
- Building a national information network

- Bt the end of 2004-05, NDDB had approved 88 perspective plans of milk unions and disbursed an aggregate amount of Rs.3920 million.
- NDDB supports milk union efforts to increase women's membership and enhance the women involvement in Dairy Co-operatives(EWIC) which include women education, formation of self help groups and exposure to dairy co-operative. The women in Governance at DCS increased to 1.98 Lakh by 2004 – 05 from 1.31 lakh during 2001-02
- Application of appropriate technologies is the key for improving productivity. NDDB assist the DCS with design and implementation of effective animal breeding, feeding, management and health care programmes. During 2004-05 the Department of AH, Dairying and Fisheries, GOI adopted NDDB's minimum standard protocol for semen stations. The standards have been in all semen stations of the country with NDDB providing the required technical support.
- To reduce economic loss from disease and to improve raw milk quality, NDDB assists the milk unions for implementing mastitis and brucellosis control programmes.
- Quality initiatives taken up in the cooperative dairy sector under the Perspective Plan,20 ℓ of NDDB include a massive awareness programme on Clean Milk production (CMP) covering one lakh village DCSs across the country
- The perspective for managing quality created greater awareness of the importance of village level raw milk chilling to ensure quality milk at the plant and for the consumer. This has resulted in increased demand for NDDB investment in bulk milk coolers. By the end of the year 2004-05 31991 villages were covered under clean milk production programme.
- More than, 44 dairy plants and 7 cattle feed plants have already obtained ISO/HACCP accreditation. NDDB has designed and developed user friendly kits for testing raw milk at the village level DCS, the reception dock of a dairy plant and also at the consumers' doorstep.
- NDDB continues its endeavor to provide real time information to dairy cooperatives by setting up information systems at various levels using modern technology. The scope of the data encompasses demography, agriculture and land use, livestock population, export and import of dairy commodities, milk production and productivity of animals.

- Information support system : Under information support system of EC programme, NDDB is establishing a network with the milk unions, federations and marketing dairies through implementation of Internet based Dairy Information System (IDIS). More than 75 per cent of the Unions are entering data regularly through IDIS

- During the year, to augment a dairy eco-operative information base, NDDB undertook studies in financing of livestock trading in milch animals and trends in milk production in selected states.

Source: NDDB

Better Management of Young Calves

4.178 Despite considerable increase in the proportion of high yielding crossbred cattle, average milk yield per animal per day remains low at 6 litres compared to its potential of 8-10 litres.. In order to increase productivity, management of calves is crucial. Bringing down the age at first calving and reduction in the inter calving period of cross-breds have been recognized as the most effective measures for augmenting milk production. With this objective, a calf rearing programme by subsidising cattle feed for rearing cattle up to 32 months along with health cover and insurance has been under implementation from Eighth Plan. With the adoption of this scheme in larger areas it is expected to increase productivity of cattle in the state. It has helped in reducing the age at maturity and inter calving period and improving milk production. During 2003-04, 23683 Calves (the highest achievement during 1998 -2005) and 2004-05 period 17941calves were enrolled under the programme. The enrollment during 2005-06 (as on December) was 11434 Nos. Details are furnished in Table 4.23

Table - 4.23
Year-wise Details of Calves Enrolled under Special Livestock Breeding Programme

Sl. No	Year	No. of calves enrolled
1	2001-02	4485
2	2002-03	6700
3	2003-04	23683
4	2004-05	17941
5	2005-06*	11434

*Source: Animal Husbandry Department * Till December 2005*

Milk Marketing

4.179 As per Report, the number of Dairy Co-operatives under organised sector in India is nearly 1.13 Lakh of which the southern area accounts for 0.26 Lakh (23 %).

4.180 In Kerala there are 3243 dairy co-operatives including 2341 Anand pattern societies functioning under KCMMF. The milk procurement of Dairy Co-operatives rose by 7 per cent, in Kerala The major recommendations of on account of increase in local sale by Primary dairy Co-operatives and their ability to make better payments to its members.

4.181 Besides the societies functioning under the Co-operative Sector, 4 Societies viz., Malanadu, Nirmalgram, PDDP, Perambra and PDDP, Kalady are working under Charitable Institutions.

4.182 MILMA represents more than seven lakh dairy farmers who have organised 2634 Anand Pattern Cooperative Societies (as on Aug 2004). It has helped in ensuring better returns to the dairy farmers. It also represents10 dairies handling 9.96 lakh litres of milk/day, 14 chilling plants, two cattle feed plants, a milk powder plant, an established training centre and 5000 distribution outlets Of the total Apcos registered, only 2375 are functional. The average milk procured per day by APCOs during the year was 8.16 lakh litres (an all time highest) against the previous year average of 7.33 lakh litres. The procurement /day/society is 344 litres. The performance of KCMMF is presented in Appendix 4.40.

4.183 In Kerala, where the production of milk is concentrated in the small farm sector and ultimate supply is dependent on seasonal factors, maintaining uninterrupted supply particularly during lean period is very difficult. The federation is thus forced to import milk from the neighbouring States. The periods August-September and January-May are considered to be lean periods when the internal supplies used to shrink. To bridge the supply demand gap and to cater the demand for making value added products they have to rely on outside States. Presently the milk was imported from AAVIN and KMF. The total import during 2004-05 was 625 lakh litres against 604 lakh litres during 2003-04. Season-wise milk production is given in Table 4.34. The procurement of milk by KCMMF stood at 2412 and 2121 and 2218 lakh litres respectively against the sale of 2479, 2650 and 2889 lakh litres during 2002, 2003 and 2004. During 2005, procurement and sale of milk by KCMMF stood at 1614 and 2185 lakh litres respectively as on Aug. 2004. Data on procurement and sale of milk by different dairies of KCMMF during 2001 to 2005 is presented in Appendix 4.41.

4.184 The veterinary services rendered by KCMMF are noteworthy. They have a well established Veterinary Wing at Thiruvanamthapuram and Ernakulam Regional Milk Unions. During 2005 (as on Aug 2004, services were provided through 13 regular and 39 emergency routes and 0.33 lakh animals were treated. KCMMF has sold 0.78 lakh MT of cattle feed during2005 (as on Aug) . It also produced 1821 MT of ghee and sold 1593 MT of ghee during the year. Year wise details for the period from 1997 to 2005 are furnished in Appendix 4.40.

4.185 Besides milk, a variety of milk products are manufactured by KCMMF. A comparison of sales by KCMMF from 2002-03 to 2004-05 is given in Appendix 4.45 Among the products, sale of milk, ghee ('milma ghee' and 'Samrudhi Ghee'), ice cream, curd and Milma Plus recorded a steady increase. The sale of Milma Plus in disposable glass bottles created good response and chocolate flavor was the most in demand and sale increased from 0 .23 lakh bottles in 2001-02 to 11.08 lakh bottles in 2002-03. Even though the sale showed a slight downward trend during 2003-04, it increased to 8.89 lakh bottles in 2004-05. At the same time the sale of sambharam which stood at 14.92 lakh litres in 2002-03 and increased to 72.99 lalk litres in 2003-04 recorded a steep decline to 13.50 lakh litres during 2004-05. No sale of Paneer and Yoghurt is recorded during the last 2 years. They had started production of a new product viz., Kassata during 2004-05.

4.186 During the first quarter of 2004-05 marketing was under the control of Milma Foods Ltd., from whom the Federation and Regional Milk Unions took over marketing. during the second quarter of onwards. During the period average sale of milk was the highest signifying double digit growth.

Weak Feed and Fodder Base

4.187 .Most of the reports regarding the availability of fodder in the country project an alarming gap between demand and supply. The future scenario of demand and supply position as shown in Tenth Plan Working Group Report of the Planning Commission on Animal Husbandry and dairying reveals a huge deficit in green fodder in the country. The available fodder can meet the demand of only 46.7 per cent of the total livestock .As per the report, the deficit in green and dry fodder in the country which was estimated at 61.96 per cent and 22.08 per cent respectively during 2005 will increase to 62.76 per cent and 23.46, per cent during 2010. The situation appears grim in case of green fodder.

4.188 Likely future scenario of demand and supply position in relation to forage in the country is given in Table-4.24

Table - 4.24
Supply and Demand of Green and Dry Fodder in India -Estimated –2025
(in million MT)

Sl.No.	Year	Supply		Demand		Deficit as % of Demand	
		Green	Dry	Green	Dry	Green	Dry
1	2005	389.9	443	1025	569	61.96	22.08
2	2010	395.2	451	1061	589	62.76	23.46
3	2015	400.6	466	1097	609	63.50	23.56
4	2020	405.9	473	1134	630	64.21	24.81
5	2025	411.3	488	1170	650	64.87	24.92

Source: Study Report of KLDB

4.189 In Kerala the situation is more worse. Fodder production efforts have not borne fruits to the extent of bridging the gap left by rapid decline in paddy cultivation. With the shift in cropping pattern of Kerala, the area under rice has come down by 50 per cent over the last two decades leading to drastic reduction in the availability of straw for feeding cattle. It is estimated that the state produces only 60 per cent of the roughage requirement for cattle in Kerala. One of the main constraints for increasing milk production is the shortage of quality fodder. To overcome this situation department is implementing fodder promotion programmes using root slips/stem cuttings of high yielding fodder varieties.

4.190 Focussed strategies and concerted efforts are the need of the hour to face this challenge. Popularisation of high yielding fodder varieties like *CO3* and large scale intercropping in coconut holdings are to be taken up with the support of local governments. Perennial fodder varieties like Hybrid Napier and Guinea, which is widely acceptable to farmers, and the department is supplying the planting material free of cost to the farmers.

4.191 Realising the importance of fodder development in optimising economic return from the dairy activity. the KLD Board and Dairy Development department have taken up fodder development as an important activity right from the beginning. The Board with the participation of farmers has taken up production of selected varieties of tropical grasses and legumes in a large scale. They produced 13.89 MT of fodder seeds during 2004-05 against 10.80 MT of seeds

during 2003-04. This includes Congo signal grass seeds (10.5 MT) and Guinea grass seeds (1MT). Besides they produced 24.6 lakh Nos of Grass slips. The quantity of seeds supplied by KLD Board during the period was only 10.88 MT against 15.65 MT during 2003-04. (See Table 4.25). The existing trend reflects the farmers' reluctance to use seeds for fodder cultivation.

Table – 4.25
Production and Sale of fodder seeds by KLD Board

Sl.No.	Year	Quantity of Seeds Produced (MT)	Quantity of Seeds Supplied* (MT)
1	2000-01	16.20	35.09
2	2001-02	15.98	20.68
3	2002-03	13.51	12.57
4	2003-04	10.80	15.65
5	2004-05	13.89	10.88

Source: KLD Board Annual Reports
* *Including sales to outside agencies and used for KLDB programme*

4.192 During 2004-05, under department programmes 375 lakh fodder slips/stem cuttings were supplied to cover an area of 1840 ha. The total are covered under fodder cultivation is 2230 ha. The area brought under fodder cultivation during April to October 2005 is approximately 1840 ha. The trend over the five year period shows a continuous decline in total area brought under fodder cultivation through department programmes (See Table 4.26)

Table 4.26
Procurement & Supply of Fodder seeds / Root Slips and Area Covered under Fodder Cultivation

Sl. No.	Year	Procurement of seeds (in MT)	Total quantity of seeds supplied to farmers (in MT)	Area covered (in Ha)	Fodder root slips/stem cuttings supplied (in lakh)	Area covered (in Ha)	Total area covered under fodder cultivation (in Ha)
1	2000-01	72.80	72.80	2820	400	2000	4820
2	2001-02	51.30	51.30	2315	400	2000	4315
3	2002-03	60.00	60.00	2000	160	800	2800
4	2003-04	4.80	4.48	1798	282.5	1412.5	3210.5
5	2004-05	Nil	Nil	Nil	375	1840	2230
6	2005-06	Nil	Nil	Nil	240	1200	1840

Source: Dairy Development Department
* as on October 2005

4.193 Regarding the cattle feed concentrate which will have to supplement the shortage in quality fodder production, State does not produce even half the requirement. Now KCMMF and Kerala Feeds Ltd. are taking conscious steps for facing this challenge.

4.194 Kerala farmers have adjusted to the situation by restricting the number of cattle and that too by preferring high yielding cross breds. This is evident from the steady increase in the proportion of crossbred animals, which Kerala could achieve during the last three decades. The

proportion of crossbred female cattle population, which stood at 50.5 per cent during 1977, increased to 82 per cent during 2003 (see Appendix 4.23). There is drastic reduction in other categories of livestock such as bullocks, indigenous female cattle, male calves etc. (Appendix 4.24 & 4.25). Due to the severe uneconomic situation of rearing dry cows distress sales for meat is common even with cross breeds.

Breeding Support

4.195 Regarding breeding infrastructure, India is the largest in the world with 64 frozen semen bull stations and more than 54000 AI Centres. AI conducted increased from 20 million in 1999-00 to 28 million Nos. in 2003-04. Due to poor quality semen produced by most of the semen stations in the country, the conception rate ranges from 20 per cent to 45 per cent only where as in the developed countries the rate is more than 50 per cent.

4.196 By the end of 2000 there were about 4.2 AI Centres/10000 breedable bovines in the country with Kerala appearing on the top of the list with 10.3 AI Centres and comparable figures of Gujarat and Rajasthan were 7.2 and 2.4 respectively.

4.197 Kerala Livestock Development Board (KLDB) is involved in the production and distribution of frozen semen and maintains three bull stations at Mattupetty, Dhoni and Kulathupuzha for the production of crossbred and purebred cattle and buffalo bulls. Compared to 2003-04, when semen production was 24.33 lakh doses, it declined by 16 per cent to 22.71 lakh doses during 2004-05. During the period while distribution of semen inside the State declined, distribution outside the State increased 3 fold. But compared to 2002-03 there is a decline of 35 per cent. Details are furnished in Appendix 4. 35.

4.198 The number of AI centres under Animal Husbandry Department declined from 2538 in 2003-04 to 2445 in 2004-05. Along with 520 centres operated by other agencies the total number of AI centres operational is 2965. (Appendix-4.36)

4.199 The number of inseminations done during 2004-05 was 11.76 lakh and calvings recorded was 3.57 lakh. This is against 3.53 lakh calvings recorded out of 12.31 lakh AI during 2002-03. Correspondingly the average number of insemination done by one centre declined from 485 in 2003-04 to 481 in 2004-05. The average number of inseminations needed for producing one calf is four which remained stagnant over the last seven years, is showing signs of improvement by declining to three (Table 4.27). This shows that the quality of AI is improving over the last 3 years.

Table – 4.27

Number of Artificial Inseminations Conducted and recorded Calving

Sl. No.	Year	No. of artificial Insemination Centres	No. of Artificial Inseminations done	No of AI Done Per centre	Recorded Calving	No of inseminations per calving
1	2	3	4	5	6	7
1	2000-01	2537	1371655	542	360645	4
2	2001-02	2505	1248996	499	332967	4
3	2002-03	2523	1369112	543	402173	3
4	2003-04	2538	1231407	485	353764	3
5	2004-05	2445	1176318	481	357718	3

Source: Animal Husbandry Department

4.200 Apart from the frozen semen technology, KLD Board is also engaged in research and development activities like progeny testing, embryo transfer, production of liquid nitrogen, fodder seed and training programmes. The Board has an embryo transfer centre at Mattupetty, a goat farm at Dhoni for production of frozen semen and kids, a pig breeding centre at Puthur etc. During the year, the Board has produced 184 Malabari kids, 11749 piglets, collected 94 embryos and trained 1079 personnel. Other activities of the Board are given in Appendix 4.37

4.201 Herd Book Scheme is operated complementary to the Progeny Testing Programme. This would help to assess the improvements happening in the field with respect to traits to support the field progeny testing programme. The scheme implemented by KLD Board under which the female progeny born to the test bulls are identified and recorded. They are followed up at half yearly intervals by way of girth measurements. So far against the target of 80000 animals, 106113 animals have been identified and registered under the programme. During 2004-05 against the target of registering 5000 calves, 3918 calves were registered under the programme. The Scheme covers a breedable population of about 60000 cross bred females spread around 83 AI Centres. Under the programme farmers are provided with deworming medicines and advice on scientific aspects of calf rearing.

4.202 Another notable achievement of KLD Board is the introduction of Boer goats which are considered far superior to any other goats for meat production, into the Kerala scene. The breed is known for rapid weight gain and heavy muscling and has high fertility. Boers typically give birth to twins. They have high disease resistance. Crosses of local goats with Boer goats have proved to be a suitable genotype for the goat production system and well adapted to all types of climate.

4.203 During 2004 KLD Board has launched a project for dissemination of Malabari Germ plasm aiming at genetic improvement of goat herd of the State. Specific objectives includes identification of superior bucks based on individual performance for growth and dams performance for milk yield and prolificacy , improving marketing outlets for superior bucks, upgradation of the non descript stock to Malabari etc.. During 2004-05, 2053 bucks are identified for selection and 180 does are selected for buck production.

Cattle Feed

4.204 As per available estimates the potential daily requirement for concentrated cattle feed in Kerala has been estimated at 5372 MT. At present the State has three cattle feed plants functioning at Pattanakkad (300 MT/day capacity) and Malampuzha (200MT /day capacity) and a custom packing arrangement at Erode are under KCMMF and Kerala Feeds Ltd. Kallettumkara (500 MT/day) operating under a separate management. The production of two Cattle Feed Units under KCMMF and Kerala Feeds Ltd. is insufficient to meet the internal demand.

4.205 Due to the heavy demand of the pellet feed from farmers a custom packing arrangement has been setup at Erode and about 1000 MT/Month of Cattle Feed is being catered from here. The project to augment the capacity of Malampuzha plant from 200 MT to 300 MT is in progress. Process upgradation, automation and modernisation projects of Pattanacaud Plant are in progress. During 2004-05, the two plants and custom packing operations under KCMMF produced and sold 1.11lakh MT of cattle feed. The major customer is APCOS and during 2004-05, sale to APCOS declined to 66 per cent from 73 per cent during 2003-04. The sale to government and Farms increased to 13 per cent from 9 per cent during the previous year. During the year the price of cattle feed is reduced by Rs.250/- per MT where as the milk price was increased by Rs.1/litre. The mineral supplement produced is marketed as feed supplement under the brand name "Milmamin".

4.206 The production of cattle feed by Kerala Feeds Ltd., increased from 1.16 lakh MT in 2003-04 to 1.26 lakh MT in 2004-05 showing a growth of 8.3 per cent and sales from 1.16 lakh MT to 1.25 lakh MT showing a growth of 8.1 per cent. The Company has a good marketing network which includes 400 dealers and 450 Co-operatives. KFL has also launched a mineral food supplement during March 2004 under the brand name "Keramin". By March 2005 the production reached 820.763 MT and sales 808.137 MT. The company has evolved a growth plan "Vision 2010" to enhance the production capacity to 1500 MT per day by 2010. The first phase to enhance the capacity to 650 TPD will be completed by March 2006

4.207 Production details of the above cattle feed plants are given in Table 4.28

Table 4.28
Production of Cattle Feed
(in lakh MT)

Factory	Production			
	2001-02	2002-03	2003-04	2004-05
Pattanacaud (KCMMF)				0.58
Malampuzha(KCMMF)	1.17	1.08	1.07	0.34
Erode CPA	-	-	-	0.18
Kerala Feeds Ltd.	0.82	1.06	1.16	1.26
Total	1.99	2.15	2.23	2.37

Egg and Meat

4.208 In a country like India where the average level of nutrition is very low chicken and eggs, which are not expensive, can contribute considerably towards improving die as a source of

animal protein. As per estimates available, the per capita availability of egg is very low at 41 eggs/year and poultry meat is 0.9 kg/year against the world average of 147 eggs and 11 kg poultry meat /year. Government of India has set a target for achieving production of over 52 billion eggs by 2011-12, at a growth rate of 4.3 per cent.

4.209 Poultry farming for egg production relying on purchased feed are uneconomic in Kerala. Poultry rearing on commercial lines is therefore largely confined to broiler production. The egg production which reached 2054 million in 1999-2000 is continuously showing declining trend and in 2004-05 it reached a lower level of 1197 million recording a drastic fall of 41.72per cent. The per capita availability of egg based on production during 2003-04 is 39/ year and during 2004-05 it further declined to 37/year The per capita consumption of egg during 2004-05 is 62/year. The gap is filled by importing eggs from neighbouring State. An alarming factor to be noted in this regard is that over the last two years the domestic production of egg is declining to a lower level than that of 1984 - 85. See Index of egg production based on 1984-85 is given in Appendix 4.33. The decline in poultry population was the major reason for the decline in production

4.210 Trend in Egg production during the period from 2000-01 to 2004-05 is given in Table 4.29 and Fig. 4.16

Fig 4.16
Egg production of Kerala (1994-2004)

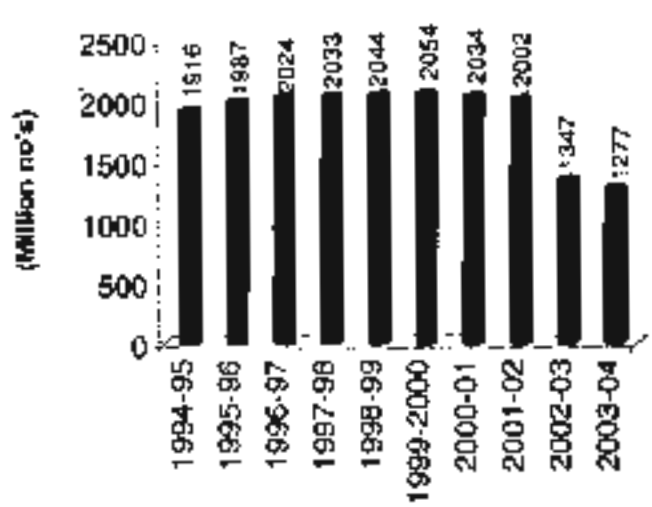


Table 4.29
Year-wise Estimate of Egg production

Sl.No.	Year	Egg Production (million numbers)				% contribution of Kerala
		India	% change over previous year	Kerala	% change over previous year	
(1)	(2)	(8)	(9)	(10)	(11)	(12)
1	2000-01	36633	20.31	2034	-0.97	5.6
2	2001-02	38729	5.72	2002	-1.57	5.2
3	2002-03	39823	2.82	1347	-32.7	3.4
4	2003-04	40403	1.46	1277	-5.20	3.2
5	2004-05	41066	1.64	1197	-6.26	2.9

Source: Economic Survey and Department of Animal Husbandry
Figures relating to India for 2003-04 are provisional and 2004-05 is anticipated

Back yard poultry

4.211 Backyard poultry system has good potential in the state. Around 8-10 lakh chicks are being introduced every year in the state. Apart from Animal Husbandry department and KSPDC a few NGOs and private farms are also involved. But the system is yet to develop to the required extent. The functioning of the department farms is to be strengthened to foster the backyard poultry system. On the contrary, in India as a whole it was transferred into a vibrant scientifically organised industry. A profile of Indian Poultry Sector is given in Box 4.12

BOX : 4.12
Indian Poultry Sector: A Profile

- The Indian poultry industry has evolved from a backyard activity to an organized scientific and vibrant industry. among the livestock products, the most notable growth has been recorded by eggs, the production of which has grown at 8.5 per cent per annum between 1980-81 and 1989-90. However, the growth rate declined to 4.3 per cent annum in the 1990s and further to 3.3 per cent between 2000-01 and 2003-04.

- The high growth rate in egg production in the last two decades was the result of investments by the private sector and its efforts in balancing the demand and supply in the market. Although India is the world's fourth largest egg producer (3.13 million tones), as of 2003, it is far behind the highest producer China (43.26 million tones) as well as the United States (8.47 million tones).

- Karnataka, Kerala, Tamil Nadu, Andhra Pradesh and the western region of Maharashta accounted for more than 62 per cent of total national egg production in 2003-04 and 60 per cent of total broiler production.

- The poultry sector includes both commercial as well as backyard operations. However, more than two-thirds of total egg production and almost the entire commercial broiler

production are from improved poultry birds in the organized sector.

- The Venkateshwara Hatcheries Group, the flag-bearer in this sector, has more than 80 per cent share in the layer day old chick market and more than 50 per cent of the broiler market and is the largest exporter of poultry products.

- The broiler sector is currently dominated by Venkateshwara Hatcheries, Sugunal Hatcheries, Arambagh Hatcheries and Pioneer Hatcheries, Broiler production has now stabilised to fulfill the entire demand of the country.

- Rural poultry continues to be a significant socio-economic activity primarily with BPL and tribal households. The backyard sector is dominated by Keggfarms, which is operating in West Bengal, Uttar Pradesh, Orissa, Bihar, Jharkhand, Chhattisgarh, Karnataka, Andhra Pradesh, Kerala and Uttaranchal. This farm and its agencies are presently distributing about 1.5 crore improved birds per year to the rural people.

Source: Planning Commission, 2005

4.212 The main breeds of backyard poultry supplied by Animal Husbandry Department Farms are Kalinga brown, Mumbai Desi, Rhode Island Red and CARI Nirbheek. During 2004-05 they produced 7.14 Lakh Nos of Chicks, 0.25 lakh Nos of ducklings and quails 0.20 lakh Nos. The birds distributed by the department are "low technology/low input" birds and they have a survival rate of above 90 per cent.

Poultry Rearing and Kerala State Poultry Development Corporation

4.213 Kerala State Poultry Development Corporation was established in 1989 to give special attention for the revival of poultry farming. The Corporation had built up a broiler breeding farm and hatchery at Kudappanakunnu in Thiruvananthapuram District with a total investment of Rs.5.95 crore. The Corporation has partially commissioned a project to rear 15,000 parent stock with a target of 25,000 and to hatch 28 lakh day-old chicks with a target of 58 lakh by utilising financial assistance from the State Government and commercial banks. Now the Corporation is producing and supplying 45000 day old chicks per week for distributing to the farmers

4.214 During 2004-05, under backyard poultry rearing scheme, KSPDC distributed about 5 lakh chicks to the farmers of the State.

II. Broiler Production

4.215 There is steady increase in the broiler production and demand for the chicken meat in the State. The total broiler chicken production in the state is around 36000-42000 MT/year. Nearly 10-15 Private hatcheries, working as satellite hatcheries also contribute to this local production of chicks and chicken meat. Approximately 40000-50000 direct employment is generated through broiler production.

4.216 Apart from this around 30000-40000 MT of chicken meat, which includes broilers, layer chicks, broiler and layer parent culls etc. is being imported from neighbouring state.

Poultry Feed

4.217 There is need of broiler feed to the extent of 2000-3000 MT per month which is being catered to by 6-7 private feed manufactures.

Meat production

4.218 India is endowed with more than 11 per cent of worlds' livestock population comprising a variety of meat animals such as buffaloes, goat, sheep, pigs, cattle and poultry. The per capita animal protein availability is about 10g against world average of 25g. The minimum requirement targeted is 20g per capita/day of animal protein of which 4g will come from meat. The estimated demand for meat would be 7.7 million tonnes against the present production of 5.7 million tonnes. Meat production in Kerala comprises of beef, mutton, pork and broiler chicken. Out of this, beef is almost entirely from the culled animals brought from the neighbouring states. The rearing of goat and pig is concentrated in selected pockets. As in the case of poultry, meat production under stall-fed condition in general is not economical in Kerala. However, there is scope for fostering this activity in selected areas largely by utilising the bio wastes available. The annual production of meat is shown in Table. 4.30

Table 4.30
Year-wise Estimate of Meat production

Kerala					
		Poultry Meat		Meat other than Poultry Meat	
Sl. No.	Year	Production (tonnes)	%age increase over previous year	Production (tonnes) @@	%age increase over previous year
(1)	(2)	(3)		(4)	(5)
1	2000-01	41515	25.03	122808	0.77
2	2001-02	47693	14.88	125100	1.87
3	2002-03	52611	10.31	125130	0.02
4	2003-04 @	45226	-14.04	142992	14.27
5	2004-05 @	37610	-16.84	162567	13.69

Source: Economic Survey and Department of Animal Husbandry
@ Considering spent chicken production as 15 per cent of Broiler production
@@ including unauthorised sector

4.219 Details of meat production in the unauthorised sector are not available. It is estimated that about 2/3rd of the meat production in the State is from unauthorised sector. Total Quantity of meat and poultry meat produced during the period 2001-02 to 2004-05 are furnished in Table 4.30.

4.220 In Kerala beef is the cheapest meat costing only 50 per cent of the prices elsewhere. This is because of the migration of large number of cattle and buffalo from the neighbouring states for slaughter. As per the study by the Swiss Agency for Development and Co-operation (1998) the number of animals migrating to Kerala is of the order of 11 lakh per annum.

4.221 There are 774 authorised slaughter houses in the State as on March 04. Category wise number of animals slaughtered and quantity of meat produced during 2001-02 to 2004-05 are given in Table 4.31

Table 4.31
Meat Production under Authorised Sector in Kerala

Sl. No	Category	Period	Numbers (000' Nos)	Qty. of meat produced (MT)
1	Cattle	2001-02	483.29	24278
		2002-03	524.25	25897
		2003-04	598.30	29864
		2004-05	627.57	33181
2	Buffalo	2001-02	180.30	10394
		2002-03	151.53	8637
		2003-04	162.99	8620
		2004-05	182.12	9846
3	Goat	2001-02	553.56	5202
		2002-03	665.74	6276
		2003-04	748.92	6696
		2004-05	684.72	6677
4	Pig	2001-02	40.70	1830
		2002-03	44.50	1994
		2003-04	53.14	2484
		2004-05	95.81	4485
	Total(1-4)	**2001-02**	**1257.85**	**41710**
		2002-03	**1386.02**	**42804**
		2003-04	**1563.35**	**47664**
		2004-05	**1590.22**	**54189**
5	a)Spent Chicken	2001-02	18525.00	17228
		2002-03	15064.50	13859
	b)Broiler Chicken	2001-02	23841.70	30465
		2002-03	26176.90	38752
	Chicken-Total *	**2001-02**	**42366.70**	**47693**
		2002-03	**41241.40**	**52611**
		2003-04	**28091.00**	**39327**
		2004-05	**27253.00**	**32704**

Source: Integrated Sample Survey for Estimation of Production of Milk, Meat & Egg
** data for spent chicken was not collected*

4.222 Compared to previous year's meat production (excluding chicken) under authorised sector, compared to previous year, share of beef decreased from 63 per cent to 61per cent, buffaloe meat remained constant at 18 per cent, mutton to 12 per cent from 14 per cent , and pork increased from 5 per cent to 6 per cent. In quantity terms the production of all types of meat is showing and upward turn except mutton and total meat production increased by 14 per cent.

4.223 The production of poultry meat including broilers is on the increase till 2002-03. It reached 52611 MT in 2002-03 and for the last two years the production is declining. As per sample survey, the poultry meat production during 2004-05 is 32704 MT. Data of spent chicken meat was not collected since 2003-04 and if this is also taken into consideration (nearly 15 per cent), the decline in poultry meat production compared to previous year is 17 per cent. The outbreak of

bird flu in other countries also had an adverse impact on the consumption of poultry meat and thereby affecting production. Percapita availability of meat during 2004-05 is 16.22 g/day

Meat Products of India Ltd.

4.224 Meat Products of India Ltd. Koothattukulam was registered in 1973 under Indian Companies Act (1956) with the objective of establishing an export oriented buffalo meat processing unit with an authorised capital of Rs.300.00 lakh and paid up capital Rs.180.00 lakh. Its' installed capacity is 300 MT/annum. At present the Company is producing meat products derived from pork, cattle, buffalo, poultry, rabbit, quail etc. and produces feed for the poultry and pig farms of AH dept. Recently, the Company developed a pet food, 'Meat Ind's Dog Chow'. During 2003-04, the Company procured 212 MT of live pork worth Rs.63.39 lakh and 89 MT of broiler birds worth Rs.27.00 Lakh from farmers at remunerative prices and sold 316 MT of meat products and 1700 piglets. It also produced 1435 MT and sold 1153 MT of livestock feed:

Import and export of Milk and Milk products

4.225 The Export of Milk Products Rules (Quality control, Inspection and Monitoring) 2000 sets out the requirements related to quality of milk products destined for export and mechanisms to ensure pre shipment inspection as well as approval of establishment for export. Quality requirements include animal health at farm level and hygiene requirements at farm, collection centre, processing establishments, storage and transportation.

4.226 GOI have amended the Livestock Importation Act, 1898 under which import of all livestock products are allowed against Sanitary Import Permits(SIP) which are issued after conducting risk analysis with regard to the disease status of the exporting country in accordance to the International Scientific Principles and Guidelines of OIE.

4.227 Number of SIPs issued are 218 during 2001, 1002 in 2002, 1514 in 2003 and 327 in 2004 (up to March).

4.228 During 2002-03 India exported livestock, poultry and related products worth Rs.4226 crores of which leather sector contributed Rs.2470 crores. (58 per cent). It is estimated that sheep and goat meat export is registering a growth of 5 per cent. These formed 4.9 per cent in quantity terms and 9.7 per cent in value terms of total meat exports.

4.229 Global prices of dairy products have been rising throughout 2004-05. As a result, India's exports of dairy products during 2004-05 increased from the previous year and were worth about Rs.3520 million. The value of milk product imports was close to Rs.514 million

4.230 During 2004-05 it was estimated that 39.02 lakh eggs, 68.95 MT of meat and 3896 Kg., of butter and 1200 kg ghee were exported from Kerala against 25.80 lakh eggs, 41.886 MT of meat and 2006 kg butter during 2003-04. Compared to 2002-03 the export of egg and meat increased by more than 100 per cent and butter by 84 per cent. During 2004-05 kerala imported 861 million eggs from outside States.

4.231 With the establishment of the WTO, the global trade in the food sector is increasingly being governed by quality and safety aspects. There is a likelihood that countries may impose standards and regulations not only for protection of consumers but also as non-tariff trade barriers. Under the SPS Agreement, developed countries are imposing stringent standards.

4.232 It is essential to strengthen the animal health and product certification laboratories in the state not only to provide certification but also to ensure quality of raw materials across the value chains.

Animal Health Care

Indian Scenario

4.233 With the introduction of extensive cross breeding programmes and improvement of quality of cross bred cattle, the susceptibility of these to various diseases including exotic diseases has increased. In order to reduce morbidity and mortality, efforts are being made by the State/UT Governments to provide better health care. For it, a network of 8720 polyclinics/hospitals and 17820 dispensaries and 25433 veterinary aid centres (including stockmen centres/mobile dispensaries), supported by about 250 disease diagnostic laboratories are functioning in the country. These institutions employ some 36000 professional staff and over 70000 para veterinarians. For the production of vaccines, there are 26 veterinary vaccine production units. The primary emphasis is on clinical services and as a result, endemic diseases such as Foot and Mouth Diseases (FMD) are still prevalent in India.

4.234 The efforts of States/UTs for preventing/controlling of various animal diseases are being supplemented by way of providing central assistance during the Tenth Five Year Plan through the following components of the scheme on "Livestock Health and Disease Control":

(i) Assistance to States for Control of Animal diseases (ASCAD)
(ii) National Project on Rinderpest Eradication (NPRE) and
(iii) Foot and Mouth Disease Control Programme (FMD-CP)

Kerala

4.235 At the end of Ninth Plan period all but 23 village panchayats in the State had a veterinary institution (hospital/dispensary). There is a strong network for veterinary health care now in the State comprising 200 Veterinary hospitals, 938 veterinary dispensaries and 14 District Veterinary Centres and other related health care institutions.

4..236 The state is implementing a programme for Foot and Mouth disease control with the assistance of Government of India. Also Brucellosis has now emerged as a new threat to the livestock wealth of the State. Helminthiasis control also needs attention. Worms and other internal parasites cause considerable economic loss to the farmers. Data regarding outbreaks, attacks and deaths of major contagious diseases of animals in Kerala for the period from 1996 to 2004 are given in Appendix. 4.46.

4.237 Even though vaccinations were carried out, frequent outbreaks were reported which lead to production loss to farmers. During 2002, 2003 and 2004 frequent F&M disease outbreaks are reported. Among the 3 years severe situation prevailed during 2003 and during the period 2383 outbreaks, 19207 attack and 1302 deaths were reported (Appendix 4.46). The most affected districts are Kannur., Alappuzha and Ernakulam.

4.238 A project for the creation of disease free zone with assistance from NDDB, FMD CP with 100 per cent Central assistance and ASCAD has been already started implementing in the State and now the diseases are under control The State has already eradicated the dreadful

disease of Rinderpest and no outbreak is reported after 1994. The reports of major diseases like Anthrax, Black Quarter and Hemorrhagic Septicemia are also very rare.

BOX: 4.13

Safety measures of avian influenza in the wake of outbreak of the disease in January 2004.

- All the State governments have been alerted to be vigilant about the outbreak of the disease, if any.
- Import of poultry and poultry products has been banned completely from the infected countries.
- Border check posts with neighbouring countries have been set up
- Customs authorities have been requested not to clear any baggage of livestock/livestock products without getting it cleared by quarantine office.
- Guidelines are issued to the States for further guidance to the poultry farmers.
- Continued vigilance is being exercised in all States by taking help of the State Animal Husbandry Department who have set up check posts/ quarantine stations at the borders, especially with Pakistan, Nepal, Myanmar and Bangladesh.
- The restriction in import of live birds and their products continues at present as bird flue is circulating in many countries.
- The samples from the suspected flocks from different parts of the country during the outbreak of the disease in 2004 were collected and sent to High security Animal Disease Laboratory (HSADL), Bhopal for testing to rule out the possibility of the disease in the country. All samples were tested negative.

Source: Government of India

Production of Vaccine in Veterinary Biological Institute, Palode

4.239 The Veterinary Biologicals, Palode is the sole agency engaged in the production and distribution of animal vaccine in the State. The production details of vaccines manufactured here are shown in Table 4. 32

4.240 Apart from the production of vaccines, the institute is engaged in the manufacture of diagnostic reagents and other animal health products.

4.241 Compared to previous year poultry vaccine production during 2004-05 decreased by 25 per cent to 134.54 lakh doses and livestock vaccine by 38 per cent to 3.29 lakh doses Number of vaccinations done during the year was 75.76 lakh for livestock and 44.63 lakh doses for poultry respectively. Compared to previous years vaccination to cattle increased by 72 per cent and vaccination to poultry decreased by 2 per cent. Details are given in Appendix 4.34

Table 4.32
Production of Vaccine by Veterinary Biological Institute (2001-02 to 2005-06)

(lakh doses)

Sl. No.	Name of Vaccine	2001-02	2002-03	2003-04	2004-05	2005-06*
1	RDVK	26.65	54.45	120.06	104.02	135.39
2	RDVF	12.87	17.61	31.16	19.86	1.48
3	FPV	3.12	0.45	0.20	8.17	0
4	DPV	11.46	10.64	28.25	2.48	19.40
5	HS Oil adjuvant	0.13	0.41	1.14	1.47	0.37
6	HS Broth	0.73	0.67	2.67	1.03	0.15
7	BQ	0.59	0.67	1.39	0.32	0.64
8	Anthrax	0.84	0.28	0.14	0.48	0.14
9	FMD Vaccine**	8.30	12.15	NA	NA	NA

*Source: Animal Husbandry Department *,till December 2005*
***Supply from Other Sources*

Prices

4.242 Average price of important inputs and products of livestock sector for the last seven years is presented in Appendix 4.38. Compared to 2003-04 there was an increase in the price of major livestock products during 2004-05. The highest increase is in the case of mutton (8.5%) and desi chicken (13.5%). During the year, price of fowl-white egg increased by 6.2 per cent, brown egg by 8 per cent and duck egg by 5 per cent. On the input side, compared to the previous year the price of grass recorded an increase of 17.5 per cent. groundnut cake 6.4 per cent and straw 7.6 per cent. The price of gingely oil cake declined by 7.6 per cent and coconut cake by 6.4 per cent

Annual Plan 2004 -05 : A Review

4.243 The total outlay approved for the livestock sub sector under Annual Plan (2004-05) was Rs.43 crore This included Rs.41 crore for Animal Husbandry and Rs.2 crore for Dairy Development (Table – 4.33 & 4.34). Against this actual expenditure in AH sub sector amounts to Rs.30.62 crores (74 69 %) and Dairy Development sub sector amounts to Rs.1.39 crores (69.43 %) totaling to 74.44 per cent expenditure in Livestock sub sector. The shortfall was mainly due to less expenditure incurred on Veterinary Services (only 38%). During the year, an amount of Rs. 450 lakh was also utilised against an outlay of Rs.204 lakh as central share of Centrally Sponsored Schemes in the Sub Sector . Also substantial outlays have been earmarked by the local governments for livestock development.

Table-4.33
Financial Performance of Livestock sub Sector during Annual Plan 2004-05
(Rs. in lakh)

Sl. No	Sub Sector	Approved Outlay	Expenditure	Expenditure as % to total outlay
1	Animal Husbandry			
	State Sector	4100.00	3062.00	74.69
	Centrally Sponsored	204.00	450.00	220.95
2	Dairy Development			
	State Sector	200.00	139.00	69.43
Total :Livestock sub sector		**4504.00**	**3651.00**	**81.06**

Table: 4.34
Outlays and Expenditure for Major Schemes during Annual Plan 2004-05
(Rs. lakh)

Sl. No.	Name of Scheme	Approved Outlay	Actual expenditure
1	Strengthening of Veterinary Service	1755	484.07
2	Expansion of Cross Breeding facilities	650	620.29
3	Special Livestock Breeding Programme	739	612.08
4	Assistance to Public Sector undertaking viz., KLD Board, KCMMF, KSPDC and MPI	250	-
5	Commercial Fodder Production Programme	170	170
	Total	3564	1886.44

FISHERIES DEVELOPMENT

Global production of fish and fishery products has more than doubled since 1970, reflecting an increase in capture and in particular aquaculture production. Alongside this trend has been a shift in the composition of fisheries production away from industrialized countries towards developing countries. This is due to both a decline in the fish stocks available in the developed World from over fishing and to an increase in the fishing activities in the developing world.

4.245 Around 60 per cent of the major fish resources in the world are over utilised or fully utilised and these resources are in urgent need of conservation. FAO has concluded that 44 per cent of the stocks for which formal assessments are available are intensively or fully exploited. 16 per cent were over fished, 6 per cent of the known stocks were in need of urgent management. Demersal high value species were over fished and that a reduction of at least 30 per cent of fishing effort was required to rebuild the resources.

4.246 Despite the stagnation in capture fisheries production, overall food fish production grew at an average annual rate of 3 per cent from the middle of 1980s to later 1990s. This rapid growth is almost entirely the result of the global boom in aquaculture production which grew at

around 11 per cent during this period. The projected composition of world fish production and rate of growth in 2020 are shown in Box : 4.14

BOX : 4.14

Fish Production and growth in 2020

- Global production of 93 MMT equivalent to an annual rate of increase of 1.5 per cent from 1997 onwards
- Over two thirds of increase is expected from aquaculture.
- Projected annual growth rate in production in India is 2.3 per cent with 1 per cent in capture and 3.7 per cent in aquaculture
- Share of India is projected at 6 per cent in global production while 41 per cent to China
- Share of developing countries is expected to increase from 73 per cent (baseline) to 79 per cent in 2020 in global production
- Aggregate consumption of both high value and low value food fish is projected to continue to increase in the developing World at 2.3 per cent and 1.6 per cent, respectively where as it is static in the developed World.
- Per capita consumption is projected to rise
- Real fish prices is expected to rise between 4 and 16 per cent, depending on the species.

Source: IFPRI and World Fish Centre

Deep Sea fishing

4.247 Potential of fish production from marine and inland sources has been estimated at 3.9 million tonnes and 4.50 million tonnes respectively. The highest potential (2.3 million tonnes) is in the water upto 50 meters depth, whereas the potential in water between 50-200meters depth is 1.3 million tonnes and beyond that only 0.3 million tonnes. The density of fish is the highest about 11 tonnes per square Km. in coastal areas (0-50 m). In water beyond 50 m it is less than 1 tonne/sq.Km. Most of the catches are from waters less than 50 m depth and many of them have already been over exploited. Having almost reached a plateau in production from the coastal waters, the scope for increasing fish production from marine sources now lies in the deep sea.

4.248 In India exploitation of deep sea fishery resources has gained added importance with the announcement of the Deep sea fishing policy by GOI in 2001. The policy aim at exploitation of 1.64 million tonnes of deep sea fishery resources through technology intensive joint ventures deploying foreign fishing vessels. Following the promulgation of deep sea fishing policy, licenses were issued to 129 foreign deep sea vessels to exploit the widely scattered and unexploited deep sea fishery resources subsequently GOI made changes in the policy. A comprehensive Marine policy was launched by GOI in November 2004 to facilitate sustainable deep sea fishing.

4.249 The Hon'ble President of India in his speech delivered in the Kerala Legislative Assembly in July 2005 has suggested 10 missions for Kerala's Prosperity by the year 2015 which the state can undertake using the core competence of the state. One of the missions

suggested was "Deep sea fishing, fish processing, and marketing of sea food products. State Government has already prepared an Action Plan for the exploitation of deep sea fishing.

4.250 Small fish workers in Kanyakumari and Thiruvananthapuram districts are engaged in migratory deep sea fishing. Artisanal deep sea fishing is defined as exploitation of fishery resources of the deep sea beyond the depth range of 0-50 metres by means of passive methods of fishing and appropriate fishing gears in continuation with mechanized boats of OAL below 43 feet. The major findings of a study on artisanal deep sea fishing is shown in Box : 4.15

BOX : 4.15

Major findings of a Study on Artisanal deep sea fishing in Kerala

Migrating deep sea fishing units of about 320 numbers doing week long fishing based at Kollam, Vizhinjam and seasonal migrating fishing from major ports of India were the target population of the study 50 households were selected for the survey.

- Duration for fishing trip lasted for 3 to 6 days catch is around 1000 tonnes/month,ranging from 626 tonnes/November to 1629 tonnes/February.
- Species composition of long line catch sows 83% *Carcharhinus melanoptreus* (Kakka-Sravu) handiness comprise 63% selar *crumenophthalmus* (Kannan Kozhiyala) and 36% *Thunnus albacares* (Yellow fin tuna – Choora).
- The catch per unit effort of sharks landed by long line shows that on an average seven sharks worth Rs. 16362 were caught per trip as an average seven members were the per trip.
- The recurring expenditure of DFFUS showed monthly variations ranging from Rs. 7689 in November to Rs. 12443 in January with an average of Rs. 9500/-. The expenditure comprises of cost of diesel and expenditure on ice, food for a week and crew allowance.
- On an average one fishing trip earned a gross income of Rs. 35728 with an expenditure of Rs. 9612. On an average 35 weekly trips in a year was reported. 320 boats landed a quantity of 23000 tonnes per annum worth Rs. 40 crores at beach price.
- Some of the boats have used fish finders – a modified echo sounder with vedeo screen display which enable them to trace the water column, for fish. Around 8% used GPS, 25% echo sound, and 6% wireless .
- Deep sea going fishermen face higher risks and higher income is also accompanied by higher risks like problems caused by coastguard, cause by commercial ships, danger to life, problems by other fishing vessels, attack by blue whale, health problem by large say, rough sea etc.
- Artisanal DSF group requires decentralized organizational support through local bodies and co-operatives.
- An intermediate craft fitted with diesel propelled IBE would be the ideal option to promote small scale deep fishing, by semi skilled artisanal fishermen.

- Long stay fishing, flexible fish operations during the different seasons, combination fishing, passive fishing methods and concerted and continuous fish finding efforts using high skills are the features of artisanal DSF. Passive fishing methods by selective gears, timely response to stock depletion by appropriately changing fishing practices (eg: demersal shark fishing to pelagic fishing) enables sustainable fishing over time.

Source: KRPLLD, 2004

Recommendations of Mid Term Appraisal (MTA) of Tenth Plan

4.251 An integrated approach was adopted for the sustainable development of fisheries sub sector with the objective of optimising production and productivity, augmenting the export of marine products, generating additional employment opportunities and improving the socio economic condition of the fisher community. The major recommendations of the mid term appraisal of the Tenth Five Year Plan is shown in Box : 4.16

BOX : 4.16

Major recommendations of MTA on Fisheries

- A major constraint to the development of the fishery sub sector is the inadequate infrastructure facilities, namely, fishing harbours and fish landing centres with the modern amenities. The present level of infrastructure facilities is reported to be adequate to meet only about 25-30% of the actual requirement.
- The absence of an institutional mechanism for easy flow of finance for deep sea fishing and for fish seed hatcheries in the private sector is another issue that needs to be addressed on a priority basis.
- The production and productivity aquaculture from inland water bodies in Gujarat, Jharkghand, Maharashtra, Tamil Nadu, North East should be increased to the national productivity of 2.2 tonnes per ha per annum.
- Reservoirs largely remain under exploited.
- Steps to increase production of quality fish seed including seeds for fresh water prawn farming and other species of fin/shell fish which are not cultivated on a large scale are also required, along with measures for seed certification, disease diagnosis and other health management.
- Necessary policy guidelines on uniform long term leasing of all suitable water bodies need to be circulated to states for streamlining the efforts to enhance production and productivity through aquaculture
- Policy intervention is required for the effective management of inshore fisheries and national exploitation of deep sea, off shore and oceanic fishery resources.
- Subsidiary industries like culture of Pearls, development of ornamental fisheries for export, and setting up of adequate fish marketing network are the other areas which need attention.

Source: Planning Commission 2005

Resource base

4.252 The state has all the requisite natural endowments for building a strong and vibrant fisheries economy in tune with the national strategy. They include a stretch of coastal belt extending over 590 km and an extensive inland waterspread of around 4 lakh hectares. The exclusive economic zone (sea spread upto 200 metres) lying adjacent to Kerala coast is spread over 36000 square kilometres which is almost equivalent to the land area of the state.

4.253 The state is endowed with rich inland water bodies consisting of 44 rivers (having an area of 0.85lakh ha) 30 major reservoirs (0.30 lakh ha) fresh water ponds and tanks (0.25 lakh ha) 45 backwater and extensive brackish water area (2.43 lakh ha). But the inland fish production accounts for only about 11.21% of the total production. Eventhough the state is endowed with extensive waterspreads offering tremendous potential for the development of inland fisheries, this opportunity has not been tapped to the desired extent

4.254 The estimated fisher folk population of Kerala is 10.89 lakh, which include 8.38 lakh in the marine sector and 2.51 lakh in the inland sector. Out of this the number of active fishermen is estimated as 2.23 lakh (1.79 lakh in marine sector and 0.44 lakh in the inland sector). There are 222 fishing villages in the marine and 113 fishery villages in the inland sector, where fishing and relative activities provide livelihood to a vast majority of the population. The estimated average number of active fishermen in a marine village is 810. The density of population in the marine fishing villages works out to 2162 per sq.km. as against 819 for the entire state. Alappuzha district is in the first place in the number of fisher folk with a population of 1.82 lakh followed by Thiruvananthapuram 1.79 lakh). The district wise details of fisher folk population are given in Appendix-4.47

Income from fisheries sub sector

4.255 Though the Net State Domestic product of the state has increased about 54 per cent during the period from 1997-98 to 2004-05, the share of fisheries sector has increased only to 33 per cent and the contribution of fisheries sector in the State domestic product also declined from 1.87 to 1.61 (See Table – 4.35)

Table – 4.35

Contribution of Fisheries sector to Net State Domestic Product (1993-94 Prices)

Category	Period				
	1997-98	2001-02	2002-03	2003-04 (Prov)	2004-05 (quick)
Net State Domestic Product (Rs. Crores)	28633	34404	37549	40328	44065
Fishing (Rs. Crores)	534	630	608	653	709
Share of fisheries sector in Net State Domestic Product	1.87	1.83	1.62	1.62	1.61
Share in Agri & allied sectors	6.60	9.20	8.76	9.14	9.70

Source: *Directorate of Economics and Statistics*

Socio Economic Status

4.256 The per capita income of fisher folk is very low when compared to the general sector. Social development indices such as birth rate, life expectancy, sex ratio, infant mortality rate, population growth, literacy etc. sufficiently explain the economic and social backwardness of fishermen community.

4.257 The socio-techno economic survey of fisherfolk in Kerala was conducted by the fisheries department during November and December 2004. Multi stage systematic random sampling method was adopted for the survey and 7031 houses were selected for detailed study from 44 marine and 27 inland villages. (20% of the villages from each district). Major findings of the survey are summarized in Box : 4.17

Box : 4.17
Major findings of the Socio Techno Economic Survey of Fisher folk in Kerala

- Primary and Upper primary schools exist in close proximity to all the fishing villages.
- Nearly 87.0 per cent of the males and 84.53 per cent of the females are literate. The male and female literacy rates of the general population are 94.2 per cent and 87 86 per cent respectively.
- In 2003-04, the dropout rate of Kerala was 1.15 per cent In the survey it revealed that out of the total fisher population in the (5-18 age). 14.6 per cent of persons are dropouts in the marine sector 7.9 per cent in the inland sector with an average of 12.4 per cent .
- 64.1 per cent of the families are Below Poverty Line on the basis of the Ration card issued by the revenue authorities
- Of the fisher folk houses nearly 91.1 per cent live in own houses. Out of the 146234 houses owned , 15.5 per cent are huts, 42 3 per cent with mud with earthen bricks, 38.1 per cent other type and 4.1 per cent covered with wooden planks. 30.3 per cent of the houses are in good condition.
- 22 per cent of the fisher folk have no land.
- In the marine sector out of the 125575 households, 71606 households have (57%) sufficient drinking water and in the inland sector out of the 34997 households 18369 households (51.3%) alone have sufficient drinking water.
- 56.7 per cent of the boats engines with horsepower upto 20 HP and 18.7% of the household possess crafts and the most prominent type of net used in craft was Ozhukkuvala and the 66.7 per cent of the Craft used Kerosene as fuel.

Source: Department of Fisheries

Species-wise Composition of Fish Landing

4.258 An increasing trend was noticed in the landings of shark , oil sardine, Bombay duck, ribbon fishes, carangide, seer fishes, tunas, penaeid prawns and cephalopods. Landings of petches and non penaeid prawns declined.

4.259 The Kerala Marine Fisheries Regulation Act was enacted with a view to enforce strict regulatory measures following the induction of more number of crafts and consequent increase in the level of unrestricted fishing. According to this Act, the inshore area coming within the depth range of 50 meters has been demarcated for fishing by the traditional fishermen using country crafts and the area beyond the limit in the economic zones can be utilised by motorized boats and large vessels. As this restriction is not being strictly followed, monsoon trawling has been banned as a preventive measure. The ban on monsoon trawling has been in force from 1980 onwards.

4.260 Although the fish catches from the Kerala coast include more than 300 different species, the commercially important number about forty only. The high value species among the fish catches are still few, prominent among them are seer fish, pomfret and prawn. Ribbonfishes are also now a target group and nearly 60-70 percent of the landings in frozen form are exported to China, Japan and other South East Asian countries. During 2004-05 the catch of Ribbon fish was 18657 tonnes. The quantity of these high value species in the total catch ultimately decides the income of the fishermen. Unfortunately the share of these high value varieties in the total marine fish catch has been remaining stagnant. The annual potential of prawn is estimated at 64482 tonnes while the average catch during 2004-05 was 53402 tonnes. The catch of oil sardine, the most important variety consumed mainly by the poorer sections of the society exceeded the potential in recent years. The species wise landings are shown in Appendix: 4.48

Box : 4.18

Assessment of Bivalve and Gastropond Resources

During 2004, landings of important groups of bivalves and gastaroponds comprising of clams, edible oysters, mussels, sacred chanks, whelks and ornamental gastropods from 8 major centres viz., Karwar, Mangalore, Calicut, Kochi in West coast and Tuticorin, Mandapam, Chennai and Visakhapatanam in east coast were estimated. The total production was 63,283 tonnes of which 62935 tonnes were bivalves. Landing of bivalves showed an increasing trend (22% increase) and clams as a single group contributed 50970 tonnes forming 81% of the total bivalve production during this year. Among the maritime states, Kerala contributed 86% of the total landing

Source: CMFRI

Table – 4.36
Production of Bivalves during 2004-05

Sl.No.	Species	Production (Tonnes)				
		Karnataka	Kerala	Tamil Nadu	Andhra Pradesh	Total
1.	Clams	2669	47706	0	595	50970
2.	Edible Oysters	202	36	15	393	1646
3.	Mussels	4077	6769	473	-	11319
	Sub total (Bivalve)	6948	54511	488	988	62935
4.	Gastroponds and others	-	-	348	-	348
	Total	**6948**	**54511**	**836**	**988**	**63283**

Source. CMFRI

Fishing Crafts

4.261 There was enormous increase in the number of fishing crafts operating in Kerala during the last decade. According to the Kerala XVII Quinquennial Census 2003 the total number of mechanised fishing boats are 2355 of which 2344 are trawlers and 11 are liners (Table – 4.37) The total number of Traditional crafts was 25812 of which 10498 are motorised and 15314 are non- motorised. The District wise distribution is given in Appendix-4.50

Table – 4.37
Mechanised Boats and Traditional Crafts

Mechanised Boats			Traditional Crafts			Gears
Trawlers	Liners	Total	Trawlers	Liners	Total	
2344	11	2355	10498	15314	25812	70038

Source: Kerala XVII Quinquennial Livestock Census, 2003

4.262 Out of the 10498 motorized crafts 5127 are canoes, 1641 are catamarams and 2028 are plank built boats Of the non- motorised crafts 2668 are canoes, 3416 are catamarams and 4183 are Plank built boats.

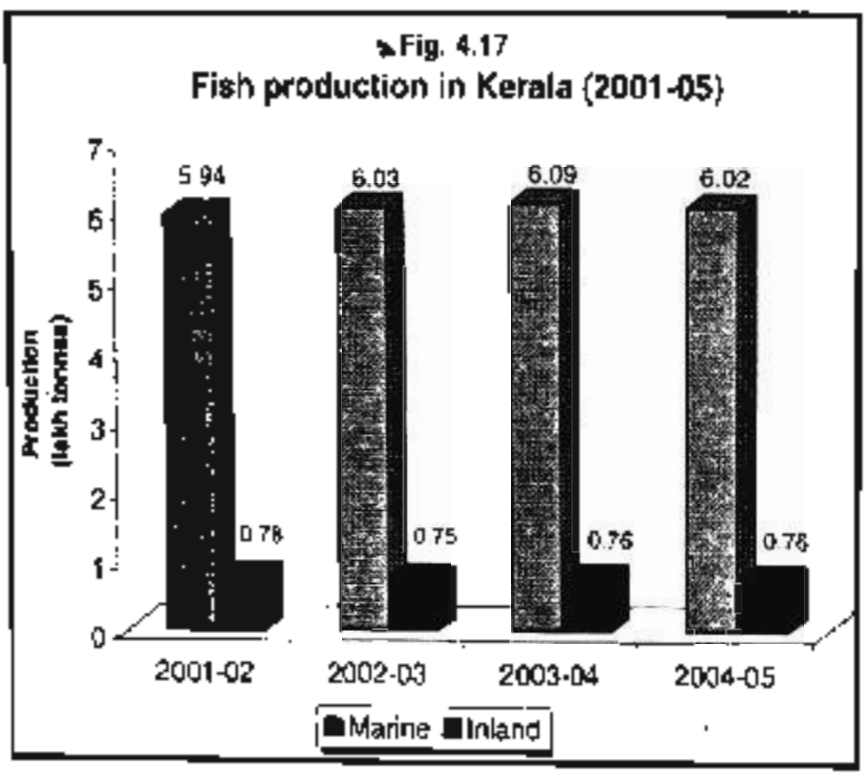
4.263 The number of fishing gears in operation has increased by 26 per cent during 2003 compared to 1998. The number of fishing gears in use during 1998 were 55737 which increased to 7038 in 2003. Out of the total 70038 fishing gears, 16778 are trawl net, 17041 are gillnets and which accounts 50 per cent of the fishing gears. The other fishing gears being used are castnets (16749), Hook & lines (6944), Drag nets (1649), Set Barriers (1886) and others (8985)

Trend in Production

4.264 During 2003-04, India's total production was 6.40 million metric tonnes of which 2.94 million metric tonnes was from marine fisheries and 3.46 from inland fisheries The marine fish production in Kerala is stagnant and seems to have achieved a saturation level whereas the inland

fish production showed signs of improvement from 1999-00 followed by slight decline. During 2004-05, marine production declined to 6.02 lakh tonnes from 6.09 lakh tonnes in 2003-04 and inland fish production is stagnant (Table- 4.38). The marine fish produced by the State is about 20% of the national marine production.

4.265 In the inland sector 0.76 lakh tonnes of fish produced and which accounts for 11.2 per cent of the total fish production of the state However at all India level, more than 50 per cent of the total fish production is contributed by the inland sector.



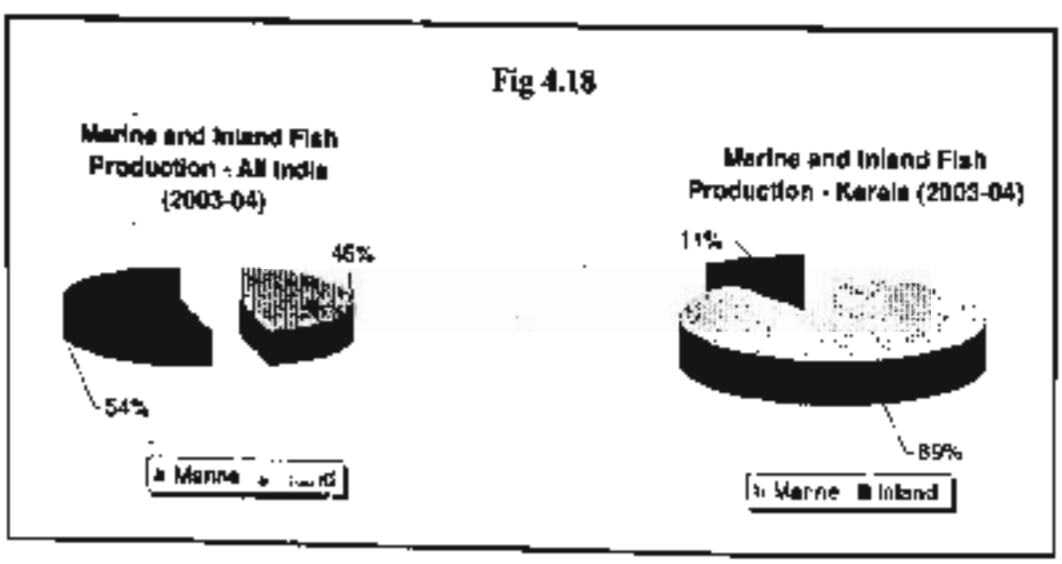


Table -4.38

Fish Production in Kerala during the last four years

(lakh tonnes)

Year	Marine	Inland	Total
2001-02	5.94	0.78	6.72
2002-03	6.03	0.75	6.78
2003-04	6.09	0.76	6.85
2004-05	6.02	0.76	6.78

Source: Fisheries department

Reservoir Fisheries

4.266 In Kerala there are 30 reservoirs with a water spread of 43,000 ha suitable for fish culture. New fish culture is being carried out only in 10 reservoirs. The total catch reported in 8 reservoirs is 77.24 tonnes and the average productivity is 14.07 kg/ha (Table- 4.39). The present production from these reservoirs are very low and the average productivity varies from 2.92 kg/ha in Malampuzha reservoir to 100.88 kg/ha of Meenkara reservoir during 2004-05. The low productivity in most reservoirs can be attributed to undesirable species mix as revealed in studies and fast growing species do not get the desired level of representation. During 2004-05 onwards the implementation of reservoir fisheries project was entrusted to ADAK.

4.267 Reservoir fisheries is one of the most important inland fishery resources and offer good potential for fisheries development of the state. A detailed action plan has to be worked out to exploit this potential with the involvement of LSG's and of Self Help Group.

Table - 4.39

Reservoirs in Kerala with average fish productivity (2004-05)

Sl.No.	Name of Reservoir	Area (ha)	Production (Kg)	Productivity (Kg/ha)
1.	Pothundy	363	5234	14.42
2.	Mangalam	393	14524	36.6
3.	Walayar	289	3351	11.66
4.	Kanhirapuzha	512	2966	5.79
5.	Chullia	159	11917	74.95
6.	Meenkara	259	26127	100.88
7.	Malampuzha	2313	6754	2.92
8	Peechi	1200	6370	5.31
9.	Vazhani	255	-	-
10	Peruvannamuzhi	-	-	-
	Total	**5743**	**77243**	**14.07**

Source: Fisheries dept

Export

4.268 Export of marine products had set an ever time record of 1.48 billion US$ during 2004-05. The total value of marine products export from the country was Rs. 6646.69 crores during 2004-05 and the quantity exported was 4.61 lakh tonnes indicating an increase of 9.11 per cent in

rupee terms, 11.97 percent in volume and 11.10 per.cent in US $ realization compared to 2003-04.

4.269 European Union has emerged as the largest market for Indian marine products during this year relegating USA to the second position. It share has increased to 25.52% from 23.37% in quantity. It has registered an export growth of 22.29% in quantity, 23.68% in rupee value and 26.71% in US$ realisation. USA become the second largest market in terms of value and it had a share of 10.85% in volume 23.4% in rupee value and 23.37% in US$ realisation. The decline was mainly due to the antidumping duty imposed by the US Government on import of Frozen shrimp from India. Export of Fr. Shrimp to USA has declined by 15.02% in quantity, 9.81% in rupee value and 7.93% in US$ terms. Export to Japan, European Union, China, South East Asia, Middle East etc. showed an increase.

4.270 The marine products export from the state during 2004-05 was 87378 MT valued at Rs. 1158 crores constituting 19 per cent in terms of volume and 17 per cent in terms of value to Indian marine products export. The export of marine products from the state during the year increased by 14 per cent in quantity terms and in value terms , increased by 5.4 per cent in rupee terms and six per cent in dollar terms compared to the previous year.

4.271 The major export item is frozen shrimp which constitutes 48.5 per cent in value term of total export from the State during 2004-05 while at national level the corresponding share is 63.5 per cent. The declining export share of frozen shrimp from the State is a cause for concern and it declined by four per cent in quantity terms and six per cent in value terms over the previous year while at the national level it increased by 6.4 per cent in quantity terms and 5.2 per cent in value terms compared to the previous year.

4.272 The State's share in all India exports has been declining in recent years. The share declined from 27 per cent in quantity terms in 1999-00 to 19 percent in 2004-05 and the share in value declined to 17 per cent from 22 per cent. Though the quantity exported during 2004-05 was increased by 14 per cent the share of Kerala remain more or less same compared to that of previous year. (Table - 4.40). European Union continues to be the major market for the marine products exported from Kerala with a share of 49.5 per cent in value during 2004-05 followed by Japan (15.4%) relegating USA to the third position (12%).

Table -4.40

Export of Marine Products from Kerala *vis-a-vis* I

(Q: Quantity in Metric Tonnes V: Value in Rs. Crore)

Year		India	Kerala	Share of Kerala (%)
2000-01	Q	440473	88852	20
	V	6444	1046	16
2001-02	Q	424470	72756	17
	V	5957	951	16
2002-03	Q	467297	81393	17
	V	6881	1046	15
2003-04	Q	412017	76627	19
	V	6092	1099	18
2004-05	Q	461329	87378	19
	V	6647	1158	17

Source: MPEDA

Infrastructure facilities

4.273 Out of the 368 freezing plants in the country 106 units are located in Kerala alone, with a capacity of 2091 tonne per day. Modernisation of processing facilities of the units for EU approval and production of value added items will increase the export of marine products from Kerala. The infrastructure facilities available for processing seafood for export purpose are shown in Table - 4.41

Table – 4.41
Infrastructure Facilities of Sea Food Industry in Kerala and All India

Facilities	All India		Kerala	
	Number	Capacity (tonnes/day)	Number	Capacity (tonnes/day)
Exporters	753	-	186	-
Fishing vessels	15960	-	4731	-
Conveyance	526	-	194	-
Freezing Plant	368	10546.6	106	2091.4
Canning Plant	6	18.5	2	1.5
Ice Plant	210	4136.4	58	147
Peeling sheds	461	4616.1	159	2295.4
Cold storage	506	141669.1	170	32657.1
Other Storages	135	6342.5	3	27

Source: MPEDA

Quality Standards

4.274 Competition in the international market is increasing and Kerala has to keep the quality standards to retain the market share. The Sanitary and Phyto Sanitary (SPS) agreement under the World Trade Agreement stipulates maximum permissible chemical residue, and other standards. The state has to move towards international standards of product hygiene in order to retain the market share in future. A large number of countries now have specific Hazard Analysis and Critical Control Point (HACCP) based regulations regarding the safety of fish products. USA was the first to adopt the HACCP based regulation of fish and fish products. All developed countries and a large number of developing countries have already shifted to HACCP based systems.

4.275 Variations in quality standards requirements among importing countries pose the biggest problem. Histamine in Canned Sardine is a good example. While the US allows for 50 ppm or less, it is as high as 150 ppm for EU. More advanced technologies such as the Zero tolerance residue are employed by EU. In addition to HACCP scheme, new requirements are also introduced like the residue monitoring requirements and heavy metal contamination monitoring in EU.

4.276 The quality control programmes across the value chain have to be strictly enforced to retain the export market share from the state. The Sanitary and Phytosanitary Agreement seems to threaten the sea food exports in the absence of stringent quality control systems. An action plan has to be prepared for the upgradation of quality control infrastructure. Awareness programmes about the quality standards in other countries and its implications for export from Kerala also have to be organised.

Rice - Fish Farming

4.277 Rice-fish farming offers tremendous potential for food security and poverty alleviation in the World. It is an efficient way of using the same land resource to produce both carbohydrate and animal protein concurrently or serially. Integrating aquaculture with agriculture results in an efficient nutrient use through product recycling since many of the agricultural byproducts can serve as nutrient and feed inputs to aquaculture.

4.278 The rice fish farms in the World are concentrated within South East Asia, East Asia and South Asia. The distribution of rice-fish area is shown in Table-4.42. The adoption rate of rice-fish farming is very low. China and Thailand with 1.2 million ha and 2.97 mill ha used for rice-fish farming are the leaders. Integrated rice-fish farming is believed to have been practiced for more than 200 years in Thailand. In China large scale popularisation of rice-fish farming started from 1983 onwards.

Table – 4.42
Distribution of Rice-fish area in the World 1999

Country	Rice –fish area (000 ha)
Bangladesh	7
India	7
China	1305
Egypt	173
Indonesia	138
Madagaskar	13
Thailand	26-culture 2967 – capture
Vietnam	40

Source World Fish Centre

Rice –fish farming in Kerala

4.279 The scheme on rice-fish culture is implemented by ADAK in the State during Tenth Five Year Plan. in Kuttanand and Pokkali fields. In the Pokkali fields an area of 2500 ha. is targeted under shrimp farming during the Tenth Five Year Plan period and 3500 ha of Padasekharams in Greater Kuttanad area are identified for rotational farming of paddy and fish/prawn. During 2004-05, fish culture was implemented in 502 ha. More focused implementation of the scheme is required with the support of financial institutions and exporters fore realizing the potential in the state.

Box - 4.19
Integration of Fresh Water Prawn Culture with Rice farming in Kuttanad

The integration of paddy cultivation with Prawn/fish culture is recommended to effectively utilize the vast area of derelict polders (embanked coastal flood plains) in Kuttanad. Nearly 55000 ha of wetlands in Kuttanad is available for paddy cultivation. Around 5000 ha of the polders are utilised for Macrobrachium rosenbergic culture as a follow up crop of the total area, about 250 ha of fallow polders are utilised for monoculture of M. rosenbrigic from March to October, while in 4750 ha poly culture with Idian and exotic carps is practiced from November to

June. Stocking density is 15000-60000/ha for monoculture of M.rosenbergic while in Polyculture with carps, it is 5000 to 20,000/ha of prawn and 5000to 10000/ha of fish. Production from mono culture varies from 95 to 1297 kg/ha where production from poly culture system is 70 to 500 kg/ha of prawn and 200to 1200 kg/ha of fish.

Data were collected from 122 farms in 1998 to 2001. The farming of M.rosenbergic is mostly carried out in the polders (65-75%) followed by coconut plantation channels (15-25%) and homestead ponds (10-15%)

Source. World Fish Culture Quartery 2002

.Tsunami

4.280 The crude production losses caused by Tsunami of December. 2004 has been estimated for Kerala is at Rs. 117.8 crores. Damage to the fisherfolk is the most widespread with long term consequence on loss of livelihood is compounded by the loss of lives, homes and fishing equipments. This has accentuated the damages to micro enterprises due to the marked interdependency in coastal economics. Smaller but socially important forms of coastal acquaculture such as oyster projects implemented by women self help groups have lost their infrastructure and potential harvest in the state. Sand drift caused by the tsunami had led to serious reduction of the draft in eight fishing harbours and landing centres. The estimated damage in Ports and fishing harbours in Kerala Rs. 24.24 crores.

4.281 In order to rehabilitate and reconstruct Public and community based infrastructure and restore the livelihood of the affected population Tsunami Emergency Assistance Project at a total cost of Rs. 245.46 crores was approved by Asian Development Bank

4.282 In the project Rs. 38.62 crores hs been provided for fisheries sector, out of this Rs. 26.10 crores has been provided during 2005-06 and Rs. 10.02 crore has been set apart during 2006-07 for implementation. Also for rehabilitation of Ports and Harbours an amount of Rs. 26.78 crore has been earmarked during 2006-07

Major developmental Programmes

4.283 The major developmental programmes implemented during the Plan period include, inland fisheries development, development of Fishing harbours and landing centres and programmes ensuring social and livelihood security of fishermen population. The developmental programmes undertaken in the marine sector include modernisation of country crafts, popularisation of new generation crafts and distribution of suitable components of fishing gear.

Outlay and expenditure for 2004-05

4.284 The outlay and expenditure for various schemes implemented in the fisheries sub sector are shown in Table-4.43. The total expenditure of the State sector schemes upto March 2005 is Rs. 1743.3" lakhs which accounts for 79 per cent of the original outlay of Rs. 2200.00 lakhs. An one time ACA of Rs. 15.00 crore also has been received for priority projects during 2004-05. Under fisheries sector there are 19 partially aided central sector schemes having an outlay of Rs. 1392.50 lakhs and expenditure is Rs 1150.20 lakh. The 100 per cent Centrally

sponsored scheme NCDC Assisted Integrated Fisheries Development Project having outlay of Rs. 700 lakhs is fully expended.

Table : 4.43

Outlay and Expenditure for 2004-05

(Rs. lakhs)

	BE	Expenditure
State Plan Schemes	2200.00	1743.38
Centrally Sponsored Schemes	1392.50	1150.26
NCDC Assisted Project	700.00	700.00
Total	4292.50	3593.63

1. Integrated Development of aquaculture in Kuttanand

4.285 The project envisages augmentation of fish/prawn production by introducing eco-friendly culture and ranching practices in-greater Kuttanad region covering 322 ha. of waterlogged areas during 2004-05 with the participation of local bodies, utilising an amount of Rs. 60.00 lakhs.

2. Integrated Development of Pokkali fields

4.286 An amount of Rs. 65 lakhs is utilised for the Integrated Development of Pokkali Fields for incurring shrimp production and fish culture was initiated in 580 ha during 2004-05 and 600 tonne shrimp has produced.

3. Fishing Harbours and Landing Centres

4.287 Vizhinjam, Neendakara, Thankassery, Munambam, Puthiyappa, Mopla Bay and Chombal- have been completed and commissioned. The progress of work in respect of the ongoing Harbours and landing centres is given in Appendix.4.51 and Table 4.44. All the harbours are constructed with 50% Central assistance. The three projects Thankassery, Munambam and Neendakara, the central assistance has already been exhausted and the construction is progresssing with State Government share. The revised estimates of most of the harbours are pending with Government of India.

4.288 Work on Muthalapozhy, Ponnani, Thottappally and Kayamkulam are progressing. The total revenue collected during 2003-04 and 2004-05 were Rs. 259.133 lakh and Rs. 217.82 lakh respectively. Neendakara contributed 47 per cent of the total revenue collected during 2004-05 (See Appendix 4.52)

Table -4.44
Fishing Harbours in Kerala

(Rs. lakhs)

Sl. No.	Name of Fishing Harbour	Total estimated cost (Rs. in Lakhs)		Year of starting	Year of completion/ Target	Expenditure upto March 2005
		Original	Revised			
1.	Vizhinjam	704.00	1583.00 *	1987	2004 II Stage	1538.66
2	Muthalappozhi	1366.00	-	2000	2005	718.29
3.	Thankasseri	1980.50	4385 50 *	1991	Commissioned on 2001	4086.77
4.	Neendakara	585.00	622	1982	Commissioned on 1988	836.97
5.	Kayamkulam	624.60	1970.32	1994	2005	1205.95
6.	Munambam	1167.20	1952 *	1988	Commissioned on 2000	1792.94
7.	Puthiappa	527.00	962 50	1988	Commissioned on 1996	1161.29
8.	Chombal	556.00	975.00 *	1992	Commissioned on 1999	902.66
9.	Mopla Bay	564.00	816.00	1992	Commissioned on 1999	1070.50
10.	Ponnani	2759.40	-	2001	2008	550.98
11.	Thalai	1370.00	1970 *	-		53.47
12.	Thottappally	1458.30	-	2004	2008	4.29

Source. Harbour Engineering Department

** Revised Estimates submitted to Government for sanction*

4.289 There are 15 landing centres for traditional fishermen. Out of the fish landing centres for traditional fishermen, eight have been completed The completed fish landing centres are Quilandy, Kattoor Pollathai, Vallikkunnu, Arthungal, Punnappra, Vellayil, Chalil Gopal Pettah and Moyilalikadappuram. Fish landing centre at Vizhinjam south has almost completed. Work at Kadapra has partially completed and construction of Groyne completed at Thikkodi. Two centres at Poovar in Thiruvananthapuram and Kanjanhad at Kasargod could not be commenced up to the non availability of land and resistance from local people. Proposed centre at

Vizhinjam North has been abandoned due to local resistance and the one proposed at Quilon was dropped in view of the development of Thankassery Fishery Harbour.

4.290 The construction of fishing harbours and landing centres has to be done on a strict project mode with different methods of financing and participation, a prioritized action plan has to be prepared for the completion of all long pending infrastructure projects.

4. Social Security and livelihood support to fishermen Community

4.291 A number of programmes are under implementation for providing social security and livelihood support to the fishermen community. They include saving-cum-relief scheme, NFWF housing, HUDCO assisted housing, DANIDA model sanitation, Group insurance to fishermen etc. The major highlights are given in Appendix-4.53

4.292 Under NFWF assisted housing scheme, under the Model villages development Programme, 8729 houses were constructed spending Rs. 35.02 crores during Ninth Plan. During the first three years of Tenth Five year plan, 3445 houses were constructed spending Rs. 1377.87 lakhs. All active fishermen are covered under group accident insurance scheme. About 2.206 lakh fishermen were insured under the scheme. Assistance is provided to accidental death/missing of fishermen while fishing, permanent and total disability and partial disability.

4.293 The Kerala Fishermen Welfare Fund Board is the implementing agency for welfare and relief schemes to the fishermen in the state. The Board has 220592 registered contributing fisher folk and 50992 registered contributory allied workers. Besides there are 27979 old age pensioners and 3247 widow pensioners and 623 allied workers old age pensioners. Details are shown in Appendix. 4.54

4.294 The saving cum relief scheme is for providing assistance to fishermen during lean period by mobilizing their savings during the peak season. This is a 50% CSS and during 2004-05, 1.25 lakh beneficiaries were assisted and the total expenditure was Rs. 6.76 crores.

CO-OPERATION

Co-operative movement has been identified as an instrument for achieving socio-economic transformation with special focus on rural population and livelihood. Through sustained efforts, co-operatives have made impressive progress in various segments of Indian economy particularly in agriculture credit disbursement, fertilizer distribution, procurement and distribution of agricultural commodities, promotion of consumer activities, dairy, fisheries, handloom, coir etc

4.296 In the era of economic liberalization the co-operatives have to re-orient themselves for achieving self sufficiency in terms of both resources and management so that they can be competitive. With the declining financial support from Government , cooperatives will have to devise ways and means of strengthening their capabilities for mobilizing capital internally and externally. The areas where the co-operative sector can play an important role and have opportunities for growth are agriculture credit and marketing, food processing, dairy and livestock, horticulture, rural development and poverty alleviation programmes, women

empowerment, village and small scale industries and provision of services in rural areas. The Co-operative Sector in India has emerged as one of the largest in the world with more than 5.45 lakh societies of various types with a membership of more than 23.62 crore as on 31st March 2002

4.297 The co-operative movement in Kerala has a solid foundation and impressive track record in terms of financial stability and sound infrastructure to generate adequate funds. The spread and growth of co-operatives in different sectors were nurtured under development plans with government initiative and government finance. Kerala had a wide network of co-operatives engaged in various promotional activities such as distribution of credit, marketing, agro processing, consumer activities, public health, education, insurance and infrastructure development There are 12552 co-operatives under the control of RCS, of which 10632 are functional in the various promotional activities in the sector. The total number of co-operatives are classified into nine categories and is given in Table-4.45

Table: 4.45
Co-operatives under the control of Registrar of Co-operative Societies

Sl. No.	Type of Societies	Total No.	Functional No.
1	Credit Co-operatives	3656	3326
2	Marketing Co-operatives	526	321
3	Consumer Co-operatives	4735	4324
4	Processing Co-operatives	33	18
5	Housing Co-operatives	366	298
6	SC/ST Co-operatives	223	193
7	Health Societies	168	128
8	Women Co-operatives	829	666
9	Other Co-operatives (miscellaneous)	2016	1358
	Total	**12552**	**10632**

4.298 The Planning Commission constituted the Bhahma Prakash Committee towards the end of 1980s. The Report of the Committee (1991) is a landmark in co-operative reforms. Based on the report, Government of India has circulated to state governments suggestions for effecting necessary changes in the Co-operative Laws.

4.299 With large expansion of co-operatives in almost all the sectors, signs of structural and performance weaknesses and regional imbalances have become apparent. The reasons for such weaknesses could be attributed to the large percentage of dormant membership, heavy dependence on government assistance, political interference, lack of professional management, overdues etc. Co-operative institutions also suffer from low resource base, high dependence on refinancing agencies, imbalances, poor business diversifications, low recoveries, huge accumulated loss, lack of professionalism and skilled staff, weak management information system (MIS), poor internal checks and control systems etc also affected the weakness of the Societies Concrete steps are necessary to revitalise the cooperatives to make them vibrant, democratic organizations with professional management with economic viability. In an increasingly competitive environment, cooperatives will cease to exist unless these can be ensured

4.300 Several committees have examined the problems facing the co-operative credit structure in the recent past such as Capoor committee (1999), Vyas Committee (2001) and Vikhe Patil Committee (2001). However, the government of India, which is committed to reviving and revitalizing the rural co-operative credit institutions, felt it necessary to commission a fresh review. Accordingly a task force was constituted in 2004 under the Chairmanship of Prof. Vaidyanathan. The recommendations were submitted in early 2005 focusing on revival of short term co-operative credit institutions.

4.301 A Task force was constituted in January 2005 for the revival of rural co-operative credit institutions (long term) in continuation of the task force constituted earlier again under the Chairmanship of Prof. Vaidyanathan. The major recommendations related to long term Co-operative Credit institutions is shown in Box : 4.20

BOX : 4.20

Major recommendations of the Task Force on Revival of Rural Co-operative Credit institutions (Long term)

- SCARDBs may be permitted to accept a wide range of term deposits from the public if they are willing to have their deposit schemes rated by an accredited agency.
- Recommends that the LTCCS be enabled to provide production, investment and other credits including fee based services.
- In addition to NABARD, any unit in the LTCCS be free to borrow from other FIS and markets.
- Deposit Mobilisation of PCARDBs should be limited to members with depositors being given full voting rights.
- Recommends federal system of structure for all state for LTCCS. The basic ground level unit needs to be an autonomous PCARDB, rather than a branch of SCARDB.
- NABARD Act needs to be further amended to directly refinance PCARDBs as well.
- All losses arising out of LT loans to agricultural and relataed activities in respect of PCARDBs may be borne by the GOI. The amount is expected to be about Rs. 2291 crores.
- All loses arising from non-agricultural loans by the structure may be borne by the concerned State government and the LTCCS equally.
- PCARDBs will be eligible to receive assistance under the proposed package if its gross interest margin is equal to or more than 50% of its operating expenses Plus its recovery is equal to or more than 50% of the demand. All arrears upto March 2005 be covered and the branch be allowed to short on a clean State, after converting itself into an autonomous PCARDB.
- The total sharing liability is 74% for GOI, 11% for State governments and 15% for Central government.

- NABARD be designated as the nodal agency for the implementation of the revitalization package.

Source: Ministry of Finance, GOI, 2006

Support by NCDC

4.302 NCDC has emerged as a developmental and promotional financing institution for the Co-operative sector in the country. The strategy of the corporation is to strengthen and develop co-operative institutions to enable them to serve their members and to maintain a sustained growth in their income.

4.303 As on March 2005 the Corporation has disbursed an amount of Rs. 700.30 crores comprising of Rs. 671.52 crores as loan and Rs. 287.83 crores as subsidy to GOK for various co-operative development programmes. Besides this, a working capital assistance of Rs. 50 crores was disbursed directly to KSCARDB. The cumulative total of Rs. 750.30 crroes to Kerala was to the tune of 8.55 per cent of the total disbursement by NCDC across the Country. The major thrust areas financed by NCDC include agro-processing, agro-marketing, integrated co-operative development projects focusing on micro-level co-operatives, consumer co-operatives, coir, Handloom and promotion of information technology in the co-operative sector.

4.304 The fund flow during 2004-05 was Rs. 109.24 crores was all time high compared to the last six years. An amount of Rs. 100 crores was directly sent to KSCARDB to meet the short term micro finance requirement in the agri and allied sectors. Out of the total amount of Rs. 109.24 crores, Rs.57.99 crore (53%) was for Marketing and input distribution, agro processing (19%), weaker sections (17%) and ICDP (10%). The activity-wise and year wise sanction and release of assistance from NCDC in 2003-04 and 2004-05 are furnished in Appendix - 4.55 and 4.56

4.305 The Year-Wise amount released by NCDC from 1962-63 to 2005 with rate of interest is given in Table 4.46

Table – 4.46
Year wise release of NCDC loans with interest rates.

(Rs.Crores)

Year	Release of fund	Interest rate(%)
1962-63 to 92-93	122.08	
1993-94 to 98-99	195.47	
1999-00	56.07	13.75
2000-01	69.04	13.75
2001-02	51.64	13-12.25
2002-03	50.18	11.50-10.5
2003-04	96.58	7-9
2004-05	109.24	8-8.5
Total	**750.30**	

Primary Agricultural Credit Societies (PACS)

4.306 The Co-operative Credit structure in Kerala comprise of 1594 Primary Agricultural Credit Societies (PACS) and 46 affiliated Primary Co-operative Agricultural and Rural Development Banks supported by the Central and Apex Co-operative banks. As on March 2005, there were 1594 PACS out of which 1550 are functional 24 are dormant and 20 are under liquidation. The 1550 PACS are functioning with a total membership of 2.50 crores, paid up share capital of Rs. 471 crores and reserves of Rs. 720 crores. Out of 1550 functional PACS, 828 societies were on loss and 722 were on profit.

4.307 The performance of the co-operatives during the year was encouraging. The total loan disbursed in 2004-05 was Rs. 10628 crores against that of Rs. 8713 crores in 2003-04. Compared to the last year, there was increase in the disbursement of all types of loans. Out of the total loan disbursement, major share (66%) was for short term , followed by medium term (30%) and long term (4%). In the case of loan disbursement, for agri purposes, though in real terms, the disbursement was higher than that in the previous year, a slight decline was noted in the percentage of short term (Agriculture) credit disbursement. Credit for non-agri purposes in all types has also increased substantially.

4.308 Though the co-operatives are disbursing loan for other agricultural purposes for making good margin for their business, a good number of societies are working on loss. Out of the 1550 functional PACs. 828 societies are working on loss.

4.309 The credit operations of the Primary Agricultural Credit Societies indicate that, during the year, the average membership has increased from 14420 to 15970, average deposits from Rs.579.00 lakhs to Rs. 771.88 lakhs, working capital to Rs.1039 lakhs, the average deposit per member to Rs. 4834 from Rs. 4012. . The increase in the average deposit per member and per society shows the strength of the movement during the year under report. The percentage of overdue to demand and overdue to outstanding stood at 19.78 per cent and 23.74 per cent respectively during the year 2004-05. Selected indicators and credit operations of PACS are given in Appendix - 4.57 and Appendix - 4.58.

One Time Settlement Scheme (OTS)

4.310 The One Time Settlement Scheme was implemented for the first time in the co-operative sector with a view to reducing the overdue position of the co-operative institutions and extend some relief to the loanees who could not repay the loan in time due to drought/flood and consequent loss of agricultural products. The scheme was implemented in all the credit co-operative institutions. The benefit so far covered 4.61 lakh people. The scheme was closed on March 31st 2005. The societies were able to collect Rs. 1488.33 crore of overdue amount under the scheme so far. The scheme has helped in reducing the overdues as well as NPAs of credit societies.

Self Help Groups linkages and PACS

4.311 In Kerala under Co-operative sector the SHG scheme was implementing through PACs. The district wise cumulative progress is given in Table – 4.47

Table – 4.47
Progress of Self Help Group Scheme as on 31.3.05

(Rs. in Lakhs)

Sl. No.	District	No. of Societies	Groups	Members	Share Capital Mobilised	Deposits	Loans issued to groups	Repaid	Out Standing	Over dues
1	2	3	4	5	6	7	8	9	10	11
1	Trivandrum	7	136	2088	3.06	59.82	646.4	172.73	473.66	214.76
2	Kollam	43	1344	8000	18.17	67.95	383.31	278.41	169.91	7.87
3.	Kottayam	64	672	6720	6.64	75.05	272.95	131.25	141.63	19.22
4.	Pathanamthitta	31	228	NA	1.48	19.11	195.76	73.84	121.91	35.36
5.	Idukki	68	5429	85023	25.33	578.43	691.66	412.65	279.01	50.4
6.	Alappuzha	28	1500	9925	2.06	65.62	611.21	259.56	351.94	8.13
7.	Ernakulam	41	195	1800		34.24	262	137	125	28.81
8.	Thrissur	153	6932	124776		465	933	165	766	
9	Palakkad	26	109	2148	8.74	4.96	454.51	224.4	230.1	132.34
10.	Malappuram	22	80	1600	1.59	5.85	177.71	76.98	52.84	8.58
11.	Kozhikode	104	360	6524		10.8	65.29	31.25	54.04	18.79
12.	Wayanad	20	1038	15000	16.21	14.11	69.04	37.73	31.32	2.99
13.	Kannur	43	222	6100	5.39	33.95	819.74	422.02	397.71	81.44
14.	Kasaragod	27	27	456	0.44	5.1	37.76	231.81	14.98	
	Total	681	18272	270760	89.11	1419.99	5625.34	4734.63	3150.11	609.09

4.312 Under this scheme 681 PACs were involved in the implementation of SHGs upto March 2005. Thrissur district formed maximum number of 6932 Groups by involving 124776 members through 153 PACs followed by Idukki district. The performance of Kasaragod district was very poor. In the State 18272 Groups with a membership of 270760 were formed. Kannur district issued large amount of loan to the SHGs (819.74) through 43 PACs. Where as the deposit is only Rs 33.95 lakhs. In the case of over due 33% of the total loan is outstanding in Thiruvananthapuram District.

Deposit Mobilisation Campaign by Co-operative Societies

4.313 Deposit Mobilisation campaigns by co-operative credit institutions continued during the year under report also. During 2004-05, against the target of Rs 400.00 crore the co-operatives mobilised Rs 1305.00 crore. Year wise target and achievement is given in Table - 4.48

Table-4.48
Targets and Achievements of Deposit Mobilisation Programme of Co-operatives in Kerala

(Rs. in Crores)

Year	Target	Achievement	Achievement (%)
2002	200.00	853.20	426.66
2003	400.00	909.61	226.00
2004	450.00	920.00	204.44
2005	400.00	1305.00	326.00

Performance of the Sector during the first three years of the Tenth Plan

4.314 The strategy adopted in the co-operative sector was expansion and diversification of commercial ventures in selected areas such as agro processing, marketing, storage and promotion of SHGs.

4.315 The outlay envisaged for the sector during 10th Plan was Rs. 100 crores. Out of this, Rs. 44 crores have been budgeted for the first three years. Against this, the expenditure incurred was Rs. 36.75 crores, ie. 83% of the budgeted outlay.

4.316 A sub sector wise financial achievement during the first three years of the Tenth Plan is given in Table – 4.49

Table- 4.49
Sub sector wise financial achievement during the first three years.

(Rs. Lakhs)

Sl.No	Sub sector	Financial outlay (2002-05)	Achievement (2002-05)	% of Expenditure to outlay.
1	Credit co-operatives	358.00	544.56	152.11
2	Processing co-operatives	720.00	696.29	96.71
3	Consumer co-operatives	350.00	289.48	82.71
4	Housing co-operatives	240.00	280.00	116.67
5	Research, Education & Training	150.00	141.31	94.21
6	Administrative Reforms	590.02	490.35	83.11
7	Modernisation	68.00	52.92	77.82
8.	Other co-operatives	148.98	155.64	104.47
9	Other schemes- i).Expansion& diversification. ii).Rehabilitation of weak but potential co-operatives	875.00 900.00	14.90 859.47	18.85 95.50
	Total	**4400.00**	**3674.92**	**83.52**

4.317 An analysis of the expenditure shows that the major share (24%) was incurred for the implementation of the two schemes 'expansion & diversification of co-operatives and rehabilitation of weak but potential co-operatives. About 19% of the expenditure was for assisting processing co-operatives, 15% for credit co-operatives, 13% for administrative expenses, 8% for providing assistance to consumer co-operatives and 8% for assistance to Housing co-operatives. Besides the plan outlay, NCDC has released Rs.256 crores during the first three years of the Tenth Plan for the development of marketing, credit, consumer and industrial co-operatives in the State.

4.318 During 2004-05, three processing societies were assisted by way of share capital contribution. Financial assistance was availed from NCDC for promoting processing co-operatives. AGreen Co-operative (Kannur), Chellanam Panchayat Service Co-operative Society

(Ernakulam), Kumbalangi SC/ST Society (Ernakulam) were assisted by way of share capital contribution.

4.319 Grant-in-aid was provided to State Co-operative for running co-operative Training Centre and implementing schemes relating to co-operative education, training, research and for conducting examinations. During 2004-05, an amount of Rs. 42.90 lakhs has been expended for imparting co-operative education. As part of e-governance, for computerizing and modernizing the co-operative department an amount of Rs. 11.12 lakhs has been spent . Share capital to the tune of Rs. 85 lakhs has been contributed to primary housing co-operatives for development of business.

4.320 A three their system consisting of primary consumer co-operatives, district wholesale stores,, and consumer federation engaged in providing consumer services to the public. Besides the consumer stores, 1000 Neethi stores and 145 Neethi medical stores are functioning in the State. Of these, 20 medical stores are run by the Federation and the remaining stores are run by PACS. Neethi gas and foreign liquor retail outlet are also implemented by the Federation. But these schemes are at loss to the Federation. An amount of Rs. 68.82 lakhs has been expended for promoting consumer activities during 2004-05. During the year financial assistance in the form of subsidy and share was provided to nine societies, and loan to two societies.

Miscellaneous types of Co-operatives

4.321 Miscellaneous types of co-operatives has been organised in the state mainly for the purpose or generating employment opportunities to the unemployed youth and the weaker sections. Co-operative Hospital and Dispensaries, Education Co-operatives, Vanitha Co-operative Societies, Motor Transport, Autorikshaw and Taxi Drivers Co-operative Societies, Tailors Co-operative Societies, Washermen Co-operative Societies, Chethuthozhilali Co-operative Societies etc. are some of the co-operative societies which are organised for the purpose of employment generation. There are also Social Welfare Co-operative Societies, Cultural Co-operative Societies, Farming Co-operative Societies, Leprosy Patient Co-operative Societies, Matsya Thozhilali Co-operative Societies, Photographers Co-operative Societies, Tailors Co-operative Societies etc. Government extend financial assistance to these societies by way of share capital contribution, grant, loan and subsidy. During 2004-05 assistance was given to 60 societies. An amount of Rs.47.80 lakhs has been given as assistance to the miscellaneous co-operatives during 2004-05.

Agricultural Marketing Co-operatives

4.322 An efficient Agricultural Marketing System is indispensable for the over all development of the economy. In Kerala, Agricultural economy is dominated by cash crops like Rubber, Coconut, Arecanut, Spices etc which are largely concentrated in small farm sector and marketing support for the products is highly essential. In a liberalized economy the challenges in the marketing front has faced by giving institutional support marketing co-operatives at the State and national level.

4.323 The two tier system of co-operatives consisting of Marketing Federation and 313 functional primary marketing societies were engaged in the marketing of agricultural produce in the State. Assistance by way of subsidy, share capital and loan are provided for the development of the marketing and processing activities. Apex institutions like CAMPCO, General Marketing Federation, Rubber Marketing Federation etc. are functioning for the marketing of the

commodities like cocoa, arecanut, spices etc. During 2004-05, agariculture produce worh Rs. 118 crores have been marketed through the marketing co-operatives.

Kerala State Rubber Co-operative Limited (RUBCO)

4.324 A Hawai chappal-manufacturing unit with a production capacity of 36 lakh pairs per year has been established with the financial assistance of NCDC. Besides conventional Hawai Chappals, the unit is producing Ultra light weight Hawai Chappals under the brand name of 'Rubco Rainbow' with the technical assistance of Hitech Setters, Malaysia. During the year 2004-05, the unit produced 12,84,33 pairs of Hawai Chappal and marketed 12,44,174 pairs valued at Rs. 449.84 lakhs. The targeted sales for 2005-06 is Rs. 10.11 crores.

4.325 During 2004-05 the cycle tyre and tube factory unit produced 827 MT cycle tyres and tubes and marketed 928 MT valued at Rs. 441.77 lakhs. The target for cycle tyres and tubes for the year 2005-06 is Rs. 13.75 crores. At present Rubco have 26 distributors for their product both in Kerala and neighbouring states. The average monthly sale of the product comes to Rs. 141.92 lakhs. During 2004-05 the unit produced 1469.8 MT mattress and marketed 1557.44 MT valued Rs. 42.92 crores. Details are given in Appendix – 4.59

4.326 Rubco Huat Woods (P) limited is a subsidiary unit of RUBCO engaged in the production of various kinds of furniture in technical collaboration with M/s. Long Huat Group Berhad of Malaysia, situated at Tellichery, Kannur District. The companies target for turn over for the year 2004-05 was Rs. 1433.78 lakhs. The turn over anticipated for the year 2005-06 is Rs. 30.00 crores.

Kerala State Rubber Marketing Federation Limited (Rubber mark)

4.327 The federation was established in 1971, with 37 co-operative rubber marketing societies and Rubber Board and Government of Kerala as members. The activities of the Federation include marketing and export of natural rubber, distribution of fertilizers and agriculture inputs, and processing of natural rubber product manufacturing etc. During the year under report the federation has procured 13509 tonnes of rubber valuing Rs.7907 lakhs, out of which 1014 tonnes are exported at value Rs. 686 lakhs, and 8121 tonnes directly sold at Rs. 4869 lakh. Total sales turnover during 2004-05 was Rs. 8899 lakhs. Details are given in Appendix – 4.59

The Kerala State Federation of SC/ST Development Co-operative

4.328 The Kerala State Federation of Scheduled Caste and Scheduled Tribe Development Co-operatives Limited is the Apex body of SC/ST Co-operatives of total 594 members, consisting of the state, 495 SC societies and 98 ST societies. It aimed at the over all development of socio-economic condition of SC/ST communities through its member societies with multifarious items of programmes and schemes for providing employment to the members and marketing their products eliminating middlemen, especially in the field of minor forest produce. It has four branches at Thiruvananthapuram, Thrissur, Kalpatta (Wayanad) and Kothamangalam. The main activities of the Federation is the collection of minor forest produce and it distribution. The Federation is running a petrol bunk of Indian Oil Corporation, honey-processing unit, 'Cheevka' processing units and an Ayurvedic medicine manufacturing unit at Ancherry in Thrissur District. The total sales turn over during 2003-04 and 2004-05 wer Rs. 8.70 crores and Rs. 10.63 crores respectively.

Kerala State Co-operative Housing Federation.

4.329 The Kerala State Co-operative Housing Federation is the apex institution of 207 Primary Housing Co-operatives in the state. It raises funds for lending programmes as share capital from Government and member societies, and borrowing from National Institutions like LIC, HUDCO, HDFC, NHC etc. The federation advances housing loans to the member societies. During 2004-05 the federation received Rs.85.00 lakhs from Government, Rs.4500.00 lakh from NHB, and Rs.5000.00 lakhs from Canara Bank. During 04-05, an assistance of Rs. 6436 lakhs has been provided for construction of 6996 houses.

Integrated Co-operative Development Project (ICDP)

4.330 Integrated Co-operative Development Project (ICDP) focuses on over all development of selected districts through co-operative efforts in the area of agriculture and allied sectors with the financial assistance of NCDC. ICDP covers all the districts in the state by providing financial assistance to PACS, PAMS, SC/ST co-operatives for infrastructural facilities such as godown, retail outlet, cash counters, iron safe, strong room, furniture etc.

4.331 The Project has successfully implemented in Wayanad, Palakkad, Kottayam, Idukki, Trichur and Pathanamthitta districts. Scheme is under implementation in Kasaragod, Kannur, Malappuram, Kollam, Alappuzha, Ernakulam, Kozhikode and Thiruvananthapurma districts. NCDC has sanctioned second phase of the project in Wayanad district and the project will be commenced soon.

4.332 ICDPs in 14 districts availed Rs. 160 crores as Block cost to strengthen the Primary marketing societies by way of creation of basic infrastructrue/banking facilities, value addition projects, professional management of co-operatives, extensive computerization of co-operatives etc. During 04-05, NCDC has released Rs. 10.77 crores for implementation of ICDP in seven districts.

Co-operative Academy of Professional Education – CAPE

4.333 The prime objective of setting up of the Academy was to establish new institutions for professional education under Co-operative sector in the State. At present it manages a Co-operative Medical College and 5 Engineering Colleges.

Kerala State Co-operative Employees Welfare Board

4.334 Government of Kerala has constituted a welfare fund for the employees of co-operative societies including commission agents/salesman in the co-operative institutions. The main objective of the Welfare Board is to raise and administer funds for the welfare of the members of co-operative employees and to alleviate the distress of employees and their dependents. Till march 2003, 35263 employees from 4485 co-operative societies were admitted as the members of Welfare Board. As on March 2004, an amount of Rs.16.41 crores was available under the welfare fund after the total disbursement of Rs.3.25 crores for various welfare activities.

Kerala State Co-operative Employees Pension Board

4.335 Government of Kerala have constituted the Kerala S tate Co-operative Employees Pension Board for payment of pension to employees of Primary Co-operatives in the State coming under the administrative control of registrar of Co-operative Societies, including the members of societies of other departments such as Hantex, Coir, Fisheries, Khadi and Village industries. The total number of employees enrolled in the scheme at the end of March 2005 was 21382. Upto March 2005, the institution has collected an amount of Rs. 22.75 crore, out of which Rs. 7.14 crore was distributed as relief assistance to deserving members (3.87 crore), medical support (0.80 crore), retired benefit (2.42 crore), SSLC cash award (0.05 crore). The amunt of Rs. 23.12 crore was deposited in co-operative institutions.

Kissan Credit Cards (KCC)

4.336 Kissan Credit Card scheme was introduced in 1998-99 as an innovative scheme for issuing short-term loan for seasonal agricultural operations and purchasing agricultural input for their production. The scheme has helped in augmenting ground level credit flow for agriculture. At the National level during 2004-05 Co-operative Banks, Commercial Banks and RRBS issued 35.56 lakh, 43.96 lakh and 17.29 lakh cards respectively. Co-operative Banks accounted for the largest share (54%) followed by Commercial Banks (35%) and RRBs (11%). A major portion of crop loan disbursed by Co-operative Banks and RRBs is through KCC indicating its emergence as widely accepted mechanism for delivery of crop loans to farmers. A personal insurance package to KCC holders was combined in the union budget and to cover them against accidental death or permanent disability upto a maximum amount of Rs.50. 000/- and Rs.25,000/- respectively. The premium burden for this is shared by the card issuing institutions and KCC holders in the ratio of 2:1.

4.337 A National Impact Assessment Survey (NIAS) of the KCC scheme was commissioned through the National Council of Applied Economic Research (NCAER), New Delhi. On the basis of the salient findings of the survey, guidelines have been issued to banks by the RBI and NABARD. NABARD advised the banks (i) to make all possible efforts to identify and lend to farmers and ensure that KCC are renewed (ii) launch a time bound programme to motivate defaulters to clear this dues, to enable them to avail the benefits from the scheme (iii) issue suitable guide line to their branches.

4.338 The KCC scheme has since been established as a major source of crop loan, but the investment credit requirement of farmers remained out side the ambit of the scheme. Keeping this in view, NABARD enlarged the scope of the scheme to cover term loans for agriculture and allied activities and a reasonable component for consumption needs.

4.339 District wise cumulative issue of KCC through PACs in Kerala as on 30-6-2005 is given below in T ble – 4.50

Table – 4.50
Progress on Kissan Credit Card issued through PACS as on 30-06-2005

(Rs. In lakhs)

Sl. No	District	No. of Societies	No of cards Issued	Loan Outstanding
1.	Thiruvananthapuram	92	130338	27385.81
2.	Kollam	101	19251	2949.78
3.	Alappuzha	77	16895	3690.18
4	Pathanamthitta	55	8514	1066.20
5.	Kottayam	97	39511	6300.00
6.	Idukki	9	53309	5411.15
7.	Ernakulam	46	8273	1431.07
8.	Thrissur	110	51228	5709.00
9	Palakkad	82	14923	3080.65
10.	Malappuram	93	18532	2151.88
11.	Kozhikode	56	35287	5184.03
12.	Wayanad	26	37057	2925.00
13.	Kannur	115	101021	11726.00
14.	Kasaragod	58	54756	6361.47
		1077	**588895**	**85378.22**

Source: RCS

4.340 In the State as on March 2005, 16.33lakh Kissan Credit Cards have been issued by all Banks since inception of the scheme. During 2004-05, 3.77 lakh fresh cards were issued with an aggregate credit of Rs. 1267 crore. The contribution of commercial banks accounted for 54.33 per cent, Co-operative Banks 45.73 per cent and the Private sector Banks 2.06 per cent of the KCC issued in the State. To enlarge the coverage of KCC scheme it is proposed to take care of full crop production, consumption needs and working capital under allied activities so far. 5.89 lakh of KCC has been issued by Co-operatives with a credit limit to the tune of Rs. 800.94 crores, with an outstanding balance of Rs. 853.78 crores through 1077 societies.

4.341 The Credit cards could be utilized effectively to channelize investment credit to the farm sector to promote capital formation. The flexi credit approach adopted by NABARD has to be popularized to address this issue.

Swarozgar Credit Card Scheme

4.342 The Swarozgar Credit Card Scheme was introduced by NABARD in 2003 to take care of investment and working capital requirements of small borrowers and by the end March 2005.161 RRBs, 35 commercial Banks and 71 Co-operative Banks had introduced the scheme and issued 1.79 lakh cards involving credit limit of Rs.532.53 crore. It is planned to cover 40 lakh self employed eligible borrowers under the scheme by the end of Tenth Five Year plan.

4.343 Under this scheme KSCARDB provide timely credit for micro enterprise, small artisans, handloom weavers, service sectors etc., as block capital or working capital in the form of non-farm sector loans. The borrowers will be provided with a laminated credit card and pass book with a validity of 5 years and the maximum limit for individual is Rs.50,000/-. Repayment period for block capital is 5 years and for working capital 1 year from the date of drawal.

Co-operative Development Fund

4.344 NABARD had constituted Co-operative Development Fund (CDF) during 1992-93 with the objective of supporting co-operative credit institutions in under taking various developmental activities such as Human Resource Development (HRD), building up Management Information System (MIS) , infrastructure creation, setting up of Business Development Department with technical personnel etc. The fund is augmented every year through contributions from NABARD surplus. Disbursement during the year 04-05 was Rs.4.15 crore including drawals pertaining to the sanctions in previous years. Cumulative sanctions and disbursement under CDF aggregates to Rs.55.33 crore and Rs.55.38 crore respectively, as on 31 March 2005. The support provided through the fund resulted in the increase in deposit mobilization in the primary societies, improved MIS and availability of trained manpower in co-operative banks contributing to over all efficiency of the structure.

4.345 In order to enable the Co-operative Banks to achieve the objective of doubling agriculture credit during 2004-07, a scheme for providing grants from CDF to Co-operative Banks has been introduced. The assistance range from Rs.1.00 lakh to Rs.5.00 lakh per institution depending upon their size and nature of business. An amount of Rs.5.00 crore has been earmarked out of CDF for this purpose.

Co-operative Reforms

4.346 The co-operative reforms and subsequent rejuvenation of the sector coupled with capital infusion are required to face the challenges in the liberalized era of the economy A Plethora of reports and recommendations are available on co-operative reforms. An action plan has to emerge through consensus for the revival of the co-operative sub sector. The recommendations of the Indian Institute of Management (Ahamadabad) in the area of agribusiness co-operatives need consideration for discussion in the larger context. (Box : 4.21).

BOX : 4.21

Co-operative Reforms : Light at the end of tunnel

- Geographic restrictions on the activities of co-operatives must be relaxed so that agribusiness co-operatives can create a firm like organization acting as an interface between the highly sophisticated global economy and their members within a strictly rural setting.

- The provisions of the companies Act amended in 2002 allow a co-operative enterprise to register under the rubric of the companies Act as a producer company under the regulation of the Registrar of Companies. Co-operation is a state subject, unless the co-operatives are ready to give up the terms co-operative, they may have to face the problem of dual control. Since most of the co-operatives do not function across the States, they cannot take advantage of enabling provision of the amended Multi State Co-operative Societies Act 2002.
- To survive in a global market by getting around the constraints of geographical

restrictions. Co-operatives should initially be allowed to rope in co-operatives from other jurisdiction as institutional members from the Primary level.

- Specific legal amendments for introduction of a co-operative share market are of paramount importance. Currently there is lack of transferability and existence of an active share market in the co-operative sector. For example the co-operative sugar factories in south Gujarat have established an informal market where shares are traded, without any objection from the members.

- Carefully designed regulatory framework is needed.

- Many of the co-operatives are sacrificing efficiency while promoting equity. Concrete ways of increasing efficiency must be incorporated.

- Universal membership by paying a small amount of share results in large number of members without having any interest in contributing to the operation of the societies.

- Pragmatic approach should be developed for co-operative education and training.

- Networking with potential external partners to be introduced to provide the much needed voice to the co-operatives, in the international bargaining and negotiation scene.

- Co-operatives should join hands with other non-governmental organization, trade unions and environmentalist groups to strengthen their lobbying efforts.

- Diversification of activities to be expanded.

- Need for re-emerging membership.

Source: IIMA, 2004

CHAPTER - 5

WATER RESOURCES

The development and management of water resources of a region has to evolve together with that of land and biomass giving due weightage to the specific socio economic and environmental features. The United Nations General Assembly at its 58th session in December 2003 agreed to proclaim the years 2005 to 2015 as the International Decade for Action "Water for life" and beginning with World Water Day, March 22, 2005 (Box: 5.1).

BOX: 5.1

International Decade for "Water for life"

The water for life decade sets the World's goals on a greater focus on Water related issues, while striving to ensure the participation of women in water related development efforts, and further co-operation at all levels to achieve water related goals of the Millennium Declaration, Johannnesburg Plan of implementation of the World Summit for sustainable Development and Agenda 21. The Assembly called upon the relevant United Nations bodies, specialised agencies, regional commission and other organisation of the United Nations to deliver a coordinated response utilising existing resources and voluntary funds, to make "water for life" a decade for action. The first water decade from 1981 to 1990 brought water to over a billion people and sanitation to almost 770 million. By 2025 it is expected that 3.4 billion people will be living in countries declared as water scarce. Over the next 30 years, 70% of the gains in cereal production is expected to come from irrigated land.

Source: UN 2005

5.2 The 'Water for life' decade aims to promote efforts to fulfill international commitments made on water and water related issues by 2015, placing special emphasis on the involvement of women in these efforts.

5.3 The Millennium Declaration emphasized the need for all United Nations Member countries to stop the unsustainable exploitation of water resources. Governments addressed this issue at the Johannesburg Summit in 2002 by agreeing to develop integrated water resource management and water efficiency plans by 2005. They also added a complementary target to halve by 2015 the proportion of people backing improved sanitation. The primary goal of the 'Water for life' Decade from 2005 to 2015 is to achieve these internationally agreed development goals relating to water, through co-operation on water issues and participation of women in these development efforts.

5.4 Water has been a key issue on the domestic and international agenda for the last 30 years starting with the 1st International Conference on water in 1977. The total water resources in the World are estimated in the order of 43750 km3/year. At the continental level, America has the largest share of the world's total freshwater resources with 45 per cent, followed by Asia with 28 per cent, Europe with 15.5 per cent and Africa with 9 per cent.

5.5 According to the World Development Indicators, 2005 in the use of fresh water in the world is concerned, the major share (71%) is consumed for agriculture followed by industry (20%) and domestic (10%).In the case of low income countries, the percentage share for agriculture is 92 where as in the high middle income countries, the share is comparatively less

(42 %) In India the major share of fresh water withdrawal is for irrigation (92%) and in Kerala the share for agriculture is 71 per cent.

5.6 The fresh water availability of Kerala according to the available estimates (1974) is 77.35 Billion Cubic Meters including re-generated flow from ground water. Nearly 40 percent of available water resources is lost as run off. The utilisable resources as per the assessment is around 42 BCM whereas the requirement for water for various purposes like irrigation, domestic and saline water intrusion etc. is reckoned at 49.70 BCM. (The purpose-wise annual fresh water with drawals is shown in Table 5.1.)

Table - 5.1

Purpose-wise Annual Fresh Water Withdrawals

Sl. No	Country/ Category	Annual Fresh Water Withdrawals (%)		
		Agriculture	Industry	Domestic
1	World	71	20	10
2	India	92	3	4
3.	Low income countries	92	3	5
4.	Middle income countries	74	17	9
5.	High income countries	42	42	16
6	Kerala	71	11*	18

Source : World Development Indicators 2005, Water Resources of Kerala, (PWD)1974

** Percentage includes saline water intrusion*

5.7 Water sector has undergone basic changes in recent years due to perceived scarcity. While focus in the past was mainly on investment in physical structures, recent developments are associated to a great extent with improved management, conservation and institutional changes. "Optimal sustainable development, maintenance of quality and efficient use of country's water resources to match the growing demands on the precious natural resource with active involvement of all stake holders in order to achieve accelerated, equitable economic development of the country" is the vision for integrated water resources development and management.

5.8 The pattern of demand for water in Kerala is undergoing gradual but continuous change towards increasing pressure for drinking and other household and commercial needs relative to the demand for irrigation which is also declining towards less water demanding perennial crops in lieu of seasonal food crops.

Global Water outlook

5.9 Demand for the world's increasingly scarce water supply is rising rapidly, challenging its availability for food-production and poultry global food security at risk. Agriculture is competing with industrial, household and environmental uses for water supply. Even as demand for water

by all users grows, ground water is being depleted, other water ecosystems are becoming polluted and degraded, and developing new sources of water is getting more costly. Based on a global model of supply and demand for food and water, the global water outlook report shows that if current water policies continue, farmers will find it difficult to meet the World's food needs. The salient findings of the global water outlook 2025 are shown in Box: 5.2.

BOX: 5.2
Global Water Outlook 2025

- Globally withdrawals for domestic and industrial uses quadrupled between 1950 and 1995 compared with agricultural uses for which withdrawals slightly more than doubled.

- By 2025 water withdrawal for most uses (domestic, industrial and livestock) is projected to increase by atleast 50 percent from 3906 cubic kilometres in 1995. This will limit irrigation water withdrawal which will increase by only 4 percent constraining food production in turn.

- If the current trend continues, (Scenario I) the global water withdrawals in 2025 are projected to increase by 22 percent above 1995 levels to 4772 km3. Projected withdrawals in developing countries will increase by 27% over the 30 years period, while developed country withdrawals will increase by 11 percent. Use of irrigation water is projected to rise under more slowly than other sectors.

- Potential irrigation demand will increase 12 per cent in developing countries while it will actually decline in developed countries by 1.5 per cent.

- In the crisis situation (Scenario II), the developed World will pay the highest price and total global water consumption will be 261 km3 higher than the 1st scenario of normal use by 13 per cent. The average cereal yield will be 6 per cent lower than scenario I due to unreliable water supply.

- In the sustainable water scenario (Scenario III), governments will transfer water rights and the responsibility for operation and management of irrigation systems to communities and water user associations, farmers will increase their onfarm investment in irrigation and water management technology, river basin organisation will be established in many water scarce basins and many planned storage projects will be cancelled due to high costs including environmental costs. World consumes less water but reaps greater benefits than under Scenario I, and total global water consumption would be 20 per cent lower than under Scenario I (-408 km3)

IFPRI, IWMI 2002

Water Resources in the Country

5.10 India, which has 17 percent of the world's population, has only 2.45 percent of world's land resources and 4 percent of the world's fresh water resources. The water resources are unevenly distributed in time and space. In the prevailing Monsoon hydrometeorology, about 85 percent of annual precipitation takes place in four months June to September of the South West Monsoon. A major part of the South West Monsoon precipitation is concentrated in two of the four months with down pour accounting for almost half of its occurring in isolated spells of

various durations aggregating to ahout 15 hours. Since most rainfall occurs only during 3 to 4 months of the year, assured water supply to agriculture, industries and drinking purposes is a challenge. It is estimated that only 70 percent of the people in urhan areas have access to basic sanitation services. A large number of rural hahitations remain without any identified source of safe drinking water. The rising consumption will aggregate the water scarcity further. The total consumption in India is expected to rise hy 20-40 percent over the next 20 years

5.11 Agriculture accounts for 89 percent of the total water consumption and domestic consumption accounts for 4.8 per cent. Irrigated land which represents only about 20 percent of the World farm land, produces around 40 per cent of the World's food supply and 60 percent of cereals. The decade presents an opportunity to promote the sustainable management of water resources. Growing water scarcity in many regions calls for a much more productive use of water in agriculture and for more transparent water allocation mechanisms between sectors, giving special attention to the needs of the environment. Subsidised or free supply of power and water has resulted in over exploitation and inefficient use of water in agriculture, leading to water-logging and salinity on 5.76 million hectares. Tremendous wastage occurs as a result of evapostranspiration, distribution loses, seepage through unlined channels and excess application. Canal-irrigation efficiency in India is estimated at around 35 to 40 per cent, which is below the international standards. Government policies need to be revised to provide incentives for efficient use of water, including appropriate water pricing and more effective institutional mechanisms for water management.

5.12 As per the latest assessment, out of the total percipitation, including snow fall of around 4000 billion cubic metre in the country the availability from surface water and replenishable ground water is put at 1869 billion cubic metre. Because of topographical and other constraints about 60% of this ie. 690 billion cubic metre from surface water and 432 billion cubic metre from ground water, can be put to beneficial use. Availability of water is highly uneven in both space and time. The per capita availability of water is reducing progressively owing to increasing population. The national average per capita availability in India was 5200 m^3 in 1951 has fallen to 2200 m^3 in 1991 and further to 1820 m^3 in 2001 and with the projected population it may go down to 1340 and 1140 cubic meter by the year 2025 and 2050 respectively. The average availability is therefore likely to fall below the water stress level in the near future. According to the international agencies, any basin having per capita availability less than 1700 cubic metre is categorised as water stressed and less than 1000 cubic metre as water scarce. According to these norms six river basins of the country have already fallen into water scarce category, and five more to become water scarce in 2025 and by 2050. Only three or four basins would be water sufficient. Hence management of water becomes a challenge. Redistribution of water through inter linking of rivers, desalination of water and rainwater harvesting should be taken up on priority basis. About 97 percent of the world's water were present in oceans and seas and therefore, there is an urgent need to desalinise water for public use. As water could not be manufactured, conservation and management of water is the only way out for the growing demands. The percapita storage in the country is about 207 m^3 which is far below the storage achieved in many of the countries such as Russia (6103 m^3), Australia (4733 m^3), Brazil (3145 m^3), United States (1964 m^3), Turkey (1739 m^3), Spain (1410 m^3), Mexico (1245 m^3), China (1111 m^3) and South Africa (753 m^3). The country thus seems to be on the threshold of a grave water crisis in the none too distant future. In short, India is already on the verge of grave water crisis. The looming water crisis is given in Box: 5.3

BOX: 5.3
Looming Water Crisis

- Per capita availability below 1000 m^3 is water scarce.
- This availability is made up of 200 m^3 for domestic/industrial use, 200 m^3 for ecology/maintaining minimum flows and 600 m^3 for food security.
- A minimum per capita storage of 1000 m^3 is thus required to meet all the three uses.
- Nine river basins with 20 crore population are already under water scarce condition.
- In India, the per capita availability now is 1820 m^3 and per capita storage is 207 m^3
- 631 billion cubic metre (BCM) in Ganga-Brahmaputra is unutilisable. Hence actual per capita availability is only 1200 m^3
- Even if all ongoing and potential storage are completed, per capita storage will increase only up to 400 m^3
- Increasing population will vitiate both per capita availability and per capita storage.
- Improving water use efficiency through proper water management in both irrigated and rain fed areas, implementation of watershed programmes and artificial recharge of ground water, restoring the traditional water bodies, interlinking of rivers, maintaining the water quality standards through pollution abatement programmes and downward revision of water supply norms will somewhat improve the situation on the water front.

Source: Tenth Plan Mid Term Review, Planning Commission 2005

5.13 In order to overcome the looming water crisis, an inter-ministerial Task groups on Effective Utilisation of Water Resources has been constituted by the Planning Commission to suggest various measures for saving water for our various demands. The salient features of the report of the Task group and the recommendations are given in Box: 5.4.

BOX: 5.4
Report of the Inter Ministry Task Group on Efficient Utilisation of Water Resources

Completion of Irrigation Projects

- There are about 388 major and medium irrigation projects which have spiffed over into the Tenth Plan with a completion liability of Rs 91000crore as on April 2004 Many of these projects are started in the Pre fifth and Fifth Plan periods. Completion of these projects will provide another 76 BCM of storage and bring about 13 m. ha additional area under irrigation. Although about Rs. 14000 crores has been released under AIBP, only 32 projects could be completed out of 136 projects being assisted. Projects need to be identified with low balance cost per ha of balance potential
- Modern tools like remote sensing should be used to monitor potential creation.

- Centre should consider placing of AIBP fund, directly with banks in order to avoid delay in release from State governments.

- All states must be directed to adopt the Prioritization of projects for resource allocation based on 12 attributes as suggested by the National Commission for Integrated Water Resources Development – AIBP assistance could be linked to such an exercise.

- A large number of ongoing major projects are unapproved mainly for want of environment and forest clearance. MOESF could consider some more relaxation like raising the cost limit for major projects needing environment clearance from present Rs. 100 crore to Rs. 250 crore and exempt major projects from need for EIA for cultural command area upto 25000 ha. from the present 10000 ha, if adequate provision for drainage and conjunctive use has been made.

Modernisation of Irrigation System

- It is estimated that about 20 to 25 m ha of irrigation system in the country need rehabilitation and modernisation. With an average investment per ha. of about Rs. 8000, the total requirement is Rs. 16000crores to Rs. 20,000 crores.

- A National Irrigation system Modernisation Project needs to be launched linking to reforms like raising of water charges and PIM Canal automation has not been successful in India due to maintenance problems.

Restoration of Waterbodies

- There are 5 lakh tanks in the country. Most of them have silted up. It is estimated that about 2 m ha potential has been lost due to this. Finding from external sources needs to be tied up for the scaling up of the existing pilot project for restoration of such water bodies

Development of Ground Water

- Out of 64 m ha of ground water potential only 45 m ha has been developed. The Ministry of Water Resource have already formulated a scheme for ground water development in 19 states where the stage of ground water development is less than 70%

- Except for Pilot projects in the Eighth and Ninth Plan, no serious effort has been made to implement this on a Mission mode. The Master plan prepared by CGWB for artificial recharge needs to be implemented in phases

On farm Water Management

- Investment in CAD works has been low. It is suggested to include all CAD works as a part of project itself so that infrastructure required for irrigation water to reach every field is implemented along with the dam.

Micro irrigation

- Drip Irrigation needs to be promoted

5.14 Integrated management of water resource assumes greater importance and should be based on the treatment of water as an integral part of the eco-system and as a natural resource whose quality and quantity determines the nature of its utilisation. Water use, in turn, has its impact on water quality and therefore utilisation of water has to be so managed as not to contribute to the deterioration of water quality. Sustainable management of water resources with due respect to ecological, economic and ethical sustainability requires a holistic and integrated approach involving engineering, socio-economic and environmental aspects. Traditional system of water management through ponds and small tanks should be integrated with canal irrigation.

5.15 Poor water supply service to farmers usually stems from inadequate operational rules, inadequate hydraulic control infrastructure and inappropriate institutional arrangement between the water supply and users. Typically the problem manifests itself by untimely water deliveries, inadequate amount of water or unreliability of water supply. The main deficiencies of the present irrigation scheme arise from the dilapidated condition of a large proportion of the infrastructure.

5.16 There is good potential for water productivity gains in rainfed and irrigated areas. This will require a continuation of agronomic, economic and social interventions including soil management and irrigation water management. In rainfed areas mitigation of dry spells with onfarm water harvesting or supplemented irrigation can potentially increase water productivity.

5.17 Overall irrigation efficiency in 93 developing countries was estimated at 45 per cent in late 1990s, which means a loss of more than half the water used for irrigation (WB. 2005). The amount of water that could be saved by 2005 by activating 70 per cent irrigation efficiency on the world's gross irrigated areas could meet about half the demand for additional water supplies (FAO 2001). Such savings are the main option for addressing water shortage challenges in many developing countries. The best opportunities for producing more with less water require shifting to demand driven water management and using improved as farm water management hardware and software. Appropriate blending of surface irrigation and micro irrigation could be used for this purpose. Affordable micro irrigation technologies have proven cost effective and competitive. They are adapted to small holdings.

5.18 The primary task now is to find ways to make the fixed capital more productive. It is necessary to invest more on better water management, complete incomplete irrigation projects, investment in non-command areas through the watershed development approach.

5.19 Conjunctive use of ground water and surface water resources needs to be planned in the irrigation projects from the beginning. There is a need to take effective steps for improving water use efficiency through renovation and modernisation of existing systems.

5.20 Water resources development is to be seen not merely as a single-sector-end objective, but as a prime mover in developing larger systems with multiple linkages. This calls for a well-set out multidisciplinary research and development agenda covering not only technological issues but also issues of social, economic, legal and environmental concerns. A trained, motivated manpower being the backbone of any development activity, in the water resources sector, also, there is need for human resource development. The kind of approach suggested required multi-level training of personnel involved in the sector to undertake the challenging task ahead

Pricing of Water

5.21 The costs of providing irrigation water include a fixed cost of operation and maintenance and a variable cost, which depends on the quantity of water supplied. Irrigation water charges in most states are not even adequate to meet the O & M costs. In addition there is a capital cost of constructing a water project. The per hectare cost of creating irrigation potential in the major & medium irrigation sector has been increasing steadily from about Rs. 1500/- in the first plan to between Rs. 1,75,000 and Rs. 2,50,000. The establishment cost takes a large part of the meagre O & M allocation, leaving very little for works. Gujarat and Maharashtra states have now been able to meet the full O & M costs from the revenue earned through water tariff. The collection of water charges has also been unsatisfactory in most states. Only fraction of water charges is recovered. There are many pricing systems used for recovering some or all of these costs. In most countries, the revenue receipts fall far short of the costs of supplying irrigation to users and often do not attempt to recover the initial capital costs. Recovery of operation and maintenance costs range from a low of 20-30 per cent in India and Pakistan to a high of close to 75 per cent in Madagascar.

5.22 Water Pricing Systems can also work as an incentive for water users to adopt water conserving technologies, or to alter the amount of land under cultivation. A volume fee provides an incentive to limit water use, while a per ha. fee provides an incentive to cultivate agricultural land more intensively. Many systems combine these, for example, charging a per hectare fee for access to water and then reduced volumetric fee for water delivered. This is the type of pricing system used in Brazil for irrigation water. Irrigation water is mostly metered in Brazil and the irrigation land requires that the price of irrigation water be the sum of two charges. The first charge is annexed per hectare and is designed to repay the capital costs of the project. These are calculated using a 50 year repayment period and a subsidised interest rate. The other charge is volumetric fee, and is designed to repay the operation and maintenance costs of the water project. However in practice, the revenues have failed to cover the costs of water projects.

5.23 Developing countries use a per hectare water fee. Pakistan uses per area pricing. In Pakistan water charges are levied on a per unit area basis and varies across region, crop and season. However the variation across crops is not related to either the water requirement or the profitability of the crop. Other countries such as Egypt and Indonesia don't charge farmers anything for the water they use but require farmers to maintain and operate the irrigation canal system.

5.24 A study in 1996 reported that in India from 1983-86, the estimated working expenses of major water projects was 2.2 times the gross revenue collected from the water users (Saleth, 1996). Using 1987 data, another study of six Asian countries showed that the irrigation charges as a percentage of total cost ranged from 1.0 per cent to 22.5 per cent.

5.25 Water rates should be such as to convey the scarcity value of the resource to users and to foster motivation for economy in water-use. They should be adequate to cover the annual maintenance and operation charges and a part of the fixed costs. Efforts should be made to reach this idea over a period, while ensuring the assured and timely supplies of irrigation water. The water rates for surface water and ground water should be rationalised with due regard to the interests of small and marginal farmers. There are wide variations in water rate structures across the states. In some states the irrigation charges vary from project to project, type of system, type of crops etc. According to the report of the Committee on Pricing of Irrigation water of the Planning Commission of 1992, water rates are a form of user charge and hence the users of public

irrigation must meet the cost of the services. The water rates are levied for its proper and beneficial use. The water rates are not uniform in all the states/Union Territories in the country. No water rate is levied for agricultural purposes in most of the North Eastern states.

BOX : 5.5
Automated System of Pricing of irrigation water in China

In Shandong, one of the biggest agricultural provinces in North China, where irrigation water accounts for 70-80 per cent of the total water use, an automated system was adopted for pricing of water. In this system irrigators have to buy prepaid integrated circuit cards. The card must be inserted into an automated server before water is released and the flow stops when the card is removed. After each irrigation, the farmer receives a receipt, stating the amount of water used, the price period per unit of water and the total deducted from the card. All servers are connected via the internet, so they are easy to control and monitor and administration costs are low. Each irrigation costs 1000 Yuan (US $ 120) which is equal to value to the water saved annually under this new system. With more than 200,000 integrated circuit card servers across the province, Shandong saves about 5 billion m3 of water annually.

Source. World Bank , 2005

5.26 The expenditure on Irrigation are dominated by maintenance and administrative costs. The proportion of working cost on administrative cost have been continuously increasing while the share of repair and maintenance showed a declining trend. Analysing the budgetary data on the expenses of the projects it is seen that the establishment cost is increasing considerably (Table-5.2). On the other hand the share of expenditures on repairs and maintenance in the total working costs has gone down. Therefore, revising water rates so as to recover the maintenance cost has to be carefully examined and recurring expenditure need to be properly audited and scrutinised.

Table - 5.2
Working Cost of Certain Major Projects

(Rs. in lakhs)

Sl. No.	Name of Project	1999-00			2002-03			2003-04		
		Establishment	Work	Total	Establishment	Work	Total	Establishment	Work	Total
1	Malampuzha	121.36	111.93	233.29	130.79	301.03	431.82	144.81	419.44	564.25
2	Mangalam	15.80	18.03	33.83	20.44	59.83	80.27	18.17	56.45	74.62
3	Walayar	23.99	23.09	47.08	33.21	98.34	131.55	25.48	101.63	127.11
4	Kanjirapuzha	215.59	404.36	619.95	212.16	313.20	525.36		99.21	99.21
5	Pazhassi	180.91	882.09	1063.00	149.50	56.22	205.72		76.67	76.67
6	Pothundy		24.63	24.63		36.34	36.34		67.37	67.37
7	Chittarpuzha	65.65	31.04	96.69		65.63			132.58	132.58
8	Pamba		45.08	45.08		88.47	88.47		160.27	160.27
9	Kuriyally	12.59	16.44	29.03	0.81	66.78	67.59		140.56	140.56
10	Kallada	1439.92	1191.38	2631.30	960.28	338.05	1298.33	188.46	1400.64	1589.10

5.27 In Kerala, the water rates now collected are based on the estimates of 1974. The rates are very low compared to the costs of maintenance of major irrigation projects. The WRD has a proposal to revise the water rates.

5.28 So far as irrigation projects in the public sector are concerned, user charges of water for irrigation constitutes the major portion of gross receipts from them. The various committees/groups constituted for suggesting ways and means to improve financial performance of projects have emphatically recommended for restructuring of irrigation water rates in the country. Costs including establishment and works and receipts of certain major Projects during the last three years are given in Table-5.3. From the table it is seen that the receipt is below 30% of the cost in most of the projects During 2003-04 receipts ranged from 1.20 per cent of total cost for Pampa irrigation project to 46.69 per cent for Pazhassi project. The share has come down during 2003-04 for projects Kanjirappuzha, Pazhassi and Pothundi. The receipts reported during 2003-04 in all projects other than Malampuzha and Pazhassi are exclusive of irrigation Cess The water charge collection machinery has to be geared up to improve the situation. The water rates now levied from the projects has to be increased so as to cover the operational cost of the projects

Table – 5.3
Cost and Receipts of Certain Major Projects

(Rs. lakhs)

Sl. No	Name of Project	1999-00		2002-03		2003-04	
		Cost	Receipt	Cost	Receipt	Cost	Receipt
1	Malampuzha	233.29	38.05	431.82	42.16	564.25	73.42
			(16.31)		(9.76)		(13.01)
2	Mangalam	33.83	4.10	80.27	3.53	74.62	2.69
			(12.12)		(4.40)		(3.60)
3	Walayar	47.08	3.46	131.55	2.65	127.11	9.24
			(7.35)		(2.01)		(7.27)
4	Kanjirapuzha	619.95	1.32	525.36	24.90	99.21	1.28
			(0.21)		(4.74)		(1.29)
5	Pazhassi	1063.00	13.69	205.72	13.67	70.67	33.00
			(1.29)		(6.64)		(46.69)
6	Pothundy	24.63		36.34	3.61	67.37	2.51
					(9.93)		(3.73)
7	Chitturpuzha	93.96	6.24	65.63	8.14	132.58	8.92
			(6.24)		(12.40)		(6.73)
8	Pamba	45.08	0.77	88.47	1.06	160.27	6.81
			(1.71)		(1.20)		(4.25)
9	Kuttiyady	16.44	2.06	48.91	1.82	104.56	18.94
			(12.53)		(3.72)		(18.11)
	Total	**2177.26**	**69.69**	**1614.07**	**101.54**	**1400.64**	**156.81**
			(3.36)		**(6.29)**		**(11.19)**

Participatory Irrigation Management (PIM)

5.29 The sub optimal utilisation of irrigation potential created in the State is mainly due to non-maintenance of irrigation structures which could be improved through PIM. The National Water Policy 2002 as well as the newly enacted modified 'Kerala Irrigation and Water Conservation Act 2003' stressess participatory approach in water resources management. In the modified CADWM programme, implementation of PIM is emphasised. Ministry of Water resources has organised various seminars/conferences for giving awareness to States for the active involvement of farmers in the management of irrigation systems. Accordingly States of Andhra Pradesh, Bihar, Goa, Karnataka, Madhyapradesh, Orissa, Rajasthan, Tamil Nadu and Kerala have either enacted exclusive legislation or amended their Irrigation Acts for involvement of farmers in irrigation management. Some states like Maharashtra and Gujarat had experienced with the idea of farmers co-operative movement in irrigation management and are in the process of enacting acts for PIM. The PIM has been identified as one of the thrust areas in the water resources sector for the country as a whole and considering its importance, the scheme is monitored in the Prime minister's office and a committee of Secretaries. The National Water Policy 2002, while stressing on participatory approach in water resources management provides for necessary legal and institutional changes to be made at various levels for the purpose of ensuring appropriate role for women. Women representatives were included in the Water Users Associations at all levels. Considering the importance of women in terms of the numerical strength and significant contribution they make to the agriculture labour force, there is a need to encourage participation of more women in water user's associations by strengthening the acts or by bringing in a new culture among the water users. The WUAs have to be strengthened and empowered to take over the role of collection of water charges from the Revenue Department instead of accepting the assistance given to them from the Revenue Department. Women are involved in various ways in the management of irrigation systems and rural water supply. Sub groups of women assist village water and sanitation committees. In states like Orissa and Gujarat women are actively involved in the operation and management of irrigation systems. The involvement of women self help groups in water management needs to be promoted in a major way.

5.30 Government of Kerala has initiated pilot studies in Neyyar and Malampuzha to operationalise the modalities of implementation of PIM. Water Users' Associations will be formed for the O & M of the branch canals and distributories. The programme envisaged was to transfer the O & M of one branch canal each at Olathanni branch in Neyyar irrigation project with a total length of 6.4 km and an area of 501ha. with garden land crops and Kuthannur branch canal of Malampuzha project with a length of 14.63 km and 1669 ha. with rice crop were selected for implementing PIM. The duration of the programme was one year. The physical progress so far achieved includes formation of 12 outlet based Water User Associations and one branch canal based WUA in Malampuzha and 15 other WUAs and one branch canal based WUA in Neyyar. Ayacut maps and list of ayacutdars were made. PRAs were carried out in nine association areas for identifying and prioritising rehabilitation works needed in the filed channels and branch canals.

Rain water Harvesting

5.31 Kerala has two predominant rainy seasons caused by Southwest and Northeast Monsoon. On an average, the state receives 3000 mm of rains, of which 60 per cent is obtained during Southwest Monsoon, 25 per cent during the Northeast Monsoon and 15 per cent during summer months. The high variations in spatial and temporal rainfall add to the complexity of the problems

associated with water management faced by the State. Though Kerala is the wettest state in the country and one of the wettest regions in the world, it may become a state of unquenchable thirst if adequate and urgent institutional and technological measures are not taken to address both the shortage and declining quality of water. Hence rainwater harvesting, one of the various technologies of water harvesting assumes importance in our state.

5.32 In order to promote rainwater harvesting, Government of India advised the State Governments to provide certain provision in building rules, pertaining to incorporation of rooftop rainwater harvesting arrangements in buildings. The Government of Kerala has amended the Kerala Municipality Building Rules, 1999 in 2004 to incorporate provision for rooftop rainwater harvesting. The government also launched a state-wide awareness building and rain-water harvesting in public buildings, institutions and households.

5.33 GoK has launched a state wide campaign for promotion of rainwater harvesting. A State level Empowered Committee under the Chairmanship of Chief Secretary consisting of senior level Government secretaries and Head of departments, district level co-ordination and Technical Committees under the Chairmanship of District Collectors were constituted for promoting rainwater harvesting. A master NGO was nominated in all districts for supporting the campaign activities. KRWSA is the nodal agency for the state sponsored Rainwater Harvesting Compaign. A special 'Rainwater Harvesting Cell' has been formed for statewide co-ordination of the compaign activities. The physical progress of the programme was encouraging. KRWSA has constructed 1864 rain water harvesting structures, 1797 small rain water harvesting structures 465 structures with 10,000 litres capacity and 55 big structures, organised 7 state level workshops, conducted 11 exhibitions, 47 seminars, organised 4 national seminars/workshops.

5.34 Budgetary support was provided to Ground water department and Soil and Water Conservation department for implementing schemes for rainwater harvesting. Several non-governmental agencies are also constructing rainwater harvesting structures in the state.

Live Storage Capacities of Irrigation Reservoirs

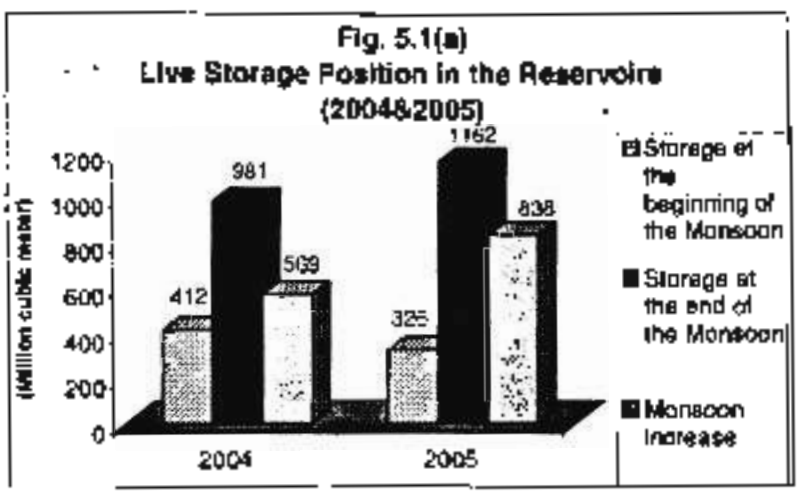
5.35 There are 18 dams intended for irrigation. Out of this 13 have storages and 5 are barrages. The live storage position of the reservoirs during the beginning and end of the monsoon period during 2004 and 2005 is given in Table – 5.4

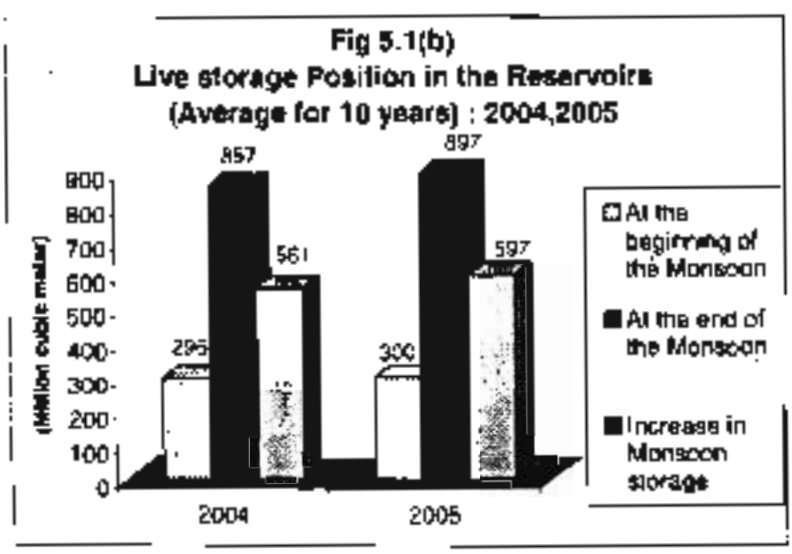
Table – 5.4

Live Storage Position in the Reservoirs

Sl. No	Item	2004 (Mm^3)	2005 (Mm^3)
1.	Storage at the beginning of the Monsoon	412	326
2.	Storage at the end of the Monsoon	981	1162
3.	Monsoon increase	561	836
4.	Average for 10 years		
	(i) at the beginning of the monsoon	296	300
	(ii) at the end of the monsoon	857	897
	(iii) increase in monsoon storage	561	597

5.36 The increase in the rainfall during 2005 has effected the rising of water level in the reservoirs. In the beginning of the Monsoon (during the current year) the total storage was 326 Mm^3 and at the end of the monsoon the level of the storage was 1162 Mm^3This is against the level of storage of 412 Mm^3 at the beginning of the Monsoon and 981Mm^3at the end of the monsoon period during the previous year. The current year's storage of 1162 Mm^3 is greater than the ten year average of 897 Mm^3 on the date. The total designed storage (at FRL) of the reservoirs is 1487Mm^3 whereas the total availability at the end of the Monsoon of 2005 is 1162 Mm^3 against 981 Mm^3 at the end of the monsoon last year. The storage capacities of reservoirs are deteriorating due to silting in reservoirs. Sedimentation or silt removal need be done periodically for the proper upkeep of the reservoirs. The storage position at the beginning and at the end of the Monsoon during 2004 & 2005 are given in Fig.5.1 (a)& 5.1(b). The Live storage capacities of the Irrigation Reservoirs is given in Appendix-5.8





Dam Safety

5.37 Safety of the existing dams is one of the items in the National Water Policy. Almost all of the 18 dams in the State were completed in the 1950's and are constructed of masonry/earth or a

combination of both. Excessive seepage/leakage, mal functioning of gates etc. caused distressed conditions as noticed by the State level Dam Safety Committee. Besides this, the storage capacity of the reservoir gets depleted due to excessive siltation. If these problems are not attended properly, it can cause downstream damages. Hence rehabilitation of the dams are essential. As per the Dam Safety Act-2000 every State having a significant number of dams shall constitute a body called 'Dam Safety Organisation (DSO). Accordingly in Kerala also constituted a 'Dam Safety Organisation' for Monitoring the post and pre-monsoon inspections of dams and maintenance and surveillance and safety activities of the dams, Hydrological review to check the adequacy of design flood, preparation of emergency action plan, prioritization of dam for rehabilitation purposes, interaction with the Dam Safety Organisation of the Central Water Commission, conducting structural analysis, and checking the safety of dams once in 10 years.

5.38 During 2004-05, Dam Safety Origanisation along with Dam Safety Committee inspected the dams in Neyyar, Malampuzha, Chimmony, Vazhani, Kanjhirappuzha, Siruvani, Kallada and Peechi.

Investment in Irrigation

5.39 Keeping in line with the national approach, Kerala also relied upon surface water irrigation system operating gravitational force for distribution. A major chunk of the outlay on water resources sector was earmarked for Major & Medium Irrigation. Out of a cumulative investment of Rs.3572.40 crores made as on 03/05, Rs.2462.51 crores (69%) was for major and medium irrigation.

5.40 During the first three years of the plan period, an amount of Rs. 435.95 crores have been budgeted and the expenditure incurred was 494.63 crores. Over and above the State plan outlay, a substantial amount has been invested for minor irrigation and flood management from the local governments component of the Tenth Five Year Plan. For the first three years of the Tenth Plan an outlay of Rs. 110.12 crores has been budgeted for these two sectors by the local governments.

5.41 Public investment in irrigation has fallen significantly over successive Plan periods. This is largely due to resource constraints faced by governments both at the Centre and the States. At the All India level also, there is decline in the percentage of funding for irrigation. The percentage of funding which was 23 percent in the 5th Plan has declined to 20.85 per cent in the sixth plan and further to 15.9 per cent in the Eighth and Ninth Plans. This has resulted in cost over run and time over run of the projects. In Kerala, the percentage outlay for the sector which was 6.38% in the Nintn Plan has decreased to 3.88% in the Tenth Plan. This has adversely affected the completion of the major projects thereby increasing the spill over costs of the ongoing projects. However, resources are not the only problem. Potential irrigation projects are located in area which are either more difficult or environmentally more sensitive which makes it difficult to implement irrigation projects. The Tenth Plan aims at a major revival of public investment in irrigation capacity and water management. The Accelerated Irrigation Benefit Programme (AIBP) launched in 1996-97 for the expeditious completion of approved ongoing major and medium irrigation projects is a potentially important instrument for providing resources to state governments to complete ongoing irrigation schemes. Allocations under this programme have been massively increased. The state wise details of release from 1996-97 to 2003-04 is given in Appendix- 5.2.

5.42 Upto 2004-05, Government of India had sanctioned Rs.17537 crores to various states. The assistance sanctioned to Gujarat was Rs.3832.42 crores (21.8%), Karnataka Rs.2079.19 crores (11.98%), Uttar Pradesh Rs.1788.37 crores (10.20%), Madhya Pradesh 1552.04 crores (8.85%)& Andhra Pradesh Rs. 869.33 crores (4.96%) and Kerala Rs.139.09 crores (0.79 %).

5.43 Central assistance is given under the programme in the form of loan and is provided to those projectswhich have investment clearance by Planning Commission. The pattern of assistance was on a 50:50 basis up to 1999-2000 and later it was revised in the ratio of 2:1 (Central and State). The pattern of assistance was modified from 01/04/2004. In the modified pattern the central share will be 70% loan and 30% grant for general category states and 10% loan and 90% grant for special category states for projects under Fast Track Programme.

5.44 In Kerala, Kallada and Muvattupuzha Projects were assisted under the AIBP and the assistance received so far is Rs. 32.51 crores and Rs.106.58 crores respectively. The assistance was availed based on individual selected components of public works identified under each project.

5.45 Promotion of private sector participation in the surface irrigation sector has been constrained both by the high capital cost of irrigation infrastructure and the absence of a working mode. The water charges now collected do not cover even the interest charges on the capital invested. Hence the private sector is not confident of getting adequate returns from the users of water. In other developing countries also the private irrigation by States necessitates tapping private funds in select areas of irrigation development and management. The National Water Policy has a provision relating to private sector participation. It is stated in the policy that private participation should be encouraged in Planning development of water resources project for diverse uses wherever feasible. In Kerala also it is proposed to introduce public private participation in the implementation of irrigation projects. The project B/R at Chamravattom is expected to be implemented with public private participation on BOT basis.

5.46 Government of India had done a mid term review of the programmes implemented by GOI during the Tenth Plan and based on the review certain priorities have been identified for the rest of the Plan period, National Priorities identified are given in Box: 5.6

5.47 In Kerala, an outlay of Rs. 930 crore is set apart for the Irrigation sector during the Tenth Plan period which includes Rs.600 crores for Major and Medium Irrigation. Rs.205 crores for Minor Irrigation and Rs.50 crores for Flood Control and Anti-sea Erosion works During the first three years of Plan period an amount of Rs.435.95 crores was budgeted and expenditure for the period was Rs. 494.63 crores. A major portion of the outlay on Water Resource Sector was earmarked for Major and Medium Irrigation Projects.

5.48 The target set for the realisation of additional irrigation potential during Tenth Plan was 1.40 lakh hectares (gross) comprising of 0.90 lakh hectares under major irrigation and 0.50 lakh hectares under minor irrigation. The cumulative target for the first 3 years was 0.75 lakh hectares, which includes 0.45 lakh hectares under major and0.30 lakh hectares under minor irrigation. The actual achievement for the first three years aggregates to 0.42 lakh hectares. Overall performance of the Major and Medium Irrigation sector was not encouraging. Additional irrigation facility could be extended only in Muvattupuzha Irrigation Project. Time and cost overrun in major and medium irrigation project is one of the major issues confronting the sector. The physical targets and achievements under Irrigation during the first three years of the Tenth Plan period is given in Table-5.5.

BOX: 5.6

National priorities based on the Midterm Review, X Plan

- Improve water use efficiency in order to bridge the gap between supply and demand of water.
- The AIBP needs to focus not only on completing projects but also maximising creation of potential at a given cost. The programme could be reviewed to provide 100 per cent Central funding without state share and placing of funds directly with project authorities through banks instead of routing them through states. Modern tools like use of satellite imageries should be adopted for monitoring.
- Fund the large irrigation projects as national projects to enable their speedy completion.
- Review the ultimate irrigation potential of all major and medium irrigation projects keeping in view actual cropping pattern, siltation, condition of canal systems, hydrology etc.
- State should set up water regulators to advise on water tariff for irrigation and water supply.
- Review Participatory Irrigation Management, as its intended objectives have not been achieved. PIM groups should be empowered to set tariff and retain a part of it.
- Review the issue of ownership rights on groundwater, as legislation to control over-exploitation has not been successful. Free power to agriculture should be discouraged.
- Implement the recommendations of the Task Force for Flood Management and Erosion Control.
- Provide additional requirement of funds in the Tenth Plan for urban and rural water supply and sanitation in order to achieve the Millennium Development Goal relating to drinking water supply and sanitation.
- Encourage a gradual change in dependence from groundwater to surface water for rural water supply to tackle the problems of sustainability and water quality.
- Design and launch schemes to assist states in urban solid waste management.
- Improve inter-ministerial coordination on water, irrigation, rural drinking water and land resources should ideally be dealt with in one ministry.
- Prepare guidelines for public private partnership in irrigation and launch pilot projects.

Source: X Plan Mid Term Review, Planning Commission 2005

Table - 5.5
Physical Targets and Achievements under Irrigation during the first 3 years of the Tenth Plan period.

Sl. No.	Sector	Unit	Cumulative coverage up the end of 9th Plan	Tenth Plan Target	2002-05 Target	Actual Achievement 2002-05
1.	Major & Medium	'000ha gross	225	90	45	24.61
2.	Minor	'000 ha gross	207	50	30	17.52
	Total		**427**	**140**	**75**	**42.13**

Review of Major Projects

5.49 As far as the Major irrigation sector is concerned, under the new initiative of 'Modernizing Government Programmes', as part of implementing the policy on long pending infrastructure projects, four projects Karapuzha, Muvattupuzha, Banasurasagar and Idamalyar were identified as long pending projects and action has been initiated for the speedy completion. In Karapuzha project about 90% of the work is over. Completionof distributories are pending. Partial commissioning of the project is expected in March 06. In Banasurasagar project, construction of main canal is completed and in the case of branch canals only the survey and investigation is progressing. In Muvattupuzha project works relating to dam and main canal have been completed. Major portion of the branches and distributories are pending completion. In Idamalayar project, the progress of execution is very slow. In Kallada project almost all the works were completed. However, the reported irrigation potential realized was relatively low as compared to the potential created.

5.50 A detailed field study was conducted on Kallalda Irrigation and Tree Crop Development Project by a multi disciplinary team constituted for reviewing the long pending infrastructure projects and the major findings of the study are given in Box:5.7

5.51 As far as Thrithala project is concerned, 90% of the work is completed and it is expected that the project can be completed by the end of the Tenth Plan. For Chamravattom project government have constituted a Corporation (Kerala Irrigation Infra Development Corporation) for accelerating the work on BOT basis. Progress of implementation of the revamping scheme was not satisfactory.

BOX: 5.7

Major findings emerged from the review of the Kallada Irrigation and Tree Crop Developement Project

- Unique irrigation project with Minor Conveyance System
- A project with very high per hectare cost (Rs. 1.31 lakh on historical cost basis)
- The on farm works in the project are implemented through underground pipelines and open lined canals.
- Out of 53514 ha of the ayacut envisaged, the potential created was 50773 ha as on 31.3.05 excluding the ayacut of bottleneck portions.
- It is estimated that around 91200 hydrants were installed in the field @ one hydrant for 0.40 ha of land on an average. The performance of hydrants was not found satisfactory. In most of the holdings the valves were not functioning and need replacement for Water control.
- Instead of hose irrigation originally envisaged for increasing the water use efficiency, flood irrigation was found in the field.
- The total MCS reported to be completed as on March 2005 was 37281 ha
- There is no realistic estimate about the actual irrigated area. It is estimated that around 12 % of Hydrants alone are in working condition
- Alignment maps were prepared for each spout and after completion of installation revised alignment maps were prepared for transfer to WUAs.
- While reviving the MCS a change in design like reduction in size of valve and use of L-bent instead of the present T are suggested.
- The estimated cost of rehabilitation of MCS system is from Rs.6100 to Rs.10860 per ha.
- Considering the investment made, the first priority should be for utilising the potential already created. It is not prudent to invest in this project for additional or new works. Kayamkulam Branch canal and five distributories are dropped due to technical and financial reasons.
- Supplementary use of reservoir for fishing needs to be explored

5.52 The overall performance of the major and medium irrigation sector during 2004-05 was not encouraging. Additional irrigation facility could be extended only in Muvattupuzha project. The additional area brought under irrigation by the project is only 1861 ha (gross) The cumulative area brought under irrigation through major and medium irrigation projects is 2.38 lakh hectares. (gross). The details of the progress of implementation of ongoing projects as on 3/2005 is given in Table- 5 6.

Irrigation Status

5.53 The source-wise and crop-wise area irrigated as on March 2004 is given in Table - 5.7 and Table- 5.8

Table - 5.6
Project-wise Details of Ongoing Projects

(Rs. lakhs)

Sl. No.	Name of Project	Year of starting	Original estimate	Revised estimate	Year of revision	Cost escalation (%)	Expenditure upto March 2003	Target area to be irrigated (Ha)		Physical achievement as on 3/03 (Ha)	
								Net	Gross	Net	Gross
1	2	3	4	5	6	7	8	9	10	11	12
1	Muvattupuzha	1974	2086	67800	2004	3150	53829	17737	34737	13029	24567
2	Idamalayar	1981	1785	30711	2004	1626	16011	14394	29036	-	-
3	Kuttyadikutty-Karappara	1987	1036	19700	2004	1801	2603	17488	34976	-	-
4	Karapuzha	197	760	25300	1999	3228	21037	5221	8721	-	-
5	Banasurasagar	1979	400	4906	1999	525	1375	2800	4740	-	-
6	Chimmony	1985	1322	12000	1999	804	1294	3106	9659	-	-
7	Thrithala	1998	1900	2660	1999	40	2586	1303	3997	-	-

Source: Department of Water Resources

Table 5.7
Net Area Irrigated (Source wise)

(in Ha.)

Sl. No.	Source	2000-01	2001-02	2002-03	2003-04
1	2	3	4	5	6
1	Government canals	100926	95270	101139	94859
2	Private canals	4041	4413	4272	5754
3	Tanks	49972	49945	66729	47856
4	Wells	115703	86297	117490	109360
5	Other sources	110399	110788	103541	123469
6	Total	381041	377162	393171	381298
7	Area irrigated more than once in a year	76824	55055	-	782892
8	Gross irrigated area	457865	432217	447490	426765
9	Net area irrigated to net area Sown (%)	17.27	17.20	17.83	17.36
10	Gross irrigated area to gross cropped area (%)	15.15	14.44	14.77	14.35
11	Irrigated area under paddy to total irrigated area	45.44	42.57	41.16	40.00

Source: Directorate of Economics & Statistics

5.54 As per the assessment of the Directorate of Economics and Statistics the net irrigated area in the state as on 3/04. was 3.81 lakh ha. and the gross area irrigated is 4.27 lakh ha. Compared to the last year a slight decline of 3.14% is noted in the area irrigated in 2003-04. The net area irrigated during 2003-04 has declined to 3.81 lakh ha. from 3.93 lakh ha. in the previous year. Only 17.36 per cent of the net cropped area is under irrigation. The major source of irrigation is wells, which contribute 29 per cent followed by government canals 24.87 per cent, tanks 12.55per cent and private canals 1.50per cent. In the source wise irrigation, the contribution of private wells predominates. The area benefitted by lift irrigation schemes has declined to 0.07 lakh ha. from 0.27 lakh ha. in 2003-04.

Table 5.8
Gross Area Irrigated (Crop-wise)

(in ha.)

Sl. No	Crops	2000-01	2001-02	2002-03	2003-04
1	2	3	4	5	6
1	Paddy	208047	183992	183703	169829
2	Tubers	979	972	1008	1020
3	Vegetables	8529	8972	9786	9657
4	Coconut	165957	158050	163550	159113
5	Arecanut	30501	31467	34205	32990
6	Nutmeg/clove	2466	2170	2948	2884
7	Other Spices and condiments	3074	3109	3212	3245
8	Banana	19448	24372	29209	28100
9	Betel leaves	990	944	990	947
10	Sugarcane	3367	3267	3426	3567
11	Others	14507	14569	15373	15413
	Total	*457865*	*432217*	*447490*	*426765*

Source: Directorate of Economics & Statistic

5.55 Among the crops, paddy continued to be the major crop supported by irrigation. It accounted for about 40 per cent followed by coconut (37%) arecanut (8%) banana (7%) and vegetables (2.3%). Though rice is the major crop supported by irrigation, it could only support 59 per cent of the total area under the crop. Similarly irrigation could be provided to 17 per cent of the total area under coconut, 35 per cent of the area under arecanut and 54 per cent of the area under banana. Compared to last year the area irrigated under all crops has been decreased.

5.56 GOI had launched a new scheme Bharat Nirman Yojana to create an additional irrigation facilities in the next four years. Under this programme action is proposed for the areas of irrigation, roads, rural housing, rural water supply, rural electrification and rural communication connectivity.

5.57 The tasks assigned under Bharat Nirman are providing electricity to every village (125000 villages) by 2009, providing an all weather road to 66802 habitations, safe source of drinking water to 55067 uncovered habitations. 10million hectares of additional irrigation capacity to be created by 2009 and construction of 60 lakh houses for rural poor

5.58 Under irrigation, it is proposed to create additional 10 million hectares of irrigation capacity by 2009 through major and medium irrigation projects (4.2 Mha), minor irrigation (2.8 Mha), enhancing utilisation of completed projects (2.0 Mha) and ground water development (1.Mha).

5.59 The guidelines of the programme are being finalised by GOI. Kerala is also eligible for assistance under the programme. GOK had proposed schemes worth Rs. 1873 crores comprising of major irrigation Rs. 1453 crores creating an additional area of 0.80 lakh ha, minor irrigation costing Rs 134 crores bringing an additional area of 0.31 lakh hectare and modernisation and restoration costing Rs 286.23 crores to create an additional area of 1.84 lakh hectares.

Local Water Resources

5.60 Local water resource development and management would be an important element of the strategy of meeting the water needs of the future particularly in water-scarce regions. There is a need to lay emphasis on local water planning, water harvesting at micro level and integrated water shed development. Lakes are the largest fresh water storages and from the time immemorial serve the human beings in non-raining season for all its water needs. Due to

excessive withdrawal of water in command and disposal of high nutrient content and polluted water from the catchment the very sustainability of lakes has become questionable. Safe water supply and environmental sanitation are vital for protecting the environment, unless the facilities for the treatment of domestic sewage and industrial effluents are increased manifold the increasing pollution due to urbanisation will further deteriorate the quality of waterbodies. National Lake Conservation Programme to arrest further degradation of lakes and to review the water body to acceptable environmental standards to that water can be utilised for various purposes needs to be strengthened. Enlarged programmes of lake and wetland conservation need to be initiated and streamlined.

5.61 An investigation by CWRDM has identified 910 ponds and tanks in Kerala with a minimum of 0.5 ha. water spread area. About 50% of the water bodies call for rejuvenation. There has been a trend to reclaim these water bodies for construction purposes. There are more than 20 artificial reservoirs and less than half of a dozen fresh water lakes in the state having good quality of water. There are perennial springs, the quality of these springs are found to be good.

5.62 Since tank irrigation has been traditionally operated and managed by the user groups, their first-hand knowledge and experience about the tank are more than that of outside experts. Many studies have noted that the poor participation of farmers in the operation and management as well as lack of institutional support to farmers' participation are among the main reasons for the decline of tank irrigation. Giving enough power to panchayats to exercise control over tanks will certainly help to improve the position. Modernisation of the existing tanks is also needed for better utilisation.

5.63 In order to promote the development of local water resources, particularly tank irrigation, Government of India has introduced a scheme 'restoration of water bodies' (renovation of tanks/ponds) with 75% central assistance under Command Area Development Programme. Restoration of Tanks in Palakkad and Pathanamthitta were forwarded to GOI and sanction has been accorded for taking up the work for the renovation of Tanks in Palakkad district. The amount sanctioned was Rs. 1.38 crores for Palakkad district and the implementation has started. The proposal for the renovation of tanks in Pathanamthita is under consideration of GOI.

Minor Irrigation

5.64 Kerala has a wide network of rivers and rivulets and springs spread over the entire cropped area. Minor irrigation sector received considerable attention from Seventh Plan onwards and got a considerable boost during the Ninth Plan period consequent to the enhanced flow of funds from the grant in aid of the local bodies as well as on account of special support received from the external agencies like European Economic Community, Dutch Government and assistance under RIDF of NABARD. With the introduction of decentralised planning, all minor irrigation works (having cultivable command area up to 2000 ha.) were vested with the Panchayat Raj Institutions (PRIs). But by the enactment of the new Act 'Kerala Irrigation and Water Management Act 2003' the definition of minor irigation has been changed and works benefiting an area less than 15 ha. only come under the category of minor irrigation and are vested with PRIs. All other works having cultivable command area greater than 15 ha. have been taken over by the Water Resources Deoartment as medium irrigation The major works implemented under surface water are minor irrigation Class – I & II and Lift irrigation schemes. Construction of check dams, Vented cross bars, weirs, tanks etc are the various works executed under minor irrigation Class-I & II.

5.65 The minor irrigation sector has always been a thrust area for NABARD not only in terms of providing increased refinance but also by introducing various developmental initiaties and financial incentives.

5.66 An amount of Rs. 78.39 crores have been expended for implementing minor irrigation shcmes during the first three years of the Tenth Plan. Besides this, an amount of Rs. 76.90crores have been budgeted for implementing minor irrigation schemes by local governments during the first two years of the Tenth Plan. The additional area brought by implementing medium irrigation schemes aggregates 15453 hectares including ground water schemes.

5.67 During the year under review (2004-05) the Department has invested Rs.15.48 crores for implementing surface water minor irrigation schemes. The additional area reported to be brought under irrigation during 2004-05 was 3073 ha.

5.68 The local governments are also investing a substantial amount for minor irrigation works. During 2004-05 an amount of Rs.36.83 crores has been budgeted for minor irrigation schemes by them, the major works being check dams, weirs, cross bars etc.

Ground Water Development

5.69 The dynamic ground water resource (recharged annually by rainfall) of the country is 432 BCM. As much as 80per cent of India's population manage to get their own domestic water supply and three fourth of the irrigated area in the country is through private sources – mostly through ground water. India is the largest user of ground water (200 BCM) followed by the United States (100 BCM) and China (90 BCM). However ground water resources are either over exploited or are in the critical zone in certain pockets —Tamil Nadu, Haryana, Punjab, Gujarat and Rajasthan. According to the Central Ground Water Board, out of 7928 blocks/taluks/watersheds, 673 are over exploited where the level of development is more than the quantum that can be replenishable and 425 are dark/critical. The provision of free or subsidised power to agriculture sector in many states is one of the factors responsible for indiscriminate use of groundwater. Regulation and pricing of power will be one of the tools to control unbridled ground water exploitation.

5.70 The National Water Policy, 2002 has advocated that groundwater recharge projects should be developed and implemented for improving both the quality and availability of ground water resources. The policy also advocated exploitation of ground water resources so as not to exceed recharge possibilities. The Ministry of Water Resources has already prepared and submitted, a part of the second green revolution project of the Ministry of Agriculture, a scheme for ground water development in 5.2 m. ha.(loan-cum-subsidy cost of Rs.15,310 crore) and another for artificial recharge of 3.9 BCM of water (at a cost of Rs.3,000 crore). Compared to 4,000 BCM rainfall/snowfall in the country and 1,869 BCM run off, recharge of this small quantity of groundwater will not adversely affect the existing hydrology of rivers and streams. The Ministry of Water Resources had also submitted a new state sector scheme costing Rs. 175 crore for artificial recharge in various parts of the country, which would serve as a demonstration exercise for various types of recharge structures.

5.71 Over-exploitation of groundwater and its attendant externalities such as resource depletion, quality deterioration, drying up of wetlands and lean season flows in streams and rivers is a critical issue in several countries including Mexico, China (especially the North China plains), the United States, Spain , Iran and Jordan. All these countries have tried a variety of strategies to control groundwater overdraft by farmers. Mexico's new water law made groundwater a national property. China, which does not have private ownership rights on farmland, has always treated

groundwater as national property. In the United States, ground water regulation is a state subject but began 50years earlier in some states. Urban groundwater depletion has been dealt with effectively in many countries.

5.72 In India too, appropriate power supply policies can be a possible instrument for regulating agricultural groundwater draft. Another method could be targeted subsidies for micro irrigation (drip and sprinkler) schemes. Liberal subsidies can be given for developing micro irrigation in over exploited/dark block. Back-ended subsidy schemes for ground water development should be promoted in potential areas. Ground water recharge will have to be taken up on a mission mode at least from the Eleventh Plan period.

5.73 The Planning Commission proposes to set an Expert Group comprising officials from concerned Ministries/Departments, NGOs, academicians and experts to review the whole issue of ground water ownership keeping in view international practices and suggest a line of action for implementation in the Eleventh Plan.

5.74 The contribution of ground water in the total irrigation potential of the country has been estimated as 47 per cent. Although ground water is annually replenishable resource, its availability is non-uniform in space and time. Hence, precise estimation of ground water resource and irrigation potential is a pre-requisite for planning its development. The scientific assessment of the ground water resources of India has been made by the Central Ground Water Board in collaboration with concerned State Departments in 1997. Total ground water resource of the country has been estimated at 432 BCM.

5.75 In Kerala, groundwater occurs under phreatic, semi-confined and confined conditions. The groundwater resources are largely concentrated in the sedimentary aquifers of the coastal regions. The groundwater resources are tapped mainly for drinking and irrigation purposes. The ground water potential of Kerala is very low as compared to that of many other States in the country. The state has a replenishable groundwater resource of 6840 million cubic meters. The net groundwater availability is 6229 million cubic meters. The gross groundwater draft is 2693 million cubic meters and the net groundwater available for future use is 3536 million cubic meters.

5.76 A district-wise analysis of ground water resources of Kerala shows that Palakkad has the higher potential for ground water recharge (12%) followed by Thrissur (11%), Ernakulam (9%), Kannur (8%), Kottayam (7%) and Alleppey (6.8%). Thiruvananthapuram has the lowest (4%) potential for ground water recharge. The stage of development of groundwater is the highest in Kasargod district (71%) and the lowest is in Wayanad (22%). The overall stage of development in the State is 43% which is greater than the national level. The ground water resources of Kerala as on 31.3.1999 is given in Appendix.5.4.

5.77 Monitoring and preservation of groundwater is an important aspect, which requires serious attention. Factors like over exploitation of groundwater, the deep infiltration of surface water from irrigated fields using chemical fertilizers and pesticides, infiltration of saline soils, effluents from industries affect the quality of ground water. The Central Ground Water Board monitors the ground water situation in Kerala state through a network of 615 observation wells and 241 piezometers. Water samples are collected in the pre monsoon period and maps showing ground water level, fluctuations are prepared to determine the long term water level trend, which helps delineating the areas of critical and overdeveloped nature. The State Ground Water Department is monitoring 440 piezometres and 303 observation dugwell stations across the state in different terrains under hydrology project. Monthly observed data for all the stations are analyzed and trend analysis reports were prepared. It is observed that 81 piezometres and 59 dug wells are showing falling trend when analyzed for pre monsoon and post monsoon seasons. This

indicates that either overdraft or insufficient recharge is affecting these areas. These areas need special attention in the context of ground water recharge.

5.78 Artificial recharge and rainwater haryesting are the best-suited and cheapest methods to overcome this situation. A scheme for the construction of artifical recharge structures was introduced in the state with financial assistance from Government of India. Sub surface dams and dykes are the main structures built for the artificial recharge of ground water. The sub surface dams constructed at Odakkali in Ernakulam district, Alanallur, Bavaji nagar in Palakkad district. Sadanandapuram in Kollam district, Ayilam in Thiruvananthapuram district, Neezhur in Kottayam district showed a considerable rise of ground water levels in the upstream side of these sub surface dams and prevention of the decline of water table in the areas. Hydrogeologically suitable sites for sub-surface dams were located and works are in progress. For the rest of places detailed hydrogeological investigation are underway for the construction of suitable recharge structures. The sources of pollution have to be properly surveyed and identified. The Central Ground Water Board is carrying out artificial recharge studies in high water demand areas with critical stage of ground water development and the Board's Pollution Cell has undertaken studies to find out the ways and means to check the effect and spreading of pollution.

5.79 As per the latest groundwater estimation carried out by the Central Groundwater Board. Government of India and Groundwater Department, Government of Kerala based on Groundwater Estimation Committee norms, 15 blocks of the State fall under overexploited, critical and semi critical categories and 33 blocks show more than 70% development. Blocks were categorised based on the stage of development and long term trend of groundwater levels during pre and post Monsoon seasons.

5.80 The systematic approach to the management of ground water requires a sustainable legal framework. Government of India has also pointed out the necessity of legislation by the State Governments for the regulation of ground water exploitation. In this circumstance, in order to regulate the over exploitation of groundwater resources Government of Kerala have brought in a law The Kerala Ground Water (Control and Regulation) Act 2002 which envisages conservation of ground water and regulation and control of its use. The Act has to be implemented by an authority named 'State Ground Water Authority' consisting of 13 members and the Secretary (WRD) as the Chairman and Director, GWD as the Secretary.

5.81 The State Ground Water Department is the nodal agency assigned with the responsibility of ground water development and utilisation. The main activities of GWD is to locate potential ground water resources for construction of ground water structures like open wells, bore-wells, tube wells and artificial structures like subsurface dykes and check dams. Technical guidance were given to local bodies for siting and construction of drilled wells and for the implementation of rainwater harvesting.

5.82 During the period under report (2004-05), an amount of Rs. 21.20 crores has been invested for minor irrigation out of which the share of ground water development was Rs. 5.72 crores ie. about 27.5 of the investment under minor irrigation.

5.83 During 2004-05 the Department has imparted technical assistance to identify sites for 5048 open wells, and constructed 1119 drilled wells. The additional area reported to be brought under irrigation was 2000 ha. Training was imparted to 71 personnel and analysed 2648 water samples, prepared 5 Ground water prospect maps from satellite imagery of Kerala under Rajiv Gandhi National Drinking Water Mission and developed new methodology for the detection of Fluoride content in drinking water, with the assistance of CCCM of BARC, Hyderabad. Under Rajiv Gandhi National Drinking Water Mission scheme, 36 bore wells were drilled in the non-

covered/partially covered habitats. The physical achievement during the year under report is given in Appendix- 5.5

National Hydrology Project

5.84 The Phase 1 of the National Hydrology Project has been continued during the period under report and the steps for starting the second phase also has been initiated. The cumulative expenditure incurred so far for Phase – 1 of the project (as on 31.3.05) is Rs. 29 crores.

5.85 The Hydrology Project Phase-II is a follow on project of Hydrology project and to be implemented with the assistance of World Bank. The project objectives are

( ) to extend and promote the sustained and effective use of the HIS by all implementing agencies concerned with water resources planning and management

( ) Strengthening the capabilities of implementing agencies at state/central level in HIS data utilisation for efficient water resource planning and management.

(iii) Awareness building and outreaches services about HIS use.

5.86 The project would cover 9 ongoing states of HP-I namely Andhra Pradesh, Gujarat, Maharashtra, Karnataka, Kerala, Madhya Pradaesh, Chattisgargh, Orissa, Tamil Nadu and 4 new states Himachal Pradesh, Goa, Pondicherry and Punjab and the Central institutes CWC, MOWR, CGWB, CWPRS, NIH,, IMD, CPCB and Bhakra-Beas Management Board (BBMB). Under HP-II it is proposed to enhance the current manual system of recording and reporting expenditures in the implementation by the Surface Water and Ground Water departments of two states by instituting a computerised Financial Management System.

5.87 The total cost of the project for the country as a whole is Rs. 6318 million. The three project components namely institutional strengthening costs 36% vertical extension cost (44%) and horizontal extension costs (20%) of the total project cost. The project would be implemented over a period of six years from 2005-06 onwards.

Flood Management

5.88 India is prone to natural disasters. Due to its locational and geographical features, it is vulnerable to a number of natural hazards like cyclones, droughts, floods, earthquakes, fires, land slides & avalanches.

5.89 Natural disasters result in heavy economic losses, apart from the loss of human life and the hardship inflicted on the survivors. On an average, at least one major disaster hits India every year, causing irrepairable damage to life and property. In Kerala, the most devastating flood that had affected the State occurred in 1924. After this 1961 witnessed another severe flood causing considerahle damage to lives and properties. Following this, flood occurred in the years 1968, 1975, 1981, 1986, 1989, 1992 and 1994. The 1994 flood caused widespread damage both to the human lives and properties.

5.90 The reasons for the occurrence of the flood are not simple enough to comprehend in its true perspective. The short duration intense rainfall seems to create conditions leading to flood. The peculiar physiograpbic set up of Kerala with abrupt fall in slope from the Western Ghats to the midlands and the high rainfall pattern spread over two seasons and that too concentrated in a

few days, are the major factors which make the state vulnerable to heavy floods of a recurring nature.

5.91 Flood proofing and identifying the flood prone areas are more important in managing the flood. Basin wise studies are necessary for finding out the causes of occurrence, intensity, duration etc. of flood. A basin wise study has been initiated by the WRD in collaboration with KSREC, State Land use Board to find out the causes and intensity of flood. The study has been initiated in 3 basins viz., Neyyar, Pamba and Achancoil which are vulnerable to flood. The study in Neyyar basin has been completed and that in other basins are progressing. Traditional ways of construction of retaining walls, embankments, lay out of field channels etc. are followed even now for flood protection.

5.92 At the State level during the year under report, an amount of Rs 1.52 crores has been spent for protection of an area of 752 ha. of land from the ravages of flood. The cumulative area brought under flood control was 60309 ha. as on 3/2005

Coastal Zone Management

5.93 Coastal erosion is affecting most of the coastal states. The situation in Kerala is also not different. Kerala has a long coastal stretch of 590 kms. and more than half of it is subjected to sea erosion. Unlike other parts in the country, Kerala seacoast is thickly populated and as a result the loss due to sea erosion is relatively very high.

5.94 Construction of sea walls continued to be the sole intervention for coastal zone protection. In the area of protection of seashore, modern technologies like geo textiles, polyethylene fabrics/sheets, nourishment of foreshore with biomaterials, etc. are emerging. During 2004-05 an amount of Rs.2.88 crores has been spent to construct 1.05 km. of new sea wall and for reformation works in 0.63 km. Out of the total coastal stretch of 590 kms. about 386.2 Kms has been protected by constructing new sea walls and reformed 113.54 Km. of old sea walls spending an amount of Rs. 275.17 crores upto 31.3.2005. The Eleventh Finance Commission has provided Rs.50.00 crores for anti sea erosion works for constructing 15.89 km of new seawall and reformation of 20.14 km. for the period 2000-05. Out of this, 12.70 km of new sea wall was constructed and reformed 28.63 km. of old sea walls as on 31.03.2005 spending Rs.38.00 crores. The physical and financial achievement under flood management and coastal zone management during 2004-05 are given in Table-5.9

Table: 5.9
Financial and Physical Progress of Flood Management and Coastal Zone Management Programmes during 2004-05

(Rs. lakhs)

Sl. No	Item	Financial Achievement	Physical Achievement	Cumulative Physical achievement as on 3/2005
1	Flo[illegible]	152	752 ha	60309 ha
2	Anti-Sea Erosion Works) New sea-wall constructed) Reformation of old & damaged sea-wall	[illegible]	1.05 km. 0.63	386.21 km. 113.54 km

Source: Water Resources Department

5.95 The Twelfth Finance Commission has awarded Rs.175 crores for the construction, maintenance and reformation of the sea walls. Kerala Coast is subject to severe erosion, which undermines the valuable coastal eco system and affects the lives of millions of people. Nearly 100 Kms. coastal zone, prone to severe sea erosion needs to be urgently protected on a long term basis. The amount allotted is for construction and reformation of sea walls for the protection of the coastal area and for establishing permanent bench marks in the coastal area and conducting pilot studies using new techniques.

5.96 The havoc caused by the tsunami towards the end of December 2004, has brought to focus the stable question of implementation of the coastal zone regulations, safe methods of rehabilitation, use of methods other than sea-wall for protection, as for example, promoting vegetation, mangroves, sand management etc. The Ministry of Water Resources has carried out relief works in Tsunami affected areas. In Kerala, preliminary studies of the affected area have been carried out. The officers worked jointly with the State Ground Water Department for site selection for drilling, electrical logging and evolving suitable well designs. 15 sites were selected jointly with State agencies for construction of wells by KWA.

5.97 A seminar on Tsunami and Coastal protection was conducted under the auspices of Kerala State Council for Science, Technology and Environment in association with CESS to have a re-look at the coastal engineering strategies followed for the Kerala coast. Some of the recommendations came out of the presentation and discussions of the seminar are given in Box: 5.8.

BOX: 5.8

Recommendations emerged in the Seminar on Tsunami and Coastal protection

- ( ) The management and protection of the Kerala Coast need to be reviewed in the background of the different types of hazards like monsoon and waves, cyclones, floods, sea level rise, earthquakes, etc. and not confined to the Tsunami alone.
- ( ) The protection of the coastal areas need not be always by structural means such as sea walls, groins and offshore break waters. Soft methods like beach nourishment bio-shield, buff zones, sand dune, artificial reefs etc. may be adopted wherever appropriate.
- ( ) Coastal protection using sea wall along the Kerala Coast shall be only in essential situations where protection of vital installations are involved.
- ( ) The CRZ regulations may be implemented strictly for the safety of the people.
- ( ) Coastal vulnerability zone for frequent hazards such as annual floods, coastal erosion etc. may be identified for restricting developmental activities.
- ( ) Integrated Coastal Zone Management plans may be prepared for the coastal areas taking into account both the sea and land proximities and their vulnerability to hazards, livelihood security of the people and other social,, economic and infrastructure requirements of the population.
- ( ) Kerala should have additional monitoring infrastructure like seismic stations, tide gauges, wave and current monitoring systems along its coast for hazard preparedness and early warning.

Source. CESS, KSTEC

Command Area Development

5.98 The Command Area Development Programme was launched with the main objective of bridging the gap between the irrigation potential created and utilised and improving agricultural production and productivity in the irrigation commands. The programme was restructured in 2003-04 and renamed as Command Area Development and Water Management Programme.

5.99 The restructured programme retains the components of the existing schemewhich have been found to be beneficial to the farmers. include a few new components considered necessary for correction of deficiencies in the irrigation system and delete those components which have lost their utility overtime.

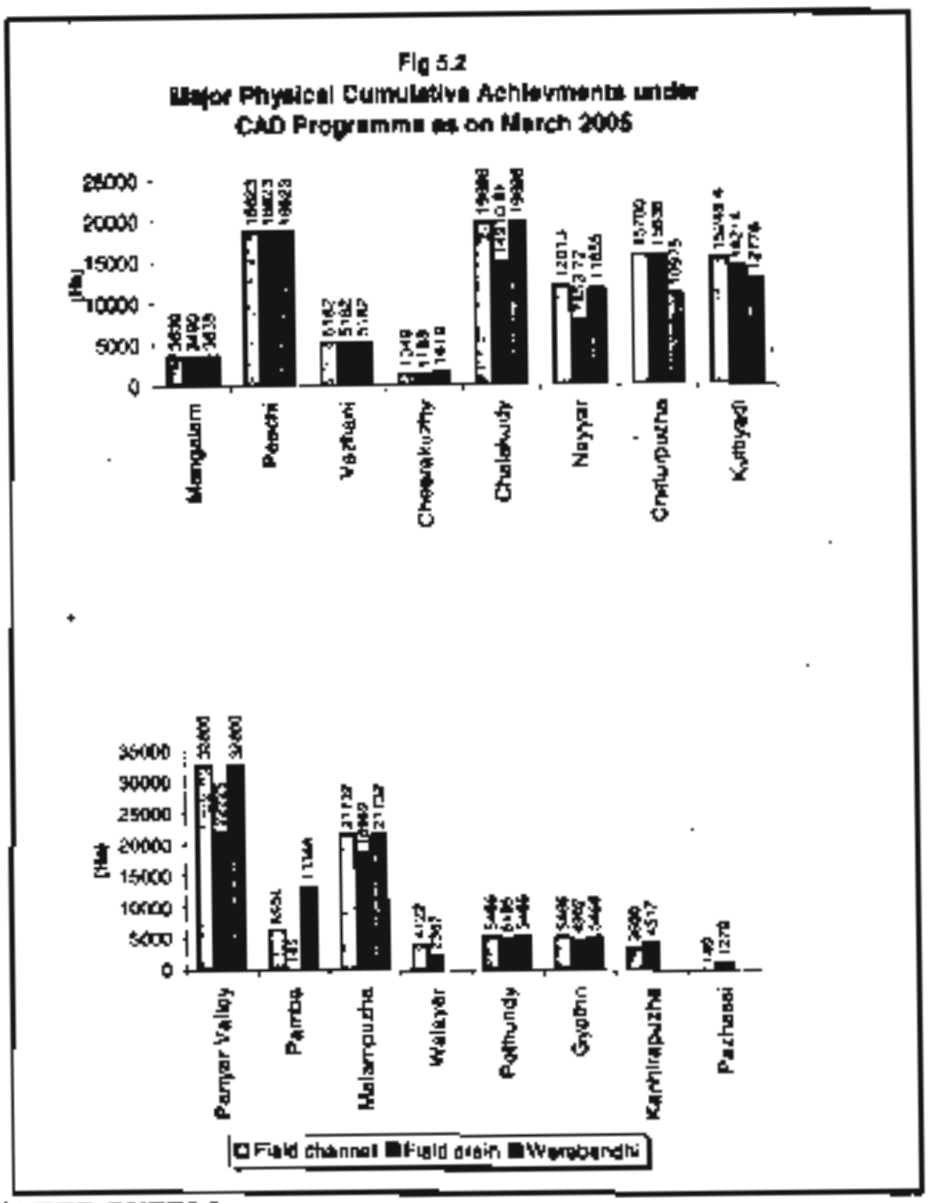
5.100 The main activities of Command Area Development Authority include construction of field channels. field drains, enforcement of warabandhi and reclamation of water logged areas. The Command Area Development (CAD) activities were carried out in the 16 completed irrigation projects. namely Malampuzha, Mangalam, Pothundy, Walayar, Cheerakuzhy, Vazhani, Peechi. Chalakudy, Neyyar, Gayathri, Pamba, Periyarvalley, Chithurpuzha, Kuttiyadi, Pazhassi and Kanhirapuzha with a total ayacut of 2.03 lakh ha. CADA programmes are implemented with financial assistance from Government of India

5.101 Government of India had directed to restructure the CAD programme from the 3rd year of the Tenth Plan onwards in the ongoing four projects namely Pamba, Periyarvalley, Kanhirapuzha and Pazhassi. Detailed project reports for these projects for the restructured CADWM activities were approved by Government of India. Finalisation of the detailed project reports of Kallada and Muvattupuzha projects are nearing completion. As part of reform initiative in the new CADWM programme new components like renovation of tanks and system correction are included.

5.102 Proposals for restoration of tanks of Palakkad and Pathanamthitta district were submitted and Government of India had sanctioned Rs.1.38 crores for the restoration of 10 tanks in Palakkad district proposal of the restoration of tanks in Pathanamthitta district under consideration of Government of India.

5.103 The progress during 2004-05 was not at all encouraging. The achievement recorded during 2004-05, include construction of field channels in 1998 ha; drains to benefit 6156 ha. adaptive trials in 10 ha; 83 training programmes, bench mark and evaluation studies in 2302 ha. The work on reclamation of water logged areas were done in 1033 ha and three evaluation reports were also published. The major physical cumulative achievements are given in Appendix - 5.7. The cumulative achievement of the main activities of CAD programmes of all projects are represented in Fig.5.2

5.104 Physical achievements of the existing CAD programme during 2004-05 are given in Appendix: 5.6



DRINKING WATER SUPPLY

Coverage

5.105 In Kerala 82.59 per cent urban and 62.24 per cent rural population have been covered by piped water supply by 2004-05. The overall water supply coverage is 67.52 per cent as against 65.2 per cent during 2003-04. The rural - urban coverage during 2003-04 was 60 per cent and 80 percent respectively. During 2004-05 additional population covered with protected water supply was 7.43 lakh. Out of it 66887 (9%) were Scheduled Caste and 8175 (1%) were Scheduled Tribe population.

5.106 District-wise overall coverage of water supply varies from 89.9 per cent in Ernakulam to 49.2 per cent in Kozhikode. In rural coverage also Ernakulam stands top with 91.3 per cent and Kozhikode is at the bottom with 34.9 per cent. Urban coverage is highest in Kottayam district with 97.6 per cent and lowest in Wayanad with 50.1 per cent. District-wise rural - urban population covered by piped water supply as on 1.4.2005 is given in Appendix 5.9.

Habitation-wise Status of Water Supply Coverage

5.107. According to a survey conducted by the Rajiv Gandhi National Drinking Water Mission in 1992, out of the 9776 habitations in the state, 2289 habitations were non covered, 7422 were partially covered and 52 habitations were fully covered. Thirteen habitations were in inaccessable forest areas and not covered. Coverage of Water Supply has been extended to all habitations in the state by 2004 and the number of fully covered habitations increased from 2125 in the year 2004 to 2365 in 2005. Year-wise coverage of water supply in habitations is given in Table 5.10

Table 5.10
Habitation-wise Coverage of Water Supply

Year	Fully Covered	Partially Covered	Non Covered	Forest Area
1	2	3	4	5
2000-01	1994	6964	805	13
2001-02	2091	6889	783	13
2002-03	2091	7444	228	13
2003-04	2125	7638	0	13
2004-05	2365	7398	0	13

5.108. Though coverage of water supply has been extended to all habitations by 2004, in 7398 habitations the supply of water is less than the stipulated norm of 40 litre percapita per day (lpcd).Table 5.11 shows the supply level of water per day.

Table-5.11
Habitation-wise Water Supply Level as on 1.4.2005

Quantity of Supply	Habitation (Nos.)
Below 10 lpcd	Nil
Between 10 lpcd and 20 lpcd	4498
Between 20 lpcd and 30 lpcd	2155
Between 30 lpcd and 40 lpcd	745
Above 40 lpcd	2365
Non Covered Forest Areas	13
Total	**9776**

Water Supply Schemes in Operation

5.109 Kerala Water Authority has 1895 water supply schemes in operation as on 1/4/2005. It consists of 65 Urban schemes, 952 Rural Multi Panchayat Schemes and 878 Rural single Panchayat Schemes. During 2004-05, 40 schemes have been commissioned. Of which 6 are urban and 34 are rural. District-wise details of water supply schemes in operation are given in Appendix.5.10

Service Connections and Street Taps

5.110. Kerala Water Authority has 9.77 lakh service connections and 1.83 lakh street taps as on 1.4.2005. This is against 9.35 lakh service connections and 1.80 lakh street taps as on 1.4.2004. It shows that 0.42 lakh service connections and 0.03 lakh street taps were provided newly during 2004- 05.Out of the total service connections, 9.07 lakh (92.8%) are domestic and 0.70 lakh (7.1%) are non domestic. Out of the total street taps, 1.44 lakh (78.3%) are in rural areas. Category- wise service connections and street taps as on 1. 4. 2005 is given in Table 5.12 and District-wise details are given in Appendix 5.11.

Table-5.12
Service Connections and Street Taps by Kerala Water Authority as on 1. 4 . 2005

Sl. No.	Category	Number
1	Service Connections	
	(i) Domestic	9,06,617
	(ii)Non Domestic	69,852
	(iii)Industrial	855
	Total	**977324**
2	Street Taps	
	(i) Rural	1,43,519
	(ii)Urban	39,712
	Total	**1,83,231**

Water Tariff and Revenue

5.111. The existing Water Tariff rate in Kerala was fixed in 1999 and it is given in Appendix 5.12. Total revenue collected from water charges during 2004- 05 is Rs. 115.23 crore as against Rs.115.68 crore during 2003-04. Out of the total revenue collected during 2004-05, Rs.112.06 crore (97.25%) was from service connections and Rs.3.17 crore (2.75%) was from street taps. During 2004-05, income from street taps has shown a sharp decline to Rs.3.17 crore from Rs.32.59 crore in 2003-04. Similarly out of the total income from water charges Rs.82.65 crore (71.7%) was from Urban Schemes and Rs.21.49 crore (18.7%) from Rural Comprehensive Schemes and Rs.11.09 crore (9.6%) from Rural Single Panchayat Schemes. Details of income from water charges from 2000-01 onwards are given in Appendix 5.13

Arrears of Water Charges

5.112. As on 1-4-2005 dues from various category of consumers amount to Rs.746.85 crore. Out of it Rs.573 crore (76.72%) is from Local Governments. Table-5.13 shows category-wise arrears of water charges

Table –5.13
Category-wise Arrears of Water charges (as on 1-4-2005)

Sl.No.	Consumer Category	Amount (Rs.in crores)	Percentage
1	Domestic	54.43	7.29
2	Non Domestic	100.09	13.40
3	Industrial	19.33	2.59
4	Panchayats	286.00	38.29
5	Municipality	159.00	21.29
6	Corporation	128.00	17.14
	Total	**746.85**	**100.00**

Computerisation in Kerala Water Authority

5.113. Kerala Water Authority is implementing computerisation with the assistance of GOI. 28 revenue units of KWA covering 60 percent of the total consumers at TVPM, Kollam, Kochi, Kozhikode Corporations and Alappuzha, Kottayam, Perumbavoor, North Paravoor, Thrippunithura, Aluva, Kalamassery, Palakkad and Kannur Municipalities were computerised and bi-monthly billing systems implemented. Spot billing system is implemented in TVPM and it is proposed to extend in other parts of Kerala in stages. A centralised Web Enabled billing and collection system is under development and is decided to be implemented in Thiruvananthapuram, connecting all the 8 revenue centres under PH Division, Thiruvananthapuram and Govt. Friends Centre. A master plan envisaging water supply schemes and sewerage schemes including project management has been approved and as per the master plan all the offices of KWA will be connected by a network. Action is being taken to implement the master plan with JBIC/GOI assistance.

Plan and Non- Plan Expenditure of Kerala Water Authority

5.114 Total expenditure of Kerala Water Authority was Rs.468.32 crore during 2004-05. Out of it Rs.173.08 crore(36.96%) was under plan and Rs.295.24 crore(63.04%) was under non-plan. Under non- plan 38.6 percent is utilised for salary and establishment, 30.5 percent for power and 11 percent each for operation and maintenance and for payment of interest on loans. Category- wise expenditure of Kerala Water Authority during 2004-05 is given in Table 5.14 and category- wise plan and non- plan expenditure of Kerala Water Authority for the last ten years is given in Appendix 5.15.

Table 5.14

Plan and Non-Plan Expenditure of Kerala Water Authority –2004-05

Sl. No.	Category	Expenditure (Rs. in crores)
	A. Plan	
1	State Plan	95.90
2	ARP Schemes	41.57
3	LIC/HUDCO Aided Schemes	15.00
4	Others(AUWSP- Central share, PMGY and JBIC	20.61
	Sub Total	**173.08**
	B. Non- Plan	
1	Salary & Establishment	113.95
2	Power Charges	90.00
3	Operation and Maintenance	33.5
4	Repayment of Loans	19.26
5	Interest on Loans	32.73
6	Others	5.80
	Sub Total	**295.24**
	Grand Total	**468.32**

Ongoing Water Supply Schemes

5.115. Considering the need for extending the coverage of protected water supply in the state, Kerala Water Authority is implementing schemes with loan assistance from funding agencies like JBIC, LIC, HUDCO, NABARD etc. in addition to state funded and centrally sponsored schemes. Altogether 989 water supply schemes consisting of 938 rural and 48 urban schemes are under execution. District- wise and category-wise details of them are given in Appendix.5.16.

Accelerated Urban Water Supply Programme (AUWSP) Schemes

5.116. To provide safe and adequate drinking water supply in census towns having population less than 20,000, Government of India introduced the AUWSP in 1993-04.Government of India grant is 50 % of the estimated cost and state government has to met the remaining 50% including 5% beneficiary/local body contribution. Benefited community should be responsible for O&M of the assets created under the programme. So far 9 schemes were sanctioned under this programme. Out of these one scheme has been commissioned and the works of other schemes are in progress.

Accelerated Rural Water Supply Programme (ARWSP)

5.117. Under ARWSP works of 100 schemes are in progress. These schemes are designed with a per capita demand of 40 lpcd and implemented with 100% assistance from Government of India.

LIC and HUDCO Aided Water Supply Schemes

5.118. Rural and Urban water supply schemes are being implemented with LIC loan assistance from 1967-68 onwards. Rs.319.57 crore has so far been received as loan from LIC and 294 water supply schemes have been completed. There are 72 rural water supply schemes and 33 urban water supply schemes under different stages of implementation with LIC aid.

5.119. HUDCO has so far provided loan for 18 schemes and out of these, 13 schemes have been commissioned. Total loan sanctioned for these schemes is Rs.157.27 crore and out of it Rs.119.71 crore has been released.

JBIC Assisted Kerala Water Supply Project

5.120 A package of five water supply schemes was approved for loan assistance by the Overseas Economic Co-operation Fund (OECF) of Japan (now the Japan Bank for International Co-operation) in 1996. The objectives of the project are to augment and rehabilitate water supply systems of two urban regions namely Thiruvanathapuram and Kozhikode and to construct water supply systems for three rural regions namely, Meenad, Cherthala and Pattuvam including their adjoining villages. The largest ever Water Supply Project in the state when completed will ensure drinking water to a population of about 43 lakh in the benefited area spread over five districts The total estimated cost of the project is Rs. 787.45 crore. Out of it external assistance is Rs. 1519.38 crore and state share is Rs. 268.07 crore.

5.121. As per the Loan Agreement, the project was proposed to be commenced in 1997 and completed by 2003. However the appointment of consultants for implementation of the project, a mandatory pre-requisite as per the Loan Agreement, had been inordinately delayed and the project could not take off as per the proposal. The selection procedure for appointment of consultants started afresh in May 2002 and agreement has been executed with the selected consultants only on 4-8-03. The consultants commenced their work from 1[illegible]/2003. Govt. of Kerala [illegible] established a fast track project implementation mechanism to speed up various approvals and to remove bottlenecks in project execution. As per the revised schedule the project

is targeted to be completed by 2007. During 2005-06 an outlay of Rs. 440 crore is provided for this project

Present Status

5.122. After commencement of the consultancy work, detailed topographical and geotechnical investigations have been carried out and the detailed design of various components of all the five schemes like Intake and Pumping Stations, Water Treatment Plants, Transmission Systems, Service Reservoirs and Distribution Network have been completed. The total project has been proposed to be executed in 28 contract packages, of which 11 are ICB packages and 17 are LCB packages. Pre qualification of bidders for all the packages has already been completed and tendering process has also begun.

Kerala Rural Water Supply and Sanitation Project (Jalanidhi)

5.123. The World Bank loan assisted Kerala Rural Water Supply and Sanitation Project (Jalanidhi) was conceived in mid 1999 . Project Implementation Plan prepared and project appraised in mid 2000.The agreement with the World Bank was signed on 4th January 2001.The government has also created an autonomous institution 'Kerala Rural Water Supply and Sanitation Agency (KRWSA) to implement this project. The project is expected to cover three lakh households, benefiting a population of over 15 lakh in the selected Grama Panchayaths. The project has been designed as a demand responsive project, with a community driven development approach in implementation. The project integrates water supply with sanitation, health promotion, environment management and ground water recharge measures.

5.124 The overall development objective of the project is to improve the quality of rural water supply and environmental sanitation. The specific development objectives of the project are : (a)demonstrate the viability of cost recovery and institutional reforms by developing, testing and implementing the new decentralised service delivery model on a pilot basis and (b) build the state's capacity in improved sector management inorder to scale up the new model state wide.

5.125. The Jalanidhi project originally proposed to implement in about 80-100 Grama Panchayaths in four districts of Kerala (Thrissur,Palakkad, Malappuram and Kozhikode),at an estimated cost of Rs.451.40 crore, over a period of six years from 2001.

5.126 During the Mid Term Review of the project in 2003, it was found that the project is achieving its target at a lower cost. Hence the estimates were revised and also decided to scale up the project to other districts. As such the total revised estimate of the project is Rs.392crore. As per the revised plan, by the end of 2006, 92 Grama Panchayaths spread over Thrissur,Palakkad, Malappuram and Kozhikode and 18Grama Panchayaths spread over the remaining 9 districts, 2 Grama Panchayats from each district, excluding Alappuzha will be covered under this project.

5.12 The project also assigns equal weightage to building up the community's awareness on sanitation and hygiene and its relation to water. Training of 336940 person-days has also been imparted to the beneficiaries for the future management of the projects by the society themselves.

Activity wise Present Status of Implementation

5.128. Panchayaths under the project are selected in batches of approximately 15-20 panchayaths per batch. Batch-I schemes were already completed. Batch II schemes are almost completed and partially handed over to Beneficiary Groups. Batch III schemes are at the fag end of implementation.Batch 1V, Batch V and schemes under scaling up of the project to other districts are in planning phase. Physical achievements in major components of the project up to 31-10-05 are given in Table.5. 15

Table. 5.15
Physical Achievements as on 31-10-05

Sl. No	Name of Component	Unit	Target as on 31/12/06	Achievement as on 31/10/05	Percentage of Achievement
1	2	3	4	5	6
1	W.S.Ss Commissioned	Nos.	2500	1568	63
2	Latrins (New+ Conversion of Un sanitary Latrins)	Nos.	48000	66662	139
3	Environment Management Works (soak pits + compost pits)	Nos	26667	56853	213
4	Drainage	KM	178	43.05	24
5	Ground Water Recharge Schemes	Nos.	562	545	97

5.129. There are 4193 active beneficiary groups as on 31-10-05. 54% of the Jalanidhi members are drawn from families living below the poverty line and 17% from SC/ST households. As on 31-10-05. 1568 Water Supply Schemes, managed by 1644 Beneficiary Groups, have been completed . At present, the average maintenance cost of a water supply scheme comes Rs. 37 per month per family, and the production cost of water per kilo litre is Rs.3.32. District-wise details of number of schemes, number of connections and population covered by schemes implemented by KRWSA is given in Appendix.5.17

Rain Water Harvesting (RWH)

5.130. 1864 Rain Water Harvesting (RWH) structures have been constructed so far through Jalanidhi Project. In order to reduce the operation and maintenance cost and to reduce the exploitation of ground water level, small rain water harvesting structures coupled with the main source is also being implemented through Jalanidhi Project. 1797 such structures have been constructed so far. In addition to this 465 RWH structures of 10000 litres capacity and 55 big RWH structures have been constructed under RWH campaign of Government of Kerala. KRWSA is the nodal agency for the state sponsored Rain Water Harvesting Campaign.

Comprehensive Schemes

5.131. Under Jalanidhi, four large surface based comprehensive water supply schemes, two in Aliparamba GP of Malappuram and one each in Pananchery (Thrissur) and Pothukal GP (Malappuram) were taken up and works of them are in progress.

Ground Water Recharge (GWR)

5.132. This project is designed in keeping with the change in Government perspective on a holistic approach to water resource management. Thus source recharge measures have been inbuilt in to the project design. GWR activities have been done in 545 BGs that are amenable for point recharge. Comprehensive GWR activities have been planned with the aim to implement GWR activities in the project panchayaths identified as 'difficult areas' which show a drop in ground water levels and face acute drought during peak summer.

Transfer of Single Panchayath KWA Schemes

5.133. In keeping with the government order of 1998 for transferring all single panchayath KWA schemes to the GPs, Jalanidhi has facilitated to transfer 172 KWA schemes to panchayaths and has been successful in transferring 53 of these, after necessary rehabilitation, to the user communities themselves.

CHAPTER - 6

ENVIRONMENT

The integration of environmental considerations into development policies, plans and projects is particularly critical, since as many investment decisions are made in short period of time but affect environment and outcomes for many years to come. International experience has clearly demonstrated that the *'grow now clean up later'* approach is costly in the long run while environmental measures can be more easily incorporated in new investments. For growing sectors like tourism environmental quality is a *sine qua non* for maintaining market share of increasingly indiscriminating clientele. Key priorities in the coming years for the conservation of environment should include enhancing urban environmental conditions including air quality, access to safe drinking water, sanitation, waste management and improving governance of national resources with a focus on biodiversity conservation.

World Environment Day

6.2 World Environment Day, commemorated each year on 5 June, through which the United Nations stimulates world wide awareness of the environment and enhances political attention and action. The world Environment Day theme selected for 2005 was 'Green cities' and the slogan was 'plan for the planet'. The city of San Francisco hosted the Day.

6.3 The theme for World Environment Day 2006 is 'Deserts and Desertification'. The agenda is to give a human face to environmental issues, empower people to become active agents of sustainable and equitable development, promote an understanding that communities are pivotal to changing altitudes towards environmental issues, and advocate partnership which will ensure nations and peoples enjoy a safer and more prosperous future. World Environment Day is a People's event with colourful activities such as street rallies, bicycle parades, green concerts, essays and poster competitions in schools, tree planting as well as recycling and clean up campaign.

Coastal Zone Management

6.4 The Government of India notification in 1991 declared 500m of land from the High Tide Line as a Coastal Regulation Zone (CRZ) on the coasts of seas, estuaries and backwaters. The State Coastal Zone Management Plan has set the regulation zone to 100 m or wherever the width of the kayal is less than 100m, a distance equal to its width. Activities such as starting of new industries, dumping of wastes, reclamation etc. are prohibited. Construction of bridges is permissible. Environmentally sensitive areas like mangrove ecosystem, fish spawning and breeding areas are protected by prohibiting all types of construction activities.

6.5 Kerala State Coastal Zone Management Authority (KCZMA) has been constituted in January 2002 for a period of three years under the Chairmanship of Chairman, State Council for Science and Technology with nine members. The authority has the powers to examine the proposals for changes or modifications in classification of coastal regulation zone areas and in the coastal zone management Plan and making specific recommendation to the National Coastal Zone Management Authority. The KCZMA examines application for development projects in the coastal areas and issue clearances for the deserving cases based on the CRZ Act 1991 and its

subsequent modifications. It also deals alleged violations of the provisions of the Act and making specific recommendations to the National Coastal Zone Management Authority, Govt. of India.

6.6 The Ministry of Environment and Forests has consituted an expert committee headed by Dr. M.S. Swaminathan in June 2004 to review the CRZ notifications in the light of the findings and the recommendations of previous committees, judicial pronouncements and representations from various interest groups. Major recommendations are shown in BOX : 6.1

BOX : 6.1

Major recommendations of the Committee to Review the CRZ notification 1991

- CRZ notification needs to be strengthened and made more scientific in its overall approach keeping in mind, both the needs of the Coastal communities including fishing, agricultural and the conservation of the coast
- The strategies for disaster preparedness, like Tsunami shall comprise emphatic prohibition on construction of any permanent structures within the vulnerable areas, except for those required to protect the community such as disaster shelters, infrastructure for rescue and relief, sea walls, where essential, to prevent erosion and ingress of sea water, look out posts etc.
- There shall be code of conduct for coastal management and ecological security including a package of rewards for initiatives in the areas of landward and seaward oriented buildings, energy efficient construction, use of non-conventional energy sources, rain water harvesting, effluent treatment and use of biodegradation material.
- The coastal ecological security literacy programme should bring to the attention of builders the opportunities now available for mainstreaming ecology in building design and construction.
- Sponsor an all India Coordinated Research Project for sustainable and integrated Coastal Zone Management in collaboration with department of Ocean Development.
- There is a need to identify and notify areas such as sensitive areas, hotspots, potential land based and sea based mariculture sites etc The mandated institutions may prepare the GIS maps.
- A network of Rural Knowledge Centres should be established all along the coast.
- All activities that are permissible within the Coastal Zone need to be allowed only after a comprehensive EIA and safety/disaster planning analysis.
- Instead of building concrete sea walls, it will be advisable to initiate a programme of raising bio shields and coastal green belts. Construction of sea walls can be restricted to areas which are very vulnerable to sea erosion.
- Sand mining is the foremost factor leading to erosion of beaches. All natural barriers such as coral reefs, mangroves and sand dunes must be protected at all costs.
- All locations where shorelines advances towards the ocean, due to shore defense measures

undertaken by the Government, construction of huts and houses should be totally banned.

- Integrated fish processing units should be allowed after incorporating adequate environmental safety measures. The present notification permits construction of fishing harbours and jetties while allied facilities are not permitted.
- The role of Coastal Zone Management Authorities needs to be expanded.
- For implementing the National Coastal Management Programme, Central Government should strengthen the technical and human resource capacity.

Source: MOEF,2005

6.7 On the whole, Coastal Zone Management has been very weak and ineffective so far due to high density of population along the coastline, economic activities and so on. The unprecedented Tsunami tragedy of December 26, 2004 has brought the need for urgent attention to this important matter.

Coastal Pollution

6.8 The major activities that are responsible for coastal pollution in India are discharge and dispersal of untreated domestic and industrial wastes, discharge of coolant waters, harbour activities such as dredging, cargo handling, dumping of ship wastes, spilling of cargo chemicals, oil transport, fishing activities etc. Domestic wastes are discharged mostly in untreated conditions due to lack of treatment facilities in most of the cities and towns. The state wise generation of waste water and treatment along the coastal states are shown in Table-6.1 Compared to waste water generation, the treatment facility available is quite low in Kerala.

Table-6.1

State & Union Territory-wise Wastewater Generation, Treatment and Disposal in Cities and Towns along the Coast

State	No. of Cities/Towns	Wastewater Generated (MLD)	Treatment Facility Available (MLD)	Untreated Waste water Disposed (MLD)
Andhra Pradesh	8	203.90	0.00	203.90
Goa	3	17.00	38.50	0.00
Gujarat	13	329.06	76.00	253.06
Karnataka	3	72.00	27.50	4.60
Kerala	**19**	**326.45**	**27.50**	**298.95**
Maharashtra	2508.6	126.00	2382.64	
Orissa	4	114.90	0.00	114.90
Tamil Nadu	12	488.02	226.01	262.02
West Bengal	6	1466.0	0.00	1466.08
Andaman & Nicobar Islands	1	6.00	0.00	6.00
Pondicherry	2	28.94	0.00	28.94
Total	**77**	**5560.90**	**521.51**	**5060.68**

MOEF 2005

Wet land Conservation

6.9 The global wetland area is estimated at 7 to 9 million Km^2 (4-6 per cent of the land surface of the Earth).The total wetland area of the country is about 4.1 million hectares MoEF has prepared a Directory of Wetlands covering 2107 natural and 62253 man made wetlands occupying an area of 4.1 million hectares and information on the status of 183 wetlands of national/international importance was prepared. There are 32 natural and 2121 man made wet lands in the State. The notified wet lands in the country are shown in the Appendix 6.1

6.10 The changes in the natural landscape through resource extraction, conversion for crop production, urbanisation , altered water balance and hydrological regimes have influenced the state of wetlands in the state. Wetlands have fragile ecosystems and they require more concerted attention than to rivers and stream basins. Various ecological problems occur in wetlands such as eutrophication, contamination by toxic chemicals, accelerated sedimentation, excessive water diversion, fish resource depletion, encroachment and habitat alteration. While the functional and economic values of wetlands are increasingly recognised, development projects continue to lend directly or indirectly to their loss..

6.11 Conservation of wetlands was initiated in 1987 in India with the objective of assessment of wet land resources, identification of wetlands of national importance, promotion of R&D activities and formulation and implementation of Management Action Plans (MAP) of the identified wetlands.

6.12 India is a signatory of the Ramsar Convention, which calls for the conservation of the ecosystems while ensuring benefits to the local communities. The real cause appears to be the complexities of implementation of the 'total protection' approach to wetlands, which is the standard norm for terrestrial protected areas. The National Committee on Wetlands and State Committees have a major role to play to protect wetlands in association with line departments, NGOs and PRIs, with appropriate co-ordination mechanism.

6.13 A state level steering committee has also been constituted. Sasthamcottah, Vembanad and Astamudi are the notified wet lands under Ramsar convention. Even though MAPs have been prepared, the implementation is quite slow and the state could not even get the full sanctioned amount from Government of India. Kerala State Council for Science Technology and Environment has taken up projects for Wetland Management in the state of Kerala. Accordingly, a wetland conservation and management programme is being executed for the Sasthamcotta and Ashtamudi wetland system. A management action plan was formulated and implementation of the same was being done by the District Collector, Kollam.

6.14 State has to prepare action plans for wetland project implementation. Immediate steps should be taken to protect them by changing their legal status to that of a protected category. Participatory methods are to be adopted with the involvement of PRIs, NGOs and local communities in the co-management of wetlands. The need for a proper management of existing wetlands should be a priority of the state.

Bio - diversity Conservation

6.15 The developing countries in the tropical and sub-tropical regions are richer, in terms ot bio-diversity, but now worst affected with bio diversity loss. India, one of the 12 mega – diversity countries of the world is in the forefront of the global bio-diversity crisis. India stands

seventh in the World as far as the number of species contributed to agriculture and animal husbandry is concerned. The Convention on Biological Diversity, the adoption of TRIPS, and an increasing trend towards privatisation of agricultural research have necessitated a new and complex policy environment for bio-diversity conservation.

6.16 A National Biodiversity Authority has been set up at Chennai under the Biological Diversity Act 2002. The Act also provides for establishment of State level Biodiversity Management Committees. Detailed rules under the Act have been notified in April 2004.

6.17 **Kerala represents an epitome of the bio-diversity profile of the Western Ghats in India. The state is endowed with diverse types of eco systems, each supporting unique assemblage of biological communities, with an impressive array of species and genetic diversity. The state contains 95 per cent of the flowering plants and 90 per cent of the vertebrate fauna of the Western Ghats.**

6.18 It is expected that by 2030, $^{1}/_{3}$ rd of bio-diversity would be extinct or they would remain in isolated refugia of non-viable population which may enter into the vortex of extinction. During the 20th century, at least 50 plant species have become extinct in the country. Three species of birds – The *Himalayan Mountain Quail, Forest Spotted Owlet and Pink headed Duck* have become extinct. 69 bird species have been categorised as extinct. *Indian Cheetah* and *Lesser one-horned Rhinoceros* are the mammals which are extinct. *Malabar Civet* is on the threshold of extinction and 173 species have been listed as threatened. Among flowering plants, about 1500 species come under threatened categories.

6.19 The major obstacles to the conservation of bio-diversity are under valuation of living natural resources, ruthless exploitation of biological and genetic resources for profit, poor knowledge of species and eco-systems, insufficiency in using applied management practices, narrow focus of attention by conservationists and insufficient funding to institutions engaged in bio-diversity conservation. One of the challenges of bio-diversity conservation is to locate areas of high concentration of endemic species so that critical endemic plant site can get priority for conservation. Nearly 23 per cent of the total endemic flora species are in Kerala. Out of the 1272 such species, 102 species occur exclusively in Kerala. The 5 endemic genera exclusively occurring in Kerala are *Chandrasekhararia* (Kannur), *Haplothismia* (Parambikulam hills), *Limnopoa* (Marshy wet lands of Northern Kerala), *Kanjarum* (Silent valley and Palakkad regions) and *Silent valleya* (Silent valley and other areas of Paladdad) There are 3 hotspots of endemic centres in Kerala – Agasthyamala, Anamalai High Ranges and Silent Valley – Wayanad. The details are given in Appendix: 6. 3

6.20 Since Kerala has the highest population density, it is prudent on the part of the local institutions/ panchayats to ensure conservation and management of protected areas with the active participation of people right at the grass root level. The preparation of biodiversity registers at Panchayat level needs to be given top priority. The Biodiversity registers prepared by some of the Panchayats on pilot basis could be popularised for adoption by more local governments in the State.

6.21 The recommendations of State Environment Report on Biodiversity conservation are shown in BOX : 6.2

BOX : 6.2
Major Recommendations of State of Environment Report of Kerala

- The thrust for biodiversity conservation shall not be limited to few charismatic animals or economically important plant species. Instead, priority should be given to Keystone or Flagship species, whose survival will ensure the protection of many other associated species and sometimes the ecosystem itself. Here, special emphasis should be given to the aquatic and fresh water bidiversity, which are degraded and depleted at an alarming rate.

- More focused information on genetic potential of the State/s biodiversity, including that of human diversity, needs to be generated and the same may be preserved at cellular or DNA level, with the help of modern conservation tools like cryopreservation.

- An ecosystem/biodiversity cell or advisory group may be organised in all major development departments related to people, land and water, including the Pollution Control Board, to advise and monitor various programmes implemented by them.

- An exhaustive database on species, their population and ecosystems may be organised. Here the support of NGOs, students and trained youths can be utilised. The database should provide information regarding endangered species, their breeding behaviors, spawning grounds, periodic population assessment data, and so on.

- Captive breeding of endangered and threatened animal species and establishment of germplasm banks for preserving the genetic diversity of rare and endangered indigenous plan species should be encouraged.

- The protected area network, encompassing more vulnerable ecosystems, like freshwater, wetland and marine ecosystems, harboring critically endangered and threatened species, shall be expanded.

- Aqua ranching programmes should be implemented to enrich the population of aquatic organisms in natural water bodies and in situ conservation areas to sustain plant species. Also, give priority to aquatic biodiversity in the watershed development programmes.

- Assessment of the extent of damage caused to the indigenous biodiversity by the invasive or exotic species in freshwater, marine and land ecosystems should be made.

- Regulations should be strengthened and better technologies should be evolved to curtail excess and destructive exploitation.

- The environmental awareness programmes should be further strengthened.

Source: SOE, KSTEC, P. 135-137

Mangroves and Sacred Groves

6.22 The World wide mangrove area is estimated at not less than 1,70,000 sq.km. and there are some 60 species of trees and shrubs that are exclusive to the mangrove habitat. Mangrove swamps in India are seriously endangered ecosystem. The distribution of mangroves in different states is shown in the Appendix 6.2 On the recommendation of National Committee on Mangroves, 35 mangroves areas in the country have been identified for intensive conservation and management. Vembanad from Kerala is one of the mangrove area identified by the Ministry for intensive conservation. For sustained improvement and ecologically sustainable utilisation of coastal mangrove forest resources, it is essential to conserve the existing genetic wealth of mangroves as well as the genetic diversity prevailing within them.

6.23 In Kerala, mangroves are distributed along the fringes of backwaters and estuaries that are inter tidal zones of the Lakshadweep Sea. Mangrove formations are confined to mainly Kasaragod, Kannur, Kozhikode, Malappuram, Ernakulam, Kottayam, Alappuzha, Kollam and Thiruvananthapuram Districts in scattered bits (Table- 6.2).

Table-6.2
Mangroves in Kerala

District	Site	Area km^2
Ernakulam	Ernakulam & Mattancheri Channels (Thompumpadi-Murukkumpadam)	1.69
Ernakulam	Ernakulam & Mattancheri Channels	0.08
Kozhikode	Chittari Puzha & Anela Puzha (Mangad-Kollam)	0.34
Kannur	Dharmadam-Edakkad	0.26
Kannur	Dharmadam Puzha & Anjarakandi Puzha	2.46
Kannur	Valapattanam estuary (Valapattanam-Narat)	0.99
Kannur	Ramapuram Puzha	1.14
Kannur	Pazhayangadi estuary (Pattuvam Kuppam)	4.62

Source: ENVIS, KSCSTE

6.24 Potential areas stand fragmented and actual area is estimated to be less then 50 km^2 which only is the remnants of about 700 km^2 of mangroves which reportedly existed in Kerala earlier. The development of timber industry especially plywood, alternative land use and the establishment of fishing ports are the major reported sources for the degradation of the mangroves of Kerala. The mangroves are considered potential fish production sites providing breeding and nursery grounds for fishes and prawn. Moreover mangroves have innate potential to bind toxic chemicals and pollutants. Herons, storks, raptors and owls use mangroves as resting sites.

6.25 Under the Important Bird Area programme (IBA), the Bombay Natural History society has prioritised the list of IBAs in Kerala. Apart from the forest areas, only Kole wetlands in Thrissur and Malappuram districts are included in this list. The areas selected under the IBAs should be given more thrust in birds conservation programmes. Even though the mangrove area in the state is insignificant compared to national coverage, the shrinking area has to be protected.

6.26 There are 14 true mangrove species in Kerala, mostly belonging to Aegiceras, Avicenia, Brugiera, Ceriops, Kandelia and Rhizophora, whereas mangroves associated species are quite diverse and many of them are also common in the terrestrial habitats also. Suitable interventions in the co-system, like assisted natural regeneration and artificial regeneration are therefore needed urgently.

6.27 Action plan for the conservation of mangroves and strategy for its implementation to ensure community participation in conservation has to be prepared.

6.28 Sacred groves have been reported from Afro-Asian Countries like Ghana, Nigeria, Turkey and Syria etc. They are found in abundance in eastern and western parts of India and are known by various names, viz. Kavu (Malayalam) Sarppakkavu (Tamil), Pavithravana (Kannada) Devarais (Marathi), Orans (Rajasthani) etc. and have extent varying from about 10 sq. kms to a million sq. kms.

6.29 The state of Kerala from time immemorial has nurtured a very religious and aesthetic line of protection of sacred groves, which was intermingled with social ways and worship. Such sacred groves are to be protected from the angle of bio diversity also and the existing sacred groves are the only islands of conservation amidst vast stretches of degraded ecosystems apart from the forests.

Land degradation

6.30 Of the World's 1.9 billion hectares of land affected by soil degradation during the last 45 years the largest area (around 550 million ha) is in the Asia Pacific region. This constitutes about 19 percent of the regions total vegetated land.

6.31 According to the latest estimates, about 187.8 million ha (57% of land area) has been degraded in the country. Out of total estimated degraded land of the country, about 162.4 million ha is due to displacement of soil material by water and wind and 21.7 m ha. is due to insitu processes as salinity and water logging. The remaining 4 m ha. is affected by the depletion of nutrients. Soil erosion accounts for 87 per cent of the total degraded land in India. Non adoption of proper soil and water conservation measures, improper crop rotation and extension of cultivation on to lands of high natural hazards are some of the important reasons contributing to soil erosion.

6.32 . The annual loss of soil accounts to nearly 5 billion tonnes, of which 3.2 billion tonnes (64%) is contributed by highly eroded to very severely eroded areas such as Shiwalik hills, the Western Ghats, black and red soil areas and the north Eastern states. In more than three quarters of the area that suffers from soil erosion, productivity is lowered by 5 per cent to more than 50 per cent. Of the annual loss nearly 29 per cent is permanently lost to the sea, about 10 per cent is deposited in reservoirs thereby decreasing their storage capacity by 2 per cent annually and the remaining 61 per cent is merely displaced.

6.33 It is estimated that on an average annual rate of soil loss is at 16.35 tonnes/ha ICAR has initiated the preparation of soil erosion maps of different states using the Universal Soil loss equation. Soil nutrient mining results in serious soil health and ecological problems, which needs urgent attention. Municipal water, sledges, pesticides, industrial water etc. need to be used with utmost care to avoid the possibility of Soil pollution through heavy metals.

6.34 High erosion rates have resulted in the sedimentation of river banks, siltation of drainage channels, irrigation canals and reservoirs. The storage capacity of many reservoirs has been reduced drastically due to accelerated erosion. The Ganga and Brahmaputra carry the maximum sediment load, about 586 and 470 million tonnes respectively every year.

6.35 Land degradation in the State varies in nature and magnitude. The degraded land in the state is shown in Table-6.3. Around 9.5 lakh ha is prone to moderate to severe soil erosion in the state. The indiscriminate and unscientific soil and water management have made a major portion of land to be erosion prone. The undulating topography with high intensity of rainfall cause the high rate of soil erosion.

Table 6.3
Land Degradation in Kerala

Sl.No.	Category	Area (Lakh Ha)
1	Soil erosion – Moderate to severe	9.52
2	Control water logging and salinity	0.76
3	Degraded forest	1.98
4	Semi stream bank erosion	1.00
5	Land slides	1.00
6	Sea erosion	0.50
7	Total	14.76

6.36 The siltation rate of reservoirs in India has been estimated to be much higher than the values assumed at the time of designing. The results of sedimentation surveys in some of the reservoirs in the state showed that the reduction in capacity of various reservoirs ranged from 4.18 per cent in Pamba to 30.9 percent in Anayirankal reservoir.

Salinisation

6.37 Salt affected soils are widespread in the Arid, semi-arial and sub humid zones of the Indo-gangetic Plain. About 7 m ha. is salt affected, of which 2.5 m ha. represent the alkali soil in the Indo gangetic plain. According to FAO, the loss in crop production due to salinity in India accounts to 6.2 million tonnes.

6.38 Based on the location, extent and intensity of salinity, 3 types of saline soils are recognized in Kerala. They are : (1) Pokkali lands, known after the Pokkali cultivation; (2) Oorumundakan lands, known after the long duration variety of rice grown there and (3) Kaipad lands. The different types of saline land together constitute an area of about 30,000 ha

6.39 These areas are cropped with paddy once in a year from June-July to October-November, when the salinity level in the surface soils is brought below the critical level by Monsoon showers. However, when salinity is partially washed off by rain water and fresh water from rivers, the inherent acidity of these soils become more dominant. Reclamation of saline soils involve leaching and drainage. Traditional agricultural practices are followed in these lands. focussed action Plan has to be prepared to utilise the land on sustainable basis for crop production.

Mining and Quarrying

6.40 The various mining/quarrying activities include sand mining from the river channels and river bank areas, soil quarrying, hard rock mining, laterite mining, brick clay mining etc.

6.41 Unlike the rivers of our neighbouring states, the rivers of Kerala are too small in their size and resource capability. Sand mining changes the physical characteristics of the river basin, disturbs the closely linked flora and fauna and alters the hydrology and soil structure. Due to the non-availability of sand in the river channel, now the attention has been shifted to the riverbanks and flood plains. Flood plain mining in the paddy fields after removing the top clay layer will have a direct bearing on the local hydrological regime and ground water movements. A survey on the Neyyar basin shows that 20 per cent of the paddy fields have been altered for clay mining. Apart from the land degradation problems, clay mining also leads to lowering of ground water level. A study by CESS reveals that many of the fish fauna as well as other aquatic organisms of Ithikkara river is under threat due to loss of habitat, feeding and breeding grounds, decline of food, aggravated salt water ingression etc. resulted out of indiscriminate sand mining. The details of river sand mining from various river basins of the Greater Cochin region are given in Appendix-6.4.

6.42 Hard rock mining is also another environmental issue in many parts of the state. Since the hard rocks are not a renewable resource, its uncontrolled quarrying may end up in irreversible changes in the environment.

Water Quality

6.43 Water quality has been steadily degraded by a combination of factors, including saline intrusion, sewage and industrial effluents. and urban and agricultural run off. Biochemical Oxygen Demand (BOD) in Asian rivers is 1.4 times the World average and 1.5 times OECD levels. Dirty water and poor sanitation causes more than 500,000 infant deaths a year in the Asia-pacific region.

6.44 High fluoride concentration in ground water beyond the permissible limit of 1.5 ppm has come to stay as a major issue affecting a large segment of rural population to the tune of 25 million spread over more than 200 districts in 17 states in the country. The population at risk is estimated at around 66 million, Hand pump attached defluoridisation and iron removal plants have failed due to inappropriate technology, unsuited to community perception and community involvement.

6.45 The presence of fluoride in ground water in concentrations above permissible limits is reported in certain pockets of Attappady and Chittoor area of Palakkad and Alappuzha districts. Earlier study conducted in the area in 1985-88 also showed fluoride concentration in the range of 0.32 to 2.62 mg/l in deep tube wells which indicate stable presence of fluoride in ground water. The studies conducted by State Ground water department also confirmed the presence of high fluoride in Ground water. Apart from regular monitoring, minimisation of fluoride by mixing low fluoride water with high fluoride water from water supply wells, use of PVC pipes, to avoid corrosion and technologies developed by NEERI etc. could be followed in the region. The legal framework for regulatory withdrawals of ground water is now in place. The frequency of monitoring and number of monitoring stations also are not representative and adequate.

6.46 Water in various stretches of rivers like Periyar, Chaliyar and Bharathapuzha are polluted with various contaminants of domestic, agricultural and industrial origin. While colour and relatively high BOD are the reported problems in Chaliyar, traces of mineral oil and organic chlorine Pesticides and salinity on the stream side are the problems of Bharathapuzha.

6.47 The Central Pollution Control Board has been monitoring water quality in collaboration with State Pollution Control Boards at 784 locations in various states and UTs. Water quality monitoring results indicate that organic and bacterial contamination still continue to be critical sources of pollution in Indian aquatic resources. The unsystematic use of fertilisers coupled with improper waste management have affected the ground water quality in many parts of the country. Also recorded high concentration of heavy metals, fluoride and nitrates at different locations around the country. Over the last decade industrial waste and municipal waste have emerged as the leading causes of pollution of surface and ground water.

6.48 Under the National River Action Plan, certain major rivers with high or intermediate levels of pollution were identified by the CPCB. Pampa Action Plan is also included under the project. However the implementation of the action plan is very slow. In order to focus on urban lakes, the National Lake Conservation Plan was also initiated.

Ambient noise levels in Major Cities of Kerala

6.49 Measurement of noise levels were carried out in the Commercial Zones, and silence zones of Thiruvananthapuram Kochi and Kozhikode to assess noise pollution, with emphasis on traffic noise by CESS. The major findings of the study are shown in Box: 6.3

BOX : 6.3
Major findings of a study on noise pollution in Kerala

- Measurements were taken from 19 Commercial Zones and 2 Silence Zones in Thiruvananthapuram. The commercial Zones recorded a noise level of 81.3 db, which is 16.3 db above the permissible noise level. The Silence zone recorded 78.7 db which is about 28.7 db above the permissible level.

- Measurements were taken from 21 locations in Kozhikode, out of which five were Silence Zones and the rest in Commercial Zone. The average noise level in the Commercial Zone is 77.5 db, 12.5 db above the permissible level and the Silence area recorded 74.7 db, which is 24.7 db above the permissible level.

- Measurements were taken at 26 locations, out of which two were in Silence Zones. The average noise levels in the commercial Zone are 78.5 db, 13.5 db above the permissible limit. The Silence Zone recorded 76.55 db, which is 26.55 db above the permissible level.

- Special events like festivals, election campaign generate noise levels that are prohibitively above the permissible limits.

Source: J. Ind. Geophys, Union Oct. 2004

Industrial effluents

6.50 A number of industries situated on the banks of rivers and backwaters discharge their effluents into the wet land system. These effluents contain a large number of toxic ingredients such as acids, alkalies, heavy metals, suspended solids and a number of other chemicals. Among various industrial pollutants, heavy metals require special considerations due to their non degradable nature. Analysis of particulate metal content indicates high concentration of Zinc, Cromium etc due to industrial pollution in Kochi backwaters. Details of industries in Periyar river basin is shown in the Appendix 6.6 Highest concentration of heavy metals in sediments was observed during pre monsoon. Chromium content was higher in Ashtamudi and Vembanad and mercury content was high in Vembanad.

6.51 A recent study showed that pollution is concentrated among a few industrial sub sectors and that a sector's contribution to pollution is often disproportionate to its contribution to industrial output. Petroleum refineries, textiles, pulp and paper and industrial chemicals produce 27 per cent of the industrial output in the country, but contributes 87 per cent of sulphur emissions and 70 per cent of nitrogen emission from the industrial sector. Likewise, iron and steel and non-metallic mineral products, produce about 16 per cent of the industrial output, but account for 55 per cent of the particulate emission.

6.52 Environmental concerns have assumed significance in the recent years. Commensurate with industrial expansion, a strong regulatory mechanism is required to ensure minimum environmental standards. Pollution control efforts in 17 high polluting industries in various states is shown in Table 6.4. Out of the total 2301 large and medium industrial units identified in the 17 categories of highly polluting industries in the country, 1927 industrial units have installed the requisite pollution control equipments, 235 units have closed down and the remaining 139 units have yet to install the necessary pollution control facilities . Legal action has been taken against all defaulting industrial units. In Kerala out of of 43 units , 6 are closed and 37 are having adequate facilities to comply with the standards

6.53 The major causes of increasing air pollution are increasing energy demand and consumption, the use of poor quality fuels such as coal with high sulphur content, inefficient methods of energy production and use, increasing number of vehicles, traffic congestion, poor automobile and road conditions, use of leaded fuel, resulting in emission of sulphur dioxide, nitrogen oxides, suspended particulate matter, lead, carbon monoxide. Forest fires also contribute to the air pollution.

Table-6.4
State wise Summary Status in 17 Categories of highly polluting Industries, 2004-05

Sl. No.	State/Uts	Total No. of Units	Status (No. of Units)		
			Closed	Compliant	Defaulters
1.	Andhra Pradesh	26	29	240	0
2.	Assam	16	03	12	01
4	Bihar	46	19	27	00
5	Chandigarh	25	02	21	02
6	Goa	08	00	08	00
7	Gujarat	283	10	273	00
8	Haryana	107	24	69	14
9	Himachal Pradesh	11	00	11	00
10	Jammu & Kashmir	10	03	07	00
11	Jharkand	21	03	16	02
12	Karnataka	116	14	102	00
13	Kerala	43	6	37	00
14	Madhya Pradesh	78	15	61	02
15	Maharashtra	392	26	356	10
17	Meghalaya	01	0	01	0
20	Orissa	51	2	42	7
21	Punjab	102	17	58	27
22	Rajasthan	108	08	96	04
23	Sikkim	01	00	01	00
24	Tamil Nadu	216	02	187	27
25	Tripura	05	00	05	00
27	Chandigarh	01	1	0	00
29	Delhi	05	01	04	0
31	Pondicherry	08	01	07	00
32	Uttaranchal	38	2	20	16
33	Uttar Pradesh	263	27	232	04
34	West Bengal	77	20	34	23
	Total	2301	235	1927	139

Source: Ministry of Environment and Forests, 2004-05

Ambient Air Quality

6.54 The annual average minimum and maximum Suspended Particulate Matter (SPM) concentration in residential areas of various cities ranged from 60 µg/m3 at Bangalore during 1991 to 521 µ/m3 at Patna during 1995, while in Industrial areas the annual average ranged between 53 µg/m3 in Chennai during 1992 and 640µg/m3 in Calcutta during 1993. The mean average value of SPM for nine years (1990 to 1998) ranged between 99 Mg/m3 and 390 µ g/m3 in residential areas and between 125 µg/m3 and 457 µg/m3 in industrial areas indicating that the annual average limit of suspended particulate matter for residential areas (140 µg/m3) and for industrial areas (360 µg/m3) had been frequently violated in most cities. Low values have been recorded in Chennai, Bangalore and Hyderabad.

6.55 Monitoring of ambient air quality is considered to be a vital component in the Environmental Impact Assessment. The Central Pollution control Board has established a national Ambient Air Quality Monitoring Net work (NAMP) in collaboration with the State Pollution Control Boards, comprising of 290 stations in 92 cities/towns, to collect, compile and disseminate information on air quality.

6.56 The Kerala State Pollution Control Board (KSPCB) monitors the ambient air quality at 11 stations in the state. The KSPCB also has 2 mobile sampling units. The relative air quality situations at four major locations in the state are given in Table-6.5.

Table 6.5.
Air Quality Levels in Selected Locations in Kerala, 2004

Pollution Standards	Annual Mean Concentration Range (µ g/m3)					
	SO^2		NO^2		SPM*	
	Industrial	Residential	Industrial	Residential	Industrial	Residential
Low (L)	0-40	0-30	0-40	0-30	0-190	0-70
Moderate (M)	40-80	30-60	40-80	30-60	190-360	70-140
High (H)	80-120	60-90	80-120	60-90	360-540	140-210
Annual average concentrate, Mg/m3	>120	>90	>120	>90	>540	>210
Kochi	L	L	L	L	L	H
Kottayam	L	L	L	L	L	L
Kozhikode	L	L	L	L	L	M
Thiruvanathapuram	L	L	L	L	L	M

Source CPCB
** Suspended Particulate Matter*

6.57 The Ministry of Environment and Forest, Government of India has identified Kochi as one of the areas with very high pollution potential.

6.58 Based on the ambient air quality data from 1995-2003, CPB has prepared a list of non-attainment cities (Table-6.6). The data shows that high levels of SPM is more prevalent form of air pollution and motor vehicles is the major source of air pollution in almost all the metro cities.

Table – 6.6
List of Non-attainment locations in Kerala
(based on ambient air quality for 1995-2003)

Location/city	Major source of Pollution	Pollution of coverage
Kottayam	Vehicles	RSPM
Kochi	Vehicles/industry	RSPM,SPM
Thiruvananthapuram	Vehicles	RSPM,SPM

Source: Ministry of Environment & Forest 2004-05 Report

Vehicular Pollution

6.59 In India, the quantum of vehicular pollutants emitted is highest in Delhi followed by Mumbai, Bangalore, Calcutta and Ahmedabad. Carbon monoxide and hydrocarbon account for 64 per cent and 23 per cent respectively, of the total emitter load due to vehicles in all these cities considered together. Given the increased usage of diesel it becomes necessary to reduce its sulphur content. Fuel quality specification have been laid down by the BIS for gasoline and diesel.

6.60 The high influx of population to urban areas, increase in consumption patterns and unplanned urban and industrial development have led to the problem of air pollution. Air pollution is widespread in urban areas where vehicles are the major contributors - Road based passenger transport has recorded high growth since 1980-81 in the country. The slow growth of road infrastructure and high growth of transport sector and number of vehicles implies that Indian roads are reaching a saturation point in utilising the existing capacities. Traffic planning and management assume importance in reducing pollution. Greater promotion of and use of alternative fuels cleaner technologies such as CNG, LPG, curbing fuel adulteration, fiscal incentives for pollution prevention and control measures, appropriate siting of industries, strengthening of emission standards, replacement of two stroke engines, awareness programmes, appropriate design of green belt are needed. An effective environment management plan should be devised covering regulation, capacity building, environment strategy by involving NGOs, PRIs, line departments and private sector.

Bio-Fuel

6.61 The gases emitted by petrol and diesel driven vehicles have an adverse effect on the environment and human health. There is universal acceptance of the need for reducing such emissions. The rationale of taking up a major programme for the production of bio-fuels for blending with gasoline and diesel in our country emanates from a variety of factors. First, there is no alternative to the petroleum based fuels ie., motor spirit or gasoline and High Speed Diesel (HSD) for the transport sector which is the major consumer of petroleum products. Secondly, Bio-fuels are environmentally superior fuels and their use becomes compelling if the prescribed emission norms are to be achieved. Thirdly, there is need to meet the global environmental concern about climate change.

Biomass availability in India

6.62 In India about 46 per cent total energy consumption is estimated to be met from various biomass resources ie. agricultural residues, animal dung, forest wastes, firewood etc. More than 500 million tonnes of crop residues are produced every year, a large portion of which is either wasted or used inefficiently. The statewise Power Potential is shown in Table-6.7

6.63 A three pronged approach looking at biomass conservation, biomass generation and efficient conversion of biomass to bio fuels is needed to improve the availability of energy in the country. Gaseous fuels like biogas or liquid fuels such as ethanol, methanol have the potential to meet the potential to meet a large portion of our energy budget, leading to cleaner environment.

Table -6.7
Biomass Power Potential

(MW)

Sl.No.	States	Potential
1.	Andhra Pradesh	200
2.	Gujarat	200
3.	Karnataka	300
4.	Maharashtra	1000
5.	Punjab	150
6.	Uttar Pradesh	1000
7.	Others	300
	Total	3500

Source: TERI Energy Data Directory and Yearbook, 2002-03

Green House Gas Emission

6.64 The Per capita emission of Carbon dioxide is little more than half the world average in Asia. In 1990, China and Japan became the first and second largest Carbon dioxide emitters in Asia which is 15 per cent of the level in OECD countries. The per capita carbon dioxide emission in various countries is shown in Table-6.8. Carbon dioxide emission largely a by product of energy production and use account for the largest share of greenhouse gases which are associated with global warming. Kyoto protocol marks the first international attempt to place legally binding limits on green house gas emissions from developed countries. In addition to carbon dioxide, the primary green house gas emissions from developed countries. In addition to carbon dioxide, the primary green house gas, the protocol focuses on five other green house gases are targeted for reduction. Developed countries are the major contributors of green house gas emissions. The average per capita emission of carbon dioxide in India is 1.1MT, while it is 19.8 MT in USA in 2000 as per the World Development Indicators 2005.

Table 6.8
Carbon dioxide Emission in Different Countries

Sl.No.	Country	Carbon dioxide emission/capita (MT)	
		1990	2000
1	India	0.8	1.1
2	China	2.1	2.2
3	Malaysia	3	6.2
4	Philippines	0.7	1.0
5	Sri Lanka	0.2	0.6
6	Thailand	1.7	3.3
7	UK	9.9	9.6
8	USA	19.3	19.8
9	Vietnam	0.3	0.7
10	Japan	8.7	9.3
11	Indonesia	0.9	1.3

Source : World Development Indicators 2003, 2005

6.65 Action Plan is needed on mitigation and control of air pollution and GHG emission in urban cities through reducing traffic congestion, proper land use planning and switching over to cleaner fuels like CNG. Development of institutional, technical and human capabilities to monitor air pollution and GHG emission and promotion of public awareness of air pollution are needed.

State of Environment Report for Kerala

6.66 The Kerala State Council for Science, Technology and Environment (STEC), has been playing a catalytic role in applying Science and Technology for the developmental process of the State. During 2005 the State of Environment Report (SOE) has been published. Some of the findings of the report are shown in Box: 6.4

BOX : 6.4
Salient features of the State of Environment Report of Kerala

The Council has for the first time taken up a project on preparation of a comprehensive State of Environment Report for Kerala. It has identified seven separate subjects involving experts belonging to different departments and has brought out the report.

1. Air Quality and Noise Pollution : Vehicular emission and noise from the vehicles are severe in the three major cities of Kerala, viz., Thiruvananthapuram, Kochi and Kozhikode. The pollution from industries are mainly contributed by the four major industrial areas of the state, three in Eranakulam (Eloor, Ambalamughal and Udyogamandal) and one in Kanjikode at Palakkad. The Kerala State Pollution Control Board (KSPCB) has brought out 592 large/medium and 2700 SSI units under the consent regime of Air (Prevention & Control of Pollution) Act. It has reported that SPM and RSPM levels exceed the ambient air quality standards. However, SO_2 & NO_2 levels are within the standard levels.

2. Climatic Changes and Ozone Depletion : The study of the average annual mean maximum and minimum temperatures in Kerala from 1961 to 2003 carried out confirmed the rising trend of maximum, minimum and average temperatures of the order of respectively 0.8^0C, 0.2^0C and 0.5^0C.

On an average, nearly, 7.5 million households in Kerala use 37.5 million kg of firewood. The total consumption of all petroleum products during 2003-04 in Kerala was 3,087,589 tons. Methane emission from various sources when converted to equivalent CO_2 in terms of global warming potential accounts for about 16% and Nitrous Oxide contributes another 2% which together contributes more than 93% of the warming potential of the green house gas emissions from Kerala.

3. Water Resources : The projected water requirement for irrigation by the year 2021 AD is about 2890 mm^3 for paddy as well as 50% of the future garden land crops. The total identified hydropower potential for Kerala is about 5000 MW with a line storage capacity of 3536mm^3. The projected water requirement in the year 2021 in the industrial sector is at 4270 mm^3. The present estimated drinking water demand is at 645 million litres/day and the annual domestic requirement is at 3230 mm^3. The estimated groundwater balance is about 5590 mm^3. Apart from the above, Kerala has 995 tanks and ponds having more than 15000mm^3

Low pH, high iron etc., are common in well waters in the laterite covered midland areas. Fluoride has been reported from certain parts of Palakkad and Alleppey districts.

4. Marine and Coastal Environment : It is estimated that about one million m^3 of sewage is generated per day in the coastal areas and about 30000m^3 of this reaches the surface water bodies.

Petroleum hydrocarbon (PHC) remains within the permissible limit, but estuaries show an increasing trend over the years. Higher level of heavy metal concentration is seen in Cochin backwaters irrespective of seasons due to industrial effluents. The count of coliforms and faecal coliforms along the estuaries and most of the nearshore waters are well above the bacterial standard for marine bathing suggested by WHO. The count of *Vibrio cholera* like organisms has showed considerable increase over the years.

5. Solid, Hazardous and Biomedical Wastes : The total quantity of hazardous waste generated and handled in the state is about 82724 tons/year. The quantity of recyclable hazardous waste is 10725 tons/year, incinerable hazardous waste 2596 tons/year and for land disposal is 60538 ton/year. About 1.5 lakhs ton/day of solid waste is being generated from the hospitals and other health care establishments. The quantity of garbage generated in the,state is about 6000 tons/day. There are 600 incinerators installed in health care institutions in the state.

6. Nature and Biodiversity : The Western Ghat region is one of the 24 biodiversity hot spots in the whole world. The state contains more than 4500 species of flowering plants. There are 102 species of mammals, 476 species of birds, 169 species of reptiles, 89 species of amphibians and 202 species of fresh water fishes were reported from Kerala.

Source : STEC. State of Environment Report, Kerala

Disaster Management

6.67 Disaster loss is on the rise with unprecedented consequences for lives, livelihoods and development gains. This is compounded by growing vulnerability resulting from unplanned urbanization, development within high risk zones, environmental degradation climate change as well as the impact of epidemics points to a future where disaster could increasingly threaten the world's economy. In the past two decades, on an average more than 200 million people have been affected every year by disasters.

6.68 Disaster risk arises when hydro meteorological, geological and other hazards interact with physical, social, economic and environmental vulnerabilities. Events of hydro meteorological origin constitute majority of disasters. Despite the growing understanding and acceptance of the importance of disaster risk reduction and increased disaster response capacities, disasters and in particular the management and reduction of work continue to pose a global challenge.

6.69 India has been traditionally vulnerable to natural disasters on account of its unique geo climatic conditions. Floods, droughts, cyclone, earthquakes and landslides have been a recurrent phenomena. **About 60 per cent of landmasses is prone to earthquakes of various intensities, over 40 million hectares is prone to floods, about 8 per cent of the total area is prone to cyclones and 68 per cent of the area is susceptible to drought**. In the decade 1990-00, an average of about 4344 people lost their lives and about 30 million people were affected by disasters every year.

6.70 The States have to formulate State Disaster Management Policies with the broad objectives to minimise the loss of lives and social, private and community assets and contribute to sustainable development. The tsunami of December 26, 2004 was one of the worst disasters in history. In the tsunami, lagoons salt marshes, wide river mouths, estuaries etc. have reportedly enabled to reduce damage to urban landscapes by absorbing/retaining sea water that flooded inland areas. The tsunami incident warrants a relook at the coastal zone management plans, legal

framework, livelihood security of people in the coastal area, and sustainable environmental management of the State.

6.71 The States of Gujarat and Madhya Pradesh have State policies for Disaster Management. All states have been advised to enact Disaster Management Acts. Gujarat and Bihar have already enacted such a law. These acts provide for adequate powers for authorities coordinating mitigation, preparedness and response as well as for mitigation/preventive measures required to be undertaken. State Governments have also been advised to convert their relief codes into Disaster Management Codes.

Environmental regulations

6.72 India is having a comprehensive environmental legislation regarding pollution control. There is a spot of environmental legislature starting from early 1970, viz. Wildlife Protection Act (1974), Water Cess Act (1977), Forest Conservation Act (1980), The Air (Prevention and Control of Pollution Act (1981), Environment (protection) Act (1986) Water (Prevention and Control of Pollution) Cess Act (1988) and Public Liability Insurance Act (1991). The water (Prevention and Control of Pollution) Act and the Air (Prevention and Control of Pollution) Act are now referred to as Water Act and Air Act.

6.73 The Air Act, Water Act and the Environment (Protection) Act, set the national standards for air and water quality. The actual standards are laid down by the CPCB (1995), in consultation with institutions such as National Environmental Engineering Research Institute (NEERI), in Nagpur. The standards termed 'Minimum National Standards' (MINAS) are designed for the country as whole, although individual states have the option of making them more stringent.

6.74 In addition, the EPA of 1986 gives powers to the Central Government to pursue any means deemed necessary to protect and improve the quality of the environment, including co-ordination of the activities of the various state governments.

6.75 India currently has relatively weak institutions and infrastructure and the master planning approach was not able to curtail congestion, pollution, marginalisation of the poor and other serious environmental situations. Added to this is the lack of co-ordination between different agencies responsible for various urban tasks within a city. Sewage, drainage and solid waste services are often the responsibility of different agencies. The poor revenue situation of urban local bodies has contributed to the failure in urban planning. Eventhough a number of environmental Acts and rules are in force, the enforcement levels are relative unsatisfactory.

ENVIRONMENTAL SANITATION

Sewage from cities in the country increased from an estimated 5 billion liters a day in 1947 to 30 billion liters a day in 1997. Of this, only 10 per cent are treated (TERI) only 70 per cent of the population in Class I cities have access to basic sanitation services. Waste Water treatment efficiency even in Class I cities is only 30 per cent (CPCB 2000). The remaining untreated sewage from the urban areas finds its way into water bodies, making the water unfit to drink or even to use for bathing and at the same time adversely affecting the ecosystem. The lack of adequate sanitation facilities has also led to severe health and environmental impact due to the presence of unhygienic conditions. The annual economic losses due to the adverse effects of poor quality drinking water on human health are estimated at Rs. 122 billion. On international comparison with other countries shows that access to sanitation for India is the lowest at 63 per

cent as compared to Africa (64 per cent), Latin America (88 per cent), Asia Pacific (84 per cent) and West Asia (98 per cent) (World Bank 1998).

Sanitation Coverage

6.77 Kerala has the largest coverage of individual household latrines in India. Out of the 65.95 lakh households in the State 55.40 lakh (84 per cent) have sanitary latrine facilities.

6.78 Though the sanitation coverage is relatively high , there is general lack of awareness on the potential health risks from unhygienic latrine. (which is estimated to account for over 60 per cent of the total household latrines) when located close to unprotected open dug well drinking water sources as well as open defecations by children.

6.79 Analysis of sanitation coverage data for the country from various sources shows that despite the acceleration of coverage under the Eighth Plan, only between 18 to 19 per cent of all rural households have a toilet. However there has been increase in coverage from around 10 per cent in 1990. At the same time, between 75 to 81 per cent of all urban households in India have toilets, an increase from the 1990 figures of around 64 per cent. National Family Health Survey data on toilet facilities shows that the proportion of households having access to toilet facilities in larger and more populated states was much lower than the national average. These include Andhra Pradesh, Bihar, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh. Among the smaller states only Himachal Pradesh followed this pattern.

6.80 The coverage is lower in households below poverty line and other sanitation conditions such as solid and liquid waste disposal, drainage, and community sanitation are very poor. The percentage of households with access to sanitation facilities according to different estimates is given in Table-6.9

Table - 6.9

Household Sanitary Latrines: Access to Sanitation Facilities

Time Line	1991(1)	1995(2)	2001(3)
Rural households with toilet (%)	44	73.4	81.3
Urban households with toilets (%)	73	90.0	92.0

Source:- (1) Census of India, 1991,
(2) NSSO 1995, (3) Census of India 2001

6.81 Though the urban coverage (92 per cent) is higher than the coverage for rural areas (81.3 per cent), the decadal rate of coverage is higher in the latter case. In absolute numbers 9.93 lakh households in the rural areas and 1.32 lakh households in the urban areas still do not have individual household sanitary latrine. There is a possibility that the present data on households with sanitary latrines may include those households with the type of latrines which are unhygienic and unacceptable on health grounds. For example, on the banks of West coast canal and in Kuttanad, there are canal latrines with no substructure to prevent excreta from falling in to water. Thus a re-look at the present data on household latrines in the State is necessary. It is possible that the number of households having safe latrines is less than the reported figure of 55.50 lakhs. The number of latrines constructed using of unsafe sanitation technologies is a major issue in Kerala.

Table 6.10
Type of Latrine within the House

Type	Total	%	Rural	%	Urban	%
Pit latrine	815221	12.4	631664	12.8	183557	11.1
Water Closet	4299445	65.2	3063983	62.0	1235462	74.8
Other latrine	426102	6.5	324374	6.6	101728	6.2
No latrine	1054438	16.0	922529	18.7	131909	8.0
Total	**6595206**	**100.0**	**4942550**	**100.0**	**1652656**	**100.0**

Source: Census of India, 2001

Community Perceptions

6.82 The baseline survey for the formulation of the Netherlands Assisted Programme (NAP II) done in three districts established that the priority service need of the people is for improved water supply with household sanitation coming next.

6.83 The NAP Report also shows that for household sanitation, latrines are the priority preference with bathing places and household wastewater drainage following. The Development Reports of the Grama Panchayats, which they prepared for the People's Campaign for the Ninth Plan, reveal that inadequacy of sanitation coverage is an acute problem for women in particular, especially for those living in the coastal areas where density of population is high and public space scarce and in colonies inhabited by the poor.

6.84 Two independent studies conducted by Rajeev Gandhi National Drinking Water Mission (RGNDWM) and NAP II reiterate that there is a perceived need among womenfolk for sanitary latrines, mostly in the interests of privacy and convenience though they are also aware of the health linkages of sanitary practices The Knowledge, Attitude and Practice (KAP) survey conducted by Indian Institute of Mass Communication in 1996-97 in Thiruvananthapuram, Alappuzha and Malappuram districts shows that people are willing to spend up to Rs.3000/- for construction of household latrines.

Local Government Initiative

6.85 Sanitation is one of the subjects that has been transferred to the local governments at the cutting edge level, as part of the decentralization process. This has paved the way for improving the level of community participation in sanitation related services.

6.86 In the Ninth Plan about 300 Grama Panchayats gave top priority to sanitation and 50 of them achieved the goal of more than 95 per cent coverage of the household sanitary latrines. During the Ninth Plan about 5.71 lakhs household sanitary latrines were constructed under decentralized plan which is much more than the total achievement in the past 15 years through different governmental programmes. During the first three years of the Tenth Five Year Plan, another 3.20 lakh was constructed (Table- 6.11).

Table-6.11
No. of Household Latrines constructed by Local Governments during Xth Plan

Year	GP	SCP	TSP	EFC	Total
2002-03	56468	8946	1609	9335	76439
2003-04	130525	21883	2262	20019	174689
2004-05	43546	11167	1009	13205	68927

Source : State Planning Board
Abbreviations : GP : General Plan, SCP : Special Component Plan
TSP: Tribal Sub Plan, EFC: Eleventh Finance Commission

Total Sanitation Campaign (TSC)

6.87 The government sponsored sanitation programmes of the nineties could not make the desired increase in the coverage of families with sanitary latrines. The major reasons contributing to this predicament were heavy reliance on subsidy, overemphasis on target and hardware, inadequate participation of stakeholders, low importance given to IEC, and limited technology options. It was in this context that the Centrally Sponsored Total Sanitation Campaign (TSC) was introduced with focus on IEC, Human Resource Development and Capacity Building. The programme is currently being implemented in 350 districts of the country and plans to cover all 594 districts by the end of Tenth Five Year Plan. The rural areas of Kollam and Kasaragod were identified in 2001 for TSC implementation. Subsequently all other districts except Kottayam have also been taken up under TSC. The project cost, government share, community contribution and component activities of TSC Projects are given in Appendix-6.10

6.88 TSC has the objective of generating felt demand for sanitation facilities through IEC, accelerating sanitation coverage propagating cost effective and appropriate technologies in sanitation, reducing incidence of water and sanitation related diseases and improving the general quality of life in rural areas. Strategies of TSC are Project mode of implementation, Community led, people centred approach, Demand Responsive Approach, Alternate Delivery Mechanism, Scaling down of subsidy, Menu of technologies to meet customer preferences, and Intensive IEC. Upto 2004-05, 3.48 lakh individual household latrines were constructed and the total achievement under TSC became 3.50 lakh latrines.

School Sanitation

6.89 Conceptually school sanitation recognizes the potentialities of the child as a change agent more respective to new ideas. The present status of schools with sanitation and drinking water facilities is given in Table -6.12

6.90 The TSC and Sarva Siksha Abhiyan (S.S.A) have provision for construction of school toilet. This apart, hygiene education is also an integral component of school sanitation for which school health clubs are formed.

Table-6.12

District wise Details of Government Schools having Drinking Water/latrines/urinal Facilities in Kerala 2004-05

Sl. No.	District	No. of Govt. Schools				No. of Schools having							
						Drinking Water				Urinals/Latrines			
		LP	UP	HS	Total	L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5		6	7	8	9	10	11	12	13
1.	Thiruvananthapuram	299	98	119	516	283	95	119	497	285	91	119	495
2	Kollam	268	62	76	406	226	55	74	355	219	59	76	354
3	Pathanam Thitta	167	42	48	257	165	42	48	255	167	42	48	257
4	Alappuzha	193	67	58	318	191	66	58	315	193	67	58	318
5.	Kottayam	169	67	59	295	163	66	59	288	167	67	59	293
6	Idukki	85	40	56	181	72	38	55	165	85	40	56	181
7	Ernakulam	182	91	87	360	182	91	87	360	182	91	87	360
8.	Thrissur	115	55	80	250	107	53	80	240	108	55	72	235
9	Palakkad	194	63	61	318	176	60	61	297	143	58	61	262
10	Malappuram	349	113	82	544	304	110	75	489	275	103	76	454
11	Kozhikode	181	74	69	324	168	68	69	305	174	71	69	315
12	Wayanad	91	34	40	165	79	33	40	152	79	34	40	153
13	Kannur	114	76	83	273	106	76	83	265	114	76	83	273
14	Kasaragod	141	72	77	290	128	71	77	276	141	72	77	290
	Total	**2548**	**954**	**995**	**4497**	**2350**	**924**	**985**	**4259 (94.71%)**	**2333**	**926**	**981**	**4240 (94.28%)**

Source: Directorate of Public Instructions, Thiruvananthapuram

NGO Participation

6.91 Many NGOs are active in the promotion of household latrines. Socio Economic Unit Foundation (SEUF) which was set up in 1987-88 has played a major role in the sector. The Sanitation programme of SEUF has a strategy of construction along with education programme which addresses issues of construction of latrines, community motivation and participation, and education communication for improved sanitation and sustainability. SEUF has introduced a novel project in training women in masonry and utilizing their services in the construction of sanitary latrines. Centre of Science and Technology for Rural Development (COSTFORD), Peerumedu Development Society (PDS), Pazhakulam Social Service Society (PASS) and Centre for Environment and Development (CED) are some of the other NGOs which are working in the sector.

Urban Programmes

6.92 The Planning Commission's Technical group on Urban policies has projected urban population at 38%. of the total population in 2006-07. During the last five decades. 5-6 million people have been added to urban India every year. The trend of urbanization in Kerala is also on a high increase.

6.93 A Centrally Sponsored Scheme for Low Cost Sanitation and Liberation of Scavengers was launched in the urban areas in 1980-81. The main objective of the scheme is to convert existing dry latrines in to low cost pour flush latrines and to provide alternate employment to the liberated scavengers.

6.94 The National Slum Development Programme (NSDP) was launched in 1997-98. The implementation of the scheme is through Kudumbasree. The urban local government are free to earmark funds for the construction of sanitary latrine with a unit cost of Rs. 2,000/-. The scheme is exclusively meant for BPL families. Under the Kerala Development Programme also urban local governments set apart plan funds from the service sector for construction of sanitary latrines for the BPL families.

Gender Issues

6.95 The growing emphasis on gender and development (GAD) issues has helped in mainstreaming women's perspectives in sanitation projects. The SHG movement which began in the mid-nineties also represents a powerful potential for poor women's participation in WATSAN Sector. The recent projects in sanitation sector perceive a clear shift in women's role as domestic level sanitation and hygiene manager to an active participant contributing significantly to the efficiency and effectiveness of project implementation. Analysis of the Local Government managed projects would also reveal that women are no longer seen as clients of the system but as agents of change (eg. Alappad Panchayat where situation analysis of women preceded programme designing and implementation). These initiatives have proven that incorporating women's perspective could change priorities and implementation dynamics. The empowerment of women needs to be viewed as a potentially powerful instrument to resolve some of the complex issues in the sector.

Kerala Total Sanitation and Health Mission (KTSHM)

6.96 In 1998 three Centrally Sponsored IEC projects were launched in Thiruvananthapuram, Alappuzha and Malappuram districts. These projects focused on social marketing for promotion of sanitation and sanitary aspects of water supply. A State level IEC Cell headed by a Consultant was set up in the Rural Development Department in 1998. In the year 2000, the Kerala Total Sanitation and Health Mission was set up as an autonomous agency, and the IEC Cell was merged with the Mission. The Mission has the mandate for developing conceptual framework, formulating programme strategies, providing expert consultancy and building sector related capacities of local governments. The Mission has expertise in strategy setting, model building and capacity building in WATSAN Sector

Solid Waste Management

6.97 Any waste other than human night soil and cullage is called solid waste. It's a mixture of organic and inorganic waste materials produced from domestic or commercial activities which

has lost its value in the eye of the first owner. Municipal Solid Wastes (Management and Handling) Rules, 2000 define solid waste as commercial and residential wastes generated either in solid or semi solid form, excluding industrial hazardous wastes, but including treated biomedical wastes.

6.98 In the light of the Supreme Court Judgment, Government of India notified comprehensive rules for Municipal Solid Waste Management. As per Supreme Court directive local governments having a population above one million are required to set up waste processing and disposal facilities before 31/12/2003 as part of implementing solid waste management system in urban areas

6.99 Urban solid waste is presently being disposed of unscientifically by dumping it in disposal yards Such operation of open dumping results in unpleasant odour and air pollution; generation of leachate polluting ground water and surface water; and fly and mosquito breeding. In order to find a lasting solution to the problem of solid waste management, government launched the Clean Kerala Programme in 2003 for which it has set up the Clean Kerala Mission. The Mission has the responsibility of capacity building of local governments in the preparation and implementation of solid waste management plan. The objective of "Clean Kerala" is to strengthen the managerial capacity and responsibility of the community and local governments in planning, implementation and maintenance of solid waste management facilities and services and to help local governments establish socially acceptable, operationally sustainable and financially viable Solid Waste Management facilities and services.

6.100 As on 31.3.05, all the Urban Local Bodies (ULB) in the State have been sensitized on a Municipal Solid Waste (Management & Handling) rules 2002. Accordingly, all of them have started taking action on this and 49 ULBs possess land for solid waste management.

6.101 At present, the quality of services related to solid waste collection and disposal is extremely poor There is an urgent need to streamline solid waste management systems, including collection and transportation, and more significantly waste treatment and disposal systems. It is estimated that only about 50% of the 2500 tonnes of waste generated per day is collected for disposal. Every day a quantity of about 1200 tonnes of waste is left to decompose on road margins, drains, canals, water bodies and open space. Such a situation provides ideal breeding ground for pathogens and disease causers. Even more serious is the problem of ground water pollution due to leachate from disposal sites Wind blown debris and burning of wastes invariably cause air pollution. There is a sharp increase in the presence of substances like plastics which are difficult to degrade or break down, in the waste stream. Bio medical waste has been a growing concern because of the emergence of diseases like AIDS and Hepatitis. Percentage distribution of households by arrangement for removal of garbage is detailed in Table-6.13

Table -- 6 13
Removal of Garbage

Sl.No.	Arrangement for Removal of Garbage	Rural	Urban
1.	By Residents	94	89
2	By Local Bodies	0	2
3.	Private Arrangement of Residents	1	6
4	Other Arrangement	5	3
	All	**100**	**100**

Source. Report on Drinking Water, Sanitation housing and Consumer expenditure in Kerala, 2003

6.102 Domestic waste constitutes 28 per cent of solid waste and consists of food waste and other discarded materials. Trade and institutional waste also forms bulk of the solid waste whereas construction and demolition waste accounts for 6 per cent. An analysis of the composition of solid wastes shows that it contains 68 per cent biodegradable wastes. The remaining 32 per cent consist of non-bio degradable components like plastic, bottles, metal parts, rubber, construction materials etc. Among these, items like paper, plastics, glass and metal pieces can be recycled or reused. There are a large number of rag pickers in the informal sector who collect recyclable materials from households, streets, bins and disposal sites.

6.103 In the present solid waste management systems, little attention is given to proper equipment design. Open, bottomless community bins, box type carts and non tipping trucks are still being used necessitating open storage and multiple handling of waste. The most critical deficiency is that proper disposal sites have not been identified by most of the urban local governments. Those who have their own sites are yet to develop the site for sanitary land fill.

6.104 The total amount of solid waste collected and the collection efficiencies in major cities are shown in Table-6.14 In Kochi and Calicut, the collection efficiency is less than the national average of 60 per cent.

Table -6.14
Total amount of Solid Waste Collected and the Collection Efficiency in Some towns/Cities in India

Sl.No	Town	Solid Waste (Tonnes)		Collection Efficiency %
		Generated	Collected	
1	2	4	5	6
1.	Mumbai	3200	3100	96.9
2.	Chennai	1819	1637	90.0
3.	Bangalore	1800	1225	68.1
4.	Ahmedabad	1200	1080	90.0
5.	Kanpur	2142	1500	70.0
6.	Pune	1000	700	70.0
7.	Lucknow	600	500	83.3
	Total	11761	9742	82.8
1.	Coimbatore	175	113	64.6
2.	Madurai	310	160	51.6
3.	Indore	120	100	83.3
4.	Baroda	321	193	60.1
5.	Cochin	230	120	52.2
6.	Bhopal	321	300	93.5
7.	Tiruchi	130	60	46.2
8.	Calicut	200	75	37.5
9.	Meerut	120	70	58.3
10.	Hubli-Dharwad	75	60	80.0
11.	Trivandrum	120	75	62.5
12.	Salem	130	25	19.2
13.	Mysore	204	122	59.8
14.	Thane	350	200	57.1
15.	Jamnagar	149	89	59.7
16.	Gulbarga	10	8	80.0
17.	Sambalpur	60	36	60.0
	Total	3025	1806	59.7

Source: Environmental Statistics, 2002.

Information Education and Communication (IEC)

6.105 Solid Waste Management is an activity in which public participation is the key to success. It is not the technology alone, but public attitude and behaviour and the efficiency and effectiveness of the systems and practices also that determine the success of a solid waste management system. A system demanding segregation and storage of waste at source would require a very high degree of human behaviour change. Hence IEC will focus on: Reduce, Reuse Recycle and Recover, No waste on ground, Segregation and storage at source, Waste processing and disposal at local level, Willingness to pay for services, Reaching out to the people – develop methodology for community mobilization and participation, Making community aware of the health risks emanating from the present system and the need for upgradation, Zero waste concept and Participation of community in deciding options.

Rural Scenario

6.106 Solid Waste Management Systems are practically non-existent in the Panchayats. This is inspite of the fact that the State is a rural – urban continuum with high density of population. The average per capita, per day, waste generation in rural areas is estimated to be around 210 gm. In the context of the high density of population of Kerala Panchayats, this is poised to become a serious health and environmental problem in the near future. As solid waste management is an important obligatory function of the local governments, there is an urgency to build up capacities of grama panchayats in this relatively complex sector. The rural local governments would need policy support, institutional support and technical support in strengthening their internal capabilities in this sector.

6.107 It is also possible to introduce "Zero Waste" concept in the rural sector with the aid of well designed Information Education Communication packages. At any rate, the approach to solid waste management systems and practices in rural areas should necessarily be based upon centralized planning and co-ordination with decentralized implementation.

6.108 As part of environmental building activity and to involve the student community into the Clean Kerala Project campaign, a pledge on 'Clean Kerala – Beautiful Kerala' – by all school children was organised and the students were given information material for motivating further activities. Eco clubs were started in 1400 schools. The mission had started a project for implementing model integrated Waste Management System incorporating the components of street seeking, segregated storage, source collection etc. in 14 municipalities. Orientation and training have been extended to the elected representatives and officials of these municipalities. The total cost of the projects of the 14 municipalities comes to Rs.1749 lakhs.

Waste Plastic for construction of roads

6.109 Waste Plastic can be used for constructing roads. I tonne plastic can be used for 1 Km. road with 12 ft. width. Kerala Highway Research Institute has started implementing this at Thiruvananthapuram on experiment basis.

Bio Medical Waste

6.110 Treatment and disposal of bio-medical wastes generated from hospitals should be done as per the Bio-medical Waste (Management and Handling) Rules, 1998 It is the responsibility of waste generator to treat and dispose of the bio-medical waste. Whereas local governments have to assist the hospitals, if they come forward for establishment of a Common Treatment Facility, by identifying suitable land, it is the responsibility of the local bodies to treat and dispose the non-biomedical waste (general waste) and treated bio-medical waste generated in the healthcare institutions. The Kerala State Pollution Control Board (PCB) is the prescribed authority to implement Bio-Medical Waste (Management and Handling) Rules in the state.

6.111 About 85% waste generated in hospitals is general waste and can be handled as other solid wastes. The remaining 15% constitutes infectious and toxic wastes. (See Table - 6.15) More often than not, the general wastes in hospitals and bio medical wastes are allowed to mix thereby rendering the general waste also toxic and hazardous

Table – 6.15
Type of Waste (%)

1	Infectious Waste	10
2	Toxic Waste	5
3.	General Waste	85

Source: State Pollution Control Board

6.112 As per rules, Bio medical waste is to be collected in four different coloured bags. Human body parts and others are to be collected in yellow colored bags and should be incinerated. Disposable items like IV sets, Blood and Urine bags are to be collected in red coloured bags and should be autoclaved for disinfection Needles, syringes and other sharps are to be collected in blue colored bags and after autoclaving/chemical treatment should be cut into small pieces. Discarded medicine, incinerator ash, chemical waste etc. can be collected in black colored bags and should be disposed of in secured landfill site.

6.113 Minimum required facilities to be installed in a hospital for biomedical waste treatment include one Incinerator, one Autoclave and one Shredder According to a rough cost estimate each hospital may have to make a capital investment of Rs.10 lakhs for acquiring these facilities. Therefore, installation of Common Treatment Facility for a given consortium of hospitals appears to be a more viable option. In a 5,000 bedded hospital, 7.5 MT of waste is generated per day. Out of this 1.25 MT would be bio-medical waste. The estimated capital cost for establishing a common treatment facility for bio medical waste generated from 5,000 hospital beds comes to Rs. 50 lakh. The annual O&M cost will come to Rs 30 lakhs.

Hazardous Waste Generation

6.114 Sources of hazardous waste in the country include those from industrial processes, mining extraction, tailings from pesticide based agricultural practices etc. Industrial operations generate considerable quantities of hazardous waste. Table-6.16 gives the state wise status of the number of units generating hazardous waste and the quantity of waste generated for recyclable, incinerable and dispensable waste. Around 7.2 million tonnes of hazardous waste is generated in the country of which 1.4 million tonnes is recyclable, 0.1 million tonnes is incinerbale and 5.2 million tonnes is destined for disposal on land.

6.115 There are 323 hazardous waste recycling units in the country, of which 303 units are indigenous raw material while 20 depend on imported recyclable wastes. In Kerala 151 units are identified as hazardous waste generating units with a production of incinerable wastes of 5069 tonnes per annum

Table – 6.16
Hazardous Waste Management in India

State	Number of HW generating Units	Quantity waste generated (waste type) TPA			
		Recyclable	Incinerable	Disposable	Total *
Bihar	42	2151	75	24351	26577
Chandigarh	47	-	-	305	305
Delhi	-	-	-	-	69423
Goa	25	873	2000	3725	8742
Gujarat	2984	26000	19953	150062	430030
Haryana	309	-	-	31046	32559
Himachal Pradesh	116	-	63	2096	2159
Karnataka	454	47330	3328	52585	103243
Kerala	**151**	**84932**	**5069**	**690014**	**780015**
Maharashtra	3953	847436	5012	1155398	200784
Madhya Pradesh	183	89593	1309	107767	198669
Orissa	163	2841	-	338303	341144
Jammu & Kashmir	57	-	-	-	1221
Pondicherry	15	8730	120	43	8893
Punjab	700	9348	1128	12233	22745
Rajasthan	306	9487	19866	2242683	227203
Tamil Nadu	1100	193507	4699	196002	401073
Uttar Pradesh	1020	-	-	-	140146
West Bengal	440	45233	50894	33699	129826
Total	12584	1429281	118941	5250173	7243750

**Total of recyclable, incinerable and disposable will not add up due to waste sold or otherwise disposed*
TERI 2003

6.116 Improper storage, handling, transportation, treatment and disposal of hazardous waste results in adverse impacts on ecosystems and the human environment. Heavy metals and certain organic compounds are phytotoxic and at relatively low levels can adversely affect soil productivity for extended periods. The Government of India has promulgated the Hazardous waste (Management and Handling) Rules in 1989 under the aegis of EPACT of 1986. The Rules provides for the control of generation, collection, treatment, transport, import, storage and disposal of listed wastes. The rules are implemented through SCBs.

6.117 India is also a signatory of the Basel Convention, 1989 on the control of Transboundary movement of Hazardous wastes and their disposal. In order to control the movement of Basel Wastes, the export and import of Cyanide wastes and Mercury and Arsenic bearing wastes has been banned from December 1996. Amendments to HWR 1989 are introduced in 2000 and 2002, widening the definition of hazardous waste and harmonising the hazardous waste list with that of Basel Convention.

Liquid Waste Management

6.118 Stagnant pools of waste water around houses, water sources, streets and in clogged drains are a health hazard. They smell foul, provide breeding place for mosquitoes and contaminate the drinking water sources. Household waste water which is commonly called sullage is generated in the toilets, the bath rooms, and the kitchen. Though harmless at the point of generation, its accumulation and stagnation will lead to unhygienic condition mainly due to putrefaction of the organic contents. Soakage pit is the most inexpensive and easiest method of sullage disposal. Though there is a general awareness about the harmful effects of waste water, 48 percent of households let waste water stagnate in their backyards.

6.119 In the absence of proper drainage facilities waste water from market places, slaughter houses, poultry farms, fish markets, hotels and garbage dumps finds its way to natural water bodies. Inadequate drainage provision causes storm water to ultimately find its way to low lying areas leading to water stagnation.

6.120 At present there is no proper waste water disposal systems in panchayats. But in towns and cities at least partial and rudimentary attempts have been made for liquid waste management. All the city corporations have a system of drainage channels which drain both waste water and storm water. 23 per cent of the households in Thiruvananthapuram city and 15 per cent houses in Kochi Corporation have access to common sewage collection system.

Fresh Water

6.121 Water is the most vital resource for the existence of life on earth. It is also indispensable for the existence of a good eco-system. According to WHO, less than 1% of the World's fresh water on earth is readily available for human consumption. India, for the last many years, is heading towards a fresh water crisis mainly due to improper management of water resources and environmental degradation which led to a lack of access to safe water supply to millions of people. This fresh water crisis is already evident in many parts of India including Kerala.

Safe Handling of Drinking Water

6.122 There is always a possibility of drinking water getting polluted at collection, transport or storage points. Observations show repeated hand contact with drinking water during collection, transportation, storage, serving and consumption, and this is an active route of contamination.

6.123 Generally people consider the water they use for drinking and cooking as clean and safe. For a vast majority of people safe water is that which "looks clean". "Tastes good" was considered an attribute of safe water by 20% "Water free from germs" is considered safe only by 30% of the respondents. Household get drinking water from various sources as noted in Table - 6.17

6.124 The practice of cleaning and covering the vessels used for water storage has a direct bearing on health For cleaning, people use water (5%) and ash and water (18%). Covering of vessel is a common practice (79%)

Table – 6.17
Percentage Distribution of Households by Primary Source of Drinking Water

Primary Sources	Kerala		India	
	Rural	Urban	Rural	Urban
1. Tap	12	33	19	70
2. Open Well	85	66	26	7
3. Tuber Well/Hand Pump	2	1	50	21
4. Other Sources	1	0	5	2
All	100	100	100	100

Source: Report on drinking water, Sanitation, housing and consumer expenditure in Kerala 2003.

6.125 Massive extension in supply of safe drinking water cannot make an appreciable impact on the health of the poor people without improved hygiene behaviour .This can be overcome only with hygiene awareness promotion based on location specific water handling practices, including the need for keeping the water source neat and clean.

6.126 The local governments have a key role in this regard. They can seek support of PHCs and Kerala Water Authority, and Kerala Rural Water Supply Agency in the Jalanidhi Project areas

6.127 **Jalanidhi, a State Goveroment agency constituted for improving the quality of rural water supply and environmental sanitation has a large role to play. Through various funding agencies, Jalanidhi could complete 1568 water supply schemes, managed by 1644 beneficiary groups in this State as on October 2005. Similary, the agency has also constructed 1864 rain water harvesting structures in the State.**

Home Sanitation and Food Hygiene

6.128 Kerala houses bear a 'visible cleanliness' within the household Traditionally cooking, eating and sleeping areas are kept clean but the surroundings are often made dirty by waste water and garbage generated by the household. The fact that almost no-cost simple sanitation measures like household soakage pit and garbage pit are not universally practiced reflects lack of public awareness of such simple interventions. **The initiatives taken by Pilicode Panchayat in Kasaragod district and Mattathur panchayat in Thrissur district prove that local governments can bring about positive changes in household sanitation.**

6.129 Prevention of food borne diseases is a major sanitation concern Many of the reported cases of food borne illnesses are caused by bacteria. Improper storage of food; improper washing of hands and finger nails, cross contamination; improperly cleaned eating and cooking utensils, work areas and equipments; and contamination through flies, cockroaches and other pests are the major routes of food contamination. The local governments have an enabling role in promoting food hygiene awareness with the support of Health Staff and C.D.S. System. Digging wells near the septic tank is a big issue in Kerala Total sanitation movement should take care of the contamination concerns.

Personal Hygiene

6.130 Personal hygiene encompasses all the acquired individual attributes that are necessary for a healthy life. Conventionally, personal hygiene focuses on safeguarding physical health alone

and will comprise of three factors, namely, (i) body hygiene, (ii) clothe hygiene and (iii) health habits and attitudes. The activities associated with personal hygiene include rectal cleaning after defecation, washing hands, brushing teeth, clipping nails, bathing, using clean clothes particularly under garments, genital cleaning, menstrual hygiene etc. It is also important to do away with unhygienic habits like picking nose, spitting indiscriminately, coughing and sneezing without covering the mouth etc. Epidemiological investigations have shown that even in the absence of latrines, diarrhoeal morbidity can be reduced with the adoption of improved hygiene behaviour. Personal hygiene practices are in a way the starting points of altering negative behaviours in other domains of sanitation. The RGNDWM studied hand washing practices before eating and feeding the child and after defecation. Hand washing before eating and after defecation is almost universal.

6.131 The national average is 87 per cent who use water only for hand washing in case of eating, 65 per cent in case of child feeding. Water and Soap are used by more than 10 per cent in Haryana, Himachal Pradesh, Goa, Kerala, Manipur, Meghalaya and Sikkim. In Kerala 83 per cent used water before eating and 44 per cent before feeding child .

6.132 Personal hygiene education needs to start from the family. A multi-pronged IEC strategy is needed to enter into this private space without being intrusive. It is ideal to target children in this regard. Anganwadi sanitation and school sanitation also assume significance and local governments will have a critical role to play as facilitator and catalyst. Baby toilets provided in Anganawadies during 10th Plan is a welcome move.

Community Environmental Sanitation

6.133 One of the factors that has contributed to Kerala's growing environmental sanitation problems is its high density of population. Lack of basic amenities compel people to resort to insanitary practices. The matter has been further aggravated by inadequate garbage disposal and drainage. The high population density, burgeoning consumerism and increased demands on civic facilities tell upon the bearing capacity of Kerala's already fragile environment. This is particularly true of the coastal area, which is characterized by high water table and high population density. Community latrine system is comparatively rare in Kerala. Community toilet can also serve the floating population in markets, bus stand and other public places. Major deficiencies in the existing community latrine system are (i) lack of cleanliness and poor up-keep, (ii) inadequate water supply and lighting, (iii) inappropriate location (iv) insecurity (especially for women) and (v) poor operation and maintenance. Before deciding on community latrine, it would be necessary to undertake a community preference assessment to reveal effective demand for such a service. One of the component activities of TSC is construction of sanitary complexes for women by providing total facilities for water supply, bathing, defecation and washing in places where adequate space is not available within households and workplaces.

6.134 Solid and liquid wastes originating from public places, markets, institutions, work places, public streets, agricultural fields, bus stands, pilgrim centres etc. lead to community environmental sanitation problems.

6.135 Most of the canals and rivers flowing through the urban areas have become dysfunctional dumping space of the leftovers of hotels and slaughterhouses, carcass and heaps of plastic wastes which make them very unhygienic. The indiscriminate use of chemical fertilizers and pesticides has become a matter of serious concern.

Clean Kerala Mission

6.136 The Local Self Government Institutions do have the primary responsibility for implementing integrated solid waste management systems. They have also the responsibility to promote activities concerning waste to wealth, hygienic environment, overall cleanliness and environmental up gradation. However, the LSGs very often lack expertise and manpower. For overcoming this, Government have established Clean Kerala Mission. The Mission has a package of objectives like upgradation of solid waste management through a systematic and comprehensive approach with environmental and legal obligation, proper and prompt collection, transportation, imparting training in this waste disposable processes, imparting awareness to the public on the havocs generated by various wastes etc.

6.137 The Clean Kerala Mission has been functioning in Kerala since 2003. They are implementing various appreciable solid waste management schemes in the State producing grid results. Al most all the Urban Local Bodies have formulated specific plan of action for Waste disposal. Rural Local Self governments have also recently started similar programmes. If the tempo of activities are moving on a positive direction with the co-operation and help of all LSGs, NGOs and Government departments, it is hoped that the concept of "Clean Kerala" will become a truth in Kerala by 2010.

Towards a Sanitation Policy

6.138 The prevailing state of affairs calls for a comprehensive approach to tackle the drinking water and environmental sanitation problems. Nevertheless a vast majority of the prevailing sanitation problems can be resolved without any costly installations. The most critical factor in this direction would be inculcating proper attitudes, habits and civic sense in the community. The local governments will need to ally with the other key players in the sector in their efforts in making the environment clean. A clean environment will be a generic indicator of the hygienic practices of people living in it and of good governance as well. An immediate restoration of a 'clean Kerala' is a sin qua non for preventing outbreak of communicable diseases, maintaining the high health status and well-being of the people and even from an economic point of view for higher productivity and retaining the attraction of tourists.

6.139 Sanitation policies are critical to create an enabling environment to encourage increased access to sanitation society. National policies can serve as a key stimulus for local action. Increasingly sanitation is being seen as a major issue in environmental protection. India has made a shift from a target driven approach to water supply and sanitation with the introduction of sector reforms for the drinking water sector and TSC for the sanitation sub sector in 1999. However it does not have a National Sanitation Policy. Sanitation still lends to be clubbed with water supply. The scale and scope of the TSC has demonstrated the need for a separate national policy related to sanitation and hygiene. Kerala can take a lead in formulating a state specific sanitation policy.

State Environment Policy

6.140 Institutions involved with environmental governance and protection are to be strengthened in the state. The State Council for Science and Technology and Environment and Kerala State Pollution Control Board are the leading agencies in the state in the environment sub sector. However environment warrants a multi agency involvement. More co ordination with implementing agencies as well as linkage with local governments would go a long way in achieving the desired results. An integrated environmental management system is required to be established in the State, in order to protect the environmental resources and to implement better

pollution control, setting up of an appropriate legal, institutional and administrative framework equipped with all required powers, skills and operation is the first requirement for developing state wide environment management. Evidently, functional co-ordination between different agencies responsible for various tasks is essentially required.

6.141 State environmental action plan needs to be prepared in a time bound manner for implementation in collaboration with LSGs, NGOs and Private sector. The initiative taken by KSTEC to prepare the State of Environment report would help in developing the action plan.

6.142 Even though environmental education is included as part of school curriculum, more topics related to the State have to be included. Environmental education has also to be made a compulsory topic in teacher training programmes. Environmental journalism is also needs strengthening to be given much focus in media coverage.

6.143 The Environmental Information System Network (ENVIS) is a notable example of the collection, collation and dissemination of environmental data and information. The initiative of the State council for Science technology and Environment to establish an ENVIS centre is a step in the right direction.

6.144 Regular publication of environmental indicators such as water and air quality levels and environmental information bulletins are essential for building a sustainable environmental framework

6.145 Incentives and disincentives are to be used as economic instruments to promote environment conservation and efficient resource use Incentives are mostly taxation oriented and disincentives are based largely on polluter pays principle.

6.146 A major set of challenges arise from emerging biodiversity loss. Preparation of People's bio diversity registers and documentation of indigenous traditional knowledge should be given top priority.

6.147 Environmentally sensitive zones requiring special conservation efforts in the state to be identified and legal status has to be given for conservation. Area development plans prepared on a scientific basis with adequate participation by the local communities and LSGs will help in sustainable conservation.

6.148 There is a need to ensure that CRZ regulations are firmly founded on scientific principles in order to ensure effective protection. Development of feasible models of Public-Private Partnerships including NGOs to leverage, resources of private sector in operating infrastructure for monitoring of environmental compliance seems to be essential to safeguard the environment. Protection of areas of high endemism of genetic resources to be strengthened. State has to prepare an environment policy on the backdrop of the national policy, considering the wider ramifications of the sub sector. Now a new department has been constituted in the State in order to provide a coordinated and focussed direction on Environment.

Kyoto Protocol

6.149 The first report of Scientists through the Intergovernmental panel on climate change (IPCC) in 1990 indicated a likely rise of global temperatures and its potentially serious consequences. This led most participants at the 1992 Earth Summit to sign the United Nations Framework Convention on climate change by which they undertook to reduce their emissions of

the main green house gas, carbondioxide to 1990 levels by 2000. However by 1995 it became evident that few countries had managed to reduce their emissions. This failure and the need for legally binding emissions targets for green house gases (GHG) and timetables for achieving the targets leading to the Kyoto Protocol signed in December 1997. Under Kyoto Protocol 39 industrial countries committed themselves to reduce their total emissions of six green house gases by 5.2 per cent below 1990 levels between 2008 and 2012. The protocol sets different emissions reduction targets for different countries to achieve this overall target. Accordingly the reduction targets for the European Union, the United States and Japan are 8 per cent, 7 per cent and 6 per cent respectively. The Protocol permits a number of other countries to increase their emission over the period. The protocol does not commit developing countries to any specific reduction targets.

6.150 .The Protocol entered into force on February 16th, 2005 the ninetieth day after at least 55 parties to the convention incorporating Annex I parties which accounted in total for at least 55 per cent of the total carbon dioxide emissions for 1990 from that group deposited their instruments of ratifications, acceptance, approvals or accessions. India also signed the protocol. As of 18 January 2006, 158 countries have deposited instruments of ratifications, accessions, approvals or acceptances. The total percentage of Annex I parties emissions is 61.6 per cent.

6.151 To reduce compliance costs for all parties and in particular to provide incentives for US participation, the protocol allows the use of several flexible mechanisms like trading CO_2 emission permits across countries, joint implementation projects and clean Development mechanism whereby the industrial countries can invest in emissions saving projects in the developing countries and obtain certified emissions reduction to offset against their own reduction obligations.

6.152 It is estimated that India emitted 908 million tonnes of CO_2 in 1998 four per cent of the World's total. India is the sixth largest emitter of CO_2. However percapita emission of CO_2 is 1.1 MT per annum, well below the world average of 3.87 MT per annum. the rate of growth of GHG emission in India is 4.6 per cent annually compared to two per cent world average.

Clean Development Mechanism

6.153 The Clean Development Mechanism (CDM) is a flexible arrangement under the Kyoto Protocol for international co-operation in reducing Green House Gas emission. GHG mitigation projects in developing countries can generate Carbon Credits which are in demand in industrialised countries for meeting their Kyoto emission reduction targets. CDM is a market based mechanism driven by the price of the Certified Emission Reduction. Government of India is supporting few states to have Pilot CDMs. Kerala is not included. The potential CDM projects are shown in BOX: 6.5

BOX : 6.5
Potential CDM projects in different sectors

Sectors	Potential Projects/Activities
Agriculture	• Improvement in cultivation practices to reduce methane emissions • Reduction of energy use through demand side management. • Improvement in use of agro chemicals (fertilizers and pesticides)
Buildings	• Energy efficient design of buildings.

(residential, commercial and government	• Energy efficient appliances. • Energy conservation measures. • Fuel switching in households and commercial boilers. • Use of renewable energy sources.
Energy (nuclear energy excluded from CDM)	• Development of renewal energy sources (hydro, solar, wind and biomass). • Clean coal technologies (e.g. coal beneficiation). • Fuel substitution measures. • Improvement in transmission and distribution network. • Reduction of leakage in transport, handling and distribution of oil and gas.
Forests	• Afforestation & Reforestation.
Industry and Manufacturing	• Energy conversion and energy efficiency measures • Process modifications requiring lesser and emission generation. • Change of feedstock in boilers (e.g. coal to gas).
Mining	• Coal bed methane recovery and reduction of methane emissions • Control of fires in mines. • Energy efficient systems.
Transport	• Introduction of alternate fuels (e.g. biofuel). • Switch over to cleaner fuels • Fuel efficiency measures. • Improvement in public transport. • Urban Planning and traffic management.
Wastes	• Landfill gas recovery and use. • Waste to energy conversion activities.

Source: UN, 2003

SOIL AND WATER CONSERVATION

For the last three decades NGOs and development agencies have implemented watershed management projects with the aim of increasing agricultural productivity and reducing poverty. Many of the watershed management projects throughout the world have not taken into account land use capability. They have centred on activities mostly at plot level and do not add upto transformation at catchment level. Additionally they have been top down and have not accommodated the interests of resource users. In order to make a meaningful difference, local people have to be directly involved, trusted and enabled their knowledge appreciated and their skills used.

6.155 A number of schemes on rainwater harvesting and watershed management are implemented by various Ministries with different guidelines, like NWDPRA Hariyali, WGDP, River valley projects etc. there are many issues of Inter Ministerial Coordination, commonality of approach, provision of support services, which need to be resolved to give a greater thrust to water harvesting and conservation. The major recommendations of the Inter-Ministry Task Group on Integration of ongoing schemes to address water conservation as a Water Mission to resolve these issues are shown in Box: 6.6

BOX : 6.6

Major recommendations of the Inter Ministry Task Group on Integration of ongoing Schemes to address Water Mission

- Central Ministries implement schemes for Watershed development under a common approach since March 2000. All schemes for watershed development implemented by the Ministry of Agriculture and Ministry of Rural Development should be converged and brought under one Ministry or one Mission with four sub missions under four existing Ministries (Agriculture, Environment and Forest, RD and Water Resources)
- A separate Committee to be set up with representatives of State governments and NGOs to work out a detailed cost structure for watershed projects.
- There is a need to formulate guidelines on technical aspects of a Watershed project.
- Hariyali guidelines need to be revised to allow for greater participation of NGOs in implementing Watershed projects.
- It is necessary to bring about a detailed guideline on process of social mobilization in watershed projects.
- The guidelines should clearly stipulate major milestones.
- The projects should be monitored more closely on social processes and the disbursement of funds to the projects should be linked to effective Social mobilization.
- Water conservation has to be addressed within the overall paradigm of watershed development

Source. Planning Commission, Oct 2004

Table-6.18

Achievement of Soil and Water Conservation Programmes during 2004-05

Name of Scheme	Achievement	
	Financial (Rs. lakhs)	Physical (ha.)
State Plan		
) RIDF	934.78	5159
) Other State Plan schemes	23.52	96.3
Centrally Sponsored Scheme		
i) NWDPRA	800.81	13347
ii) River valley project – Kabini	231.11	2608
Total:	**1990.17**	**21210.3**

6.156 The projects under RIDF I and RIDF II and RIDF III were completed. Under RIDF IV & V, there were no schemes for soil conservation department. The department is now implementing RIDF VI, VII & VIII, IX and X schemes. Under RIDF VI, 20 projects were sanctioned with an outlay of Rs. 1021.87 lakhs and 40 watersheds were sanctioned under RIDF VII with an outlay of Rs. 1779.32 lakhs covering an area of 13694 ha. Similarly under RIDF VIII, 12 schemes were sanctioned with a financial outlay of Rs. 647 lakhs for covering an area of 5175 ha. Under RIDF IX, 7 projects were sanctioned with an outlay of Rs. 403.47 lakhs for covering an area of 2859 hectares 51 projects having a project cost of Rs. 2973.5 lakhs were sanctioned under RIDF X for covering an area of 28537 hectares. During the year 2004-05 an area of 5159 ha. was brought under various soil and water conservation measurs expending an amount of Rs. 934.73lakhs. Details regarding RIDF projects are given in Table-6.19

Table -6.19
RIDF assisted Soil and Water Conservation Programmes

RIDF Phase	Period	No. of Watershed			Project cost (Rs. lakhs).	Project Area (Ha)	Cumulative Achievement	
		Sanctioned	dropped	Completed/ongoing			Physical (Ha)	Financial (Rs. lakhs)
RIDF I	1995-97	40	3	37	1013.20	5902	5718	996.09
RIDF II	1996-99	32	6	26	1292.99	8725	7859	1087.45
RIDF III	1998-02	40	3	37	2161.50	13423	10890	1845.07
RIDF VI	2000-03	20	-	20	1021.87	6220	3703.21	814.27
RIDF VII	2002-04	40	-	40	1779.32	13694	9966.45	1456.54
RIDF VIII	2002-05	12	-	12	647.40	5175	1935.50	320.72
RIDF IX	2004-06	8	-	-	403.47	2859	139	68.66
RIDF X	2004-07	51	-	-	2973.75	28537	1527	329.45

6.157 Other important state sector schemes implemented during 2004-05 were the protection of catchment of reservoirs of water supply schemes and stabilisation of land slide areas. Sedimentation of reservoirs is a serious problem posing a threat to the life of the reservoir and its storage capacity. Sedimentation is caused due to soil erosion and improper land use in the catchment area. With a view to reduce siltation of the reservoirs of water supply schemes, various soil conservation measures are taken up in the catchment of reservoirs of Aruvikkara and Sasthamcotta. During 2004-05, soil and water conservation measures were implemented at a cost of Rs.12 lakhs covering an area of 59.3 ha in Aruvikkara and Sasthamcottah.

6.158 Stabilisation of land slide areas scheme is being taken up by the state considering the frequent landslide occurring in different districts of the State. Under this project, Rs. 9.52 lakh has been utilised for taking up scientific soil conservation measures in 34 ha. area affected by landslide in the State

6.159 Under the National Watershed Development Project for Rainfed Areas (NWDPRA), 30 watersheds have been identified in the State during Tenth Plan period with an effective area of 72032 ha. The District Watershed Committee and Watershed Development Team were constituted and Project Implementing Agencies and Nodal Agencies were identified in all

districts. During 2004-05 an amount of Rs.800.87 lakhs was expended under the project for treating an area of 13,347 ha.

6.160 An integrated watershed management approach is being adopted Kabini River valley project . Total catchment area of Kabini is 1.635 lakh ha of which 1.05 lakh ha needs soil and water conservation measures. An amount of Rs.903 lakh has been spent upto 3/2005 for covering an area of 8592 ha. During the year 2004-05 an area of 2608 ha has been treated under the project expending an amount of Rs. 231.11 lakhs. At present works are being implemented in 8 watersheds which has been classified under high priority by the All India Soil and Land use Survey. Though the implementation of the project has been beneficial to the Scheduled Tribe and Scheduled Caste families in Wayanad district, the progress of the project by and large was slow.

6.161 The major schemes implemented under Western Ghats Development programme (WGDP) include forestry, village and small scale industries, horticulture, soil conservation, minor irrigation, dairy development, agriculture etc. The expenditure during the Ninth Plan was Rs.6112.70 lakhs of which 21 percent was for Soil Conservation, 23 percent for forestry schemes and 18 percent for minor irrigation works. During 2004-05, Rs.13.13 crores has been spent and out of this Rs. 8.80 crores has been utilised for 88 watershed in the State. Physical and financial achievements of WGDP for Natural Resource Management for 2004-05 are shown in Appendix-6.15

6.162 Many states have taken up development of degraded areas under the watershed approach on a mission mode. The new paradigm of 'watershed plus' recognises the need to involve the community as a necessary condition for the sustainability of watershed programmes. The programme seeks to ensure convergence of all other programmes that promote economic activities and generate increased employment opportunities. Conscious efforts to promote non farm employment and increased land access for the land less as well as promotion of Self Help Groups form a part of the new approach.The success of the programme, to a great extent, depends on the involvement of PRIs and local people in planning and implementation of watershed programmes and the extent of securing the participation of the local community to take care of resource management. A detailed guideline covering the technical aspects also needs to be put in place as recommended by the Inter Ministry Task force.

FORESTRY AND WILD LIFE

Forest certification is a potentially useful tool for contributing to the sustainable forest management Certification involves the external verification of forest management quality, which raised the need for adequate auding systems and local auditing capacity. Forest Certification is expanding rapidly. More than 30 countries have adopted forest certification. In January 2002, the area of certified forest was estimated at 109 million hectares in the world. This is twice the level from 2000. The total figure includes third party audited areas under the two international systems (FSC and PEFC), national scheme (Canada, Malaysia and the US) and those forests for which a Keurhout declaration has been issued. Out of the total certified forest, 54% is located in Europe, 38% in North America, 3% is located in Africa, 3% in Latin America and 2% in Asia Pacific. Targeted area under the certified forest by 2005 is 200 million hectares. Thus less than 10% of the currently certified forests are located in tropical countries.

6.164 Timber Certification is an instrument used to confirm the achievement of certain predetermined performance standards of forest management in a given forest area at a given point of time. An attempt could be initiated in the state towards moving for Certification of our forest area.

BOX : 6.7
Challenges of Forest Certification

- The issues identified for low levels of certification are inflexibility of standards, conflicts between legal settings and certification standards etc.
- Current proliferation of timber certification schemes may create problems for timber producing countries, especially export oriented countries.
- Timber Certification is expensive. The initial cost estimated for Malaysia required to improve forest harvesting operations as compared to current practices is estimated to increase by 63% per ha in 2002.
- Consumers in Europe and USA as revealed in a recent survey are not very willing to pay for more for forest products emanating from certified forest. So increased production costs may not be possible to pass on to the consumers.

Source: FAO, 2004

6.165 FAO has identified forest management certification as an important tool in support of the sustainable use and conservation of forests. Certification provides an opportunity to strengthen comprehensive approaches in the forestry sector. The short run price premium reported for certified supplies range from 5% to 65% in Sawn wood and Plywood dealing with issues related to forest management and ecological and social sustainability.

Forest Cover

6.166 Recent estimates on global forest cover by FAO indicate that between 1990 and 2000. the annual loss of natural forests in the tropics, where most of the deforestation is occurring was 15.2 million ha. Although this figure was slightly lower than the 15.5 million ha recorded for the period 1980-1990, the rate of deforestation is almost constant.

6.167 The forest cover in the country according to 1999 assessment was 637293 sq.km. while the 2001 assessment showed an increase of 6 per cent. Among the states highest net increase of 5237 sq. km. was observed in Kerala. Forest cover assessed in 2001 consists of all lands with more than one ha having tree canopy density of more than 10 per cent interpreted from satellite data, irrespective of tree species. Eventhough higher tree cover were reported in 2001, direct comparison with 1999 assessment would be invalid since 1:50000 scale digital interpretation was adopted in 2001 while 1: 250,000 visual interpretation in 1999. Technical factors as well as changes in the ground have contributed to the changes. The forest cover of the state as per the 2001 assessment of FSI was 15560 sq.km. (dense forest 11772 sq.km. and open forest 3788 sq.km).

6.168 The forest covers 28.98 per cent of Geographical area in Kerala and the strategies for the development of forests envisages maintenance of environmental stability through preservation and reduction of degradation of forest, conservation of Bio-diversity, increasing productivity of forests and developing Participatory Forest Management and technology improvement.

6.169 Kerala ranks 14th among all the States/Union Territories in respect of percentage of geographical area under forest cover. Madhya Pradesh with 77265 sq.km. has the maximum area under forest cover followed by Arunachal Pradesh (68045 Sq.km.) and Chattisgarh (56448 sq.km).

6.170 The estimated Forest area (provisional) in Kerala is 11244.691 sq.km.. This includes 9277.765 sq.km. of reserve forests, 126.008 sq.kms. of proposed reserves and 1840.919 sq.km. of vested forests. Out of the total of 11244.691 kms. the effective forest area in Kerala is only 9400 sq.kms. (Divisionwise details of forest cover are given in Appendix - 6.16.

6.171 The Tenth Five Year Plan has proposed raising the forest and tree cover for the country to 25 per cent in 2007 and 33 per cent by 2012 There has been increasing realization that forests provide numerous benefits to mankind including improvement of quality of environment. In the year 2001, the total forest cover had increased by 38245 sq.kms. as compared to 1999. The corresponding increase in the State was 5237 sq.kms.
This would mean bringing additional area under forest and tree cover to the extent of over 14 million hectares by 2007 and another 26 million hectares by 2012

6.172 In Kerala forests fall in two bio-geographic provinces of Western Ghats and the West Coast, and are rich in bio-diversity and vital for environmental protection and considered to be a repository of rare and endangered flora and fauna. The forest area in Kerala (11244.691 sq.km.) is higher than the national average of 19.5%. As per the assessment of Forest Survey of India (2001) the area under forest in the State is higher than the eff[illegible] forest cover as assessed by the Forest Department.

Table - 6.20
Types of Forests in Kerala

Sl. No.	Forest Type	Area (Sq.km.)	% of Total area
1	Tropical Wet Evergreen and semi evergreen Forests	3299	35.10
2	Tropical Moist Deciduous Forests	4100	43.62
3	Tropical Dry Deciduous Forests	100	1.06
4	Mountain Sub Tropical Temperate shoals	70	0.74
5	Plantation	1810	19.26
6	Grass land	21	0.22
	Total	9400	100

Source :- Department of Forest

6.173 The nature of forests in Kerala shows vide variation among the categories ranging from tropical wet evergreen to tropical dry deciduous forests. The area under different types of forest is shown in Table 6. 20. Tropical evergreen and tropical moist deciduous forests account for 79 per cent. The coverage of the plantation forestry is to the extent of 19 per cent.

6.174 Out of total area, 1.88 lakh ha. is degraded with crown density below 40 per cent. Afforestation of the degraded forests is one of the thrust areas for forestry development, supported under various programmes which include compensatory afforestation and general forestry.

6.175 Forest plantation constitutes the major source of raw materials to the forest based industries. The total area covered by forest plantation of various species is about 2.04 lakh ha. Teak is the major species planted 74186.97 ha(40.14 %) followed by mixed plantation 78776.62(35.57%) and Eucalyptus 12127.85 (11.75 %) (See Appendix 6.17)

6.176 Major forest produce includes timber, reeds, bamboo and firewood. Their total production shows a declining trend from 1993-94 onwards. Reeds and bamboos show sharp decline in supplies during the period while the extraction of timber is on the increase. The quantity of timber produced in 2004-05 was 78056.51 cum. The number of bamboos and reeds produced was 338.73 lakhs. These are species which can be promoted under farm forestry with peoples participation. The trend in production of forest produces during the last eight years is shown in Appendix 6.18

Timber Market

6.177 India is a major producer and consumer of tropical timber. In order to fill the growing gap between domestic demand and supply it has been importing increasing quantities of timber and timber products in recent years. ITTO has undertaken a study to gauge the overall trends and prospects of India's timber markets with special reference to tropical timber trade. Major findings of the study are shown in Box : 6.8

6.178 Although Kerala was a net exporter of hardwood timber, presently about 50% of its wood requirement in cities are met from import. It is estimated that the volume of timber import to the state is to the tune of Rs. 500 crores per annum. Forests of the state contribute to only 5% of the timber requirements of the state. Balance 95% is met from private lands as well as from import. There is hardly any scope for increasing the supply of timber from the forests, as a major objective of current forest policy is ecological conservation rather than commercial production of wood. The only feasible way to attain self-dependency in wood requirements is by producing more wood in the private lands.

BOX : 6.8

Major Findings of a Study on Indian Timber Market

India is emerging as a significant consumer of timber imported and has emerged as the third largest importer tropical logs. The deficit between domestic production and consumption is estimated at 3.64 million cu.m. for industrial round wood plus 90 thousand cu.m of sawn wood and 40 thousand cu.m. of Plywood.. Within the tropical timber species, the study has revealed that tropical timbers imported by private traders are likely to be of better quality and price competitive compared with domestically produced tropical timber due to the higher transaction costs of the public sector undertakings which deal with domestic timber through their depots. Alternate and substitutes of timber are posing a threat to the timber market in India. The Primary survey conducted in 12 urban consumption centres has shown that the timber consumption in urban Indian has been growing at 7 per cent per annum, for the five years upto 2002-03. The study revealed that 43% of the total industrial round wood consumed in the urban centres in the 12 urban centres. Logs were reported to import mainly from Malaysia, Myanmar, Indonesia, Ivory cost, Nigeria and New Zealand. The increasing use of imported tropical timber in the urban consumption centers can be attributed primarily to its price competitiveness and the limited availability of domestically produced timber. Most of the timber imports in India are in the form of logs as the import duty on round wood is only 5% as against 35% on sawn wood. One of the major consumption centres for end uses in Delhi and Delhi Satellite Towns and upcoming centres are Surat and Ahammedabad.

Source: ITTO, 2004

6.179 The Promotion of Tree Growth in Non-forest areas Act 2005 in Kerala came into force on 8.9.2005. The objective of the act is to promote the cultivation of trees in non-forest areas of the State, to preserve the bio-diversity and arrest the soil erosion and to increase the availability of timber and bamboos in the State. The Act is intended to remove certain obsolete law/rules in the Forest Department relating to felling of trees and transporting of timber. According to this Act, every owner of the non-forest land have the right to cut and transport any tree other than sandalwood tree standing in his land. The transportation of timber of a specified tree from the land to any other place is regulated by a declaration filed by the owner of the tree before the Forest Range Officer having the jurisdiction of the area.

Agro Forestry

6.180 Indian forest productivity at 0.7 m3 of wood per year per hectare is one of the world's lowest. There is a growing demand supply gap and agro forestry assumes significance in this regard. (Table-6.21)

Table-6.21
Total Projected demand of raw wood by different industries
(in million cubic meters)

	2010
Paper & Paper Board	15.40
Newsprint	3.42
Constructions	22.10
Packaging	6.40
Plywood	17.96
Match box	3.00

Source: Ministry of Environment & Forest

6.181 The National Forestry Action Plan projects the annual requirement of timber for household sector in the country at 66.6 million cubic meters (cum) in the year 2006 and the total timber requirement at 81.8 million cubic meters. Against the demand, production from forests has been estimated at 29 million m3 in 2006. The homestead mixed gardens is a basic agro ecosystem in Kerala. A wide spectrum of trees and shrubs, more than 127 species, are reported in the Kerala homestead gardens. Most of these species are under exploited. Available micro level studies indicate that standing stock of commercial timber from the Kerala homesteads is between 6.6 and 50.8 m3 per hectare. Bio diversity of Kerala homestead gardens has declined drastically due to commercialization. In order to conserve and improve on-farm genetic diversity and to enhance timer productivity from the traditional land use systems, concerted efforts are necessary especially for evolving technology packages on tree management and production and distribution of quality planting materials.

6.182 Farm forestry does not adequately figure in the local plans of the panchayats. Dearth of adequate planting materials of the desired species is a major constraint for popularising the activity in rural areas. Panchayats can render the required support for organising nurseries with people's participation. Planting of trees in homesteads and public places could be promoted by the Grama panchayats by involving farmers and NGOs However sustainability has to be ensured through participatory management.

Trees outside Forests

6.183 The World has billions of trees that are not included in the Forest Resource Assessment 2000 definition of forest and other wooded land. Trees outside Forest (TOF) include trees in cities, on farms, along roads, and in many other locations. Trees outside the forest are an important source of non-wood forest products. In Kerala a study estimated that out of the total annual production of 14.6 million cubic meters of wood in the state, about 83 per cent was from homesteads, 10 per cent from estates and seven per cent from forests (quoted by FAO)

6.184 The Ministry of Environment and Forests has constituted the National Forest Commission on 7.2.2003 for a period of two years to review the working of Forests and Wildlife sector covering existing policy and legal framework, current status of forest administration, policy option for sustainable forest and wildlife management, biodiversity conservation, and establishing partnership and interface between forestry management and local communities including tribals. The report of the Commission is expended in 2006.

Participatory Forest Management (PFM)

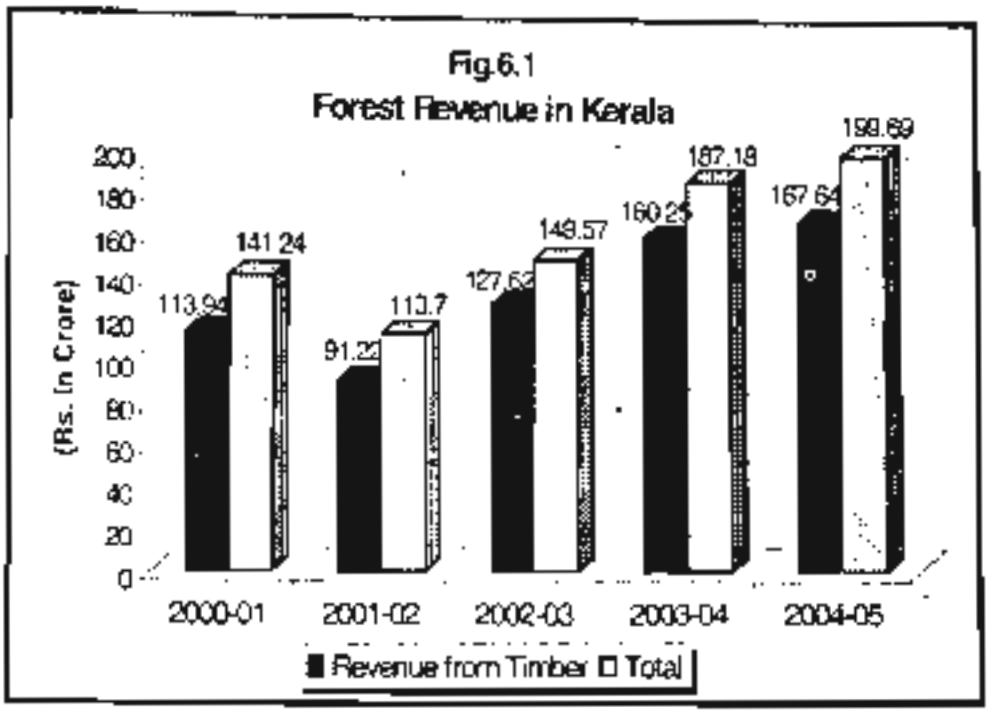
6.185 Joint Forest Management was introduced in India with the proclamation of National Forest Policy 1988. However, through a resolution in 1990, the scheme was actually introduced in all the states in India. In Kerala it is known as Participatory Forest Management. Under the scheme, the forest dependant communities are given rights to collect lops and of branches, non-timber forest produces etc.

6.186 Joint Forest Management (JFM) programme was pursued vigorously as the result of the National Forest Policy 1988, and the Joint Forest Management resolution in 1990 has now been adopted in all 28 states. Around 84632 JFM Committees have been formed and 17.33 million ha. forest area have been brought under JFM programme. About 85.28 lakhs families are involved in JFM programme in various states all over the country. In Kerala 323 PFM Committees have been formed and 1.71 lakhs ha. forest area have been brought under PFM. About 41000 families including 3828 SC's and 11371 ST's are involved in PFM programme in various forest divisions of Kerala. The execution, monitoring and evaluation of the micro plans is vested with the Vanasamrakshana samithies. Upto December 2005 about 327 VSS have been registered.

6.187 Government of Kerala constituted the FDA's in each forest division in 2002-03, with a view to guiding the activities of the VSS. So far 47 Forest Development Agencies FDA's have been constituted in the state. The total amount expected to flow to the FDA's for the Tenth Plan comes to Rs. 32.77 crores.

Forest Revenue

6.188 The Revenue from the forestry sector by way of sale of timber and other forest products comes to Rs 199.69 crores in 2004-05 as against Rs. 187.18 crores in 2003-04 Major portion of the forest revenue is from timber (Fig. 6.1). During 2004-05 Rs. 167.64 crore was the revenue from timber, which account for 83.95 per cent of the total forest revenue. Details are given in Appendix 6.14. The State Government have modified the policy of supplying raw materials to M/s. Hindustan Newsprint Ltd at reduced rates. There will be an annual increase in the price of forest produce supplied to them at 20 per cent per annum. The increase in revenue attainable through this measure is of the order of Rs. 10.00 crores per annum.



Wild life and Biosphere Reserve

6.189 By 2005, India has 90 National parks and 501Wild life Sanctuaries covering an area of 1,56,934 sq km (roughly 22 per cent of the forest area and five per cent of the land area of the country). The 90 National Parks in the country cover an area of 36,882 sq.km. which constitute 5% of the forest area. The total area of 501 sanctuaries is 120,052 sq.km. which constitute 17 per cent of the forest area. Of these, 28 have been declared tiger reserve, spread over 37,761 sq.km. in 17 states. These reserves constitute roughly 5.6 per cent of the recorded forest area and over one per cent of the country's geographical area. The total tiger population recorded in 2001-02 census is 3642, but over half of these tiger live outside tiger reserves. The Periyar Wild life sanctuary was constituted in 1950 and was brought under project Tiger in 1978 as Periyar Tiger Reserve. The Periyar Tiger Reserve also falls in the Periyar Elephant Reserve. The types of forest includes evergreen forests, grass land and moist deciduous forests. The total extend is 777 sq.km. consisting of core (350 sq.km), buffer (377 sq.km) and tourism (50 sq.km) zones. The animal found in the reserve are elephants, leopard, tiger, lion tailed macaque, nilgiri marten etc. in addition to the 45 species of reptiles. Periyar Tiger received the highest number of tourists at 415373 during 2004-05 and earned Rs. 1.80 crore from gate receipts and other tourists activities. In camparison, the total grant received by Periyar Tiger Reserve from the Central Government is also Rs. 2 crore annually. The Ministry of Environment and Forest has set up a Task Force to review the management of tiger reserves and the key recommendations of the Task Force are given in the Box:6.9

BOX : 6.9
Key recommendations of the Tiger Task Force

- Reinvigorate the institutions of governance
- Strengthen efforts geared towards protection of the tiger, checking poaching, convicting wild life criminals and breaking the international trade net work.
- Expand the inviolate spaces for the tiger by minimising human presser in these areas
- Repair the relationships with the people who share the tiger's habitat by building strategies for coexistence.
- Regenerate the forest habitats in the fringes of the tiger's protective enclaves by investing in forest, water and grassland economies of the people.

Report of the Tiger Task Force, Government of India

6.190 The area covered by five National Parks, thirteen Wild life sanctuaries coming under the category of protected areas in Kerala works out to 2346.28 sq.kms. It is 24 per cent of the total area under forest and 6 per cent of the total geographical area, which is higher than the national average of 5 per cent. Details are given in Appendix-6.19. Protected area are managed now as showcases of bio diversity with predominance for large animals in habitat management, Participatory Management based on the principles of eco-development has been initiated and this strategy has resulted in the co-operation of the neighborhood communities and forest dependent communities. During the year 2004-05, an amount of Rs. 1038.60 lakhs was earmarked under various schemes for protected areas management including bio diversity conservation. Out of which Rs. 886 lakhs were utilised under various schemes.

6.191 Biosphere Reserves are terrestrial and coastal ecosystems which are internationally recognised within the framework of UNESCO's Man and Biosphere programme. In the country, 13 Reserves have been set up and in 2001, UNESCO approved designating the Sunderban (West Bengal) and Gulf of Mannar Reserves. As a result three Biosphere Reserves from India are now included in the International Net Work, the third being Nilgiri (Kerala, Karnataka and Tamil Nadu) which was designated earlier. Agasthyamala Hills in Kerala comprising an area of 1701 sq.km. has been designated as 13th Biosphere Reserve in 2001. Detailed action plans will facilitate attraction of additional funding for these sites for long term conservation and sustainable utlisation of resources.

6.192 The first National Wildlife Action Plan of 1983 has been revised and the new wild life Action Plan (2002-2010) has been adopted at the national level. The plan outlines the strategies, action points and priority projects for conservation of wild fauna and flora in the country. A systematic management of Protected Area is most important from ecological, environmental and socio economic point of view. The implementation of Management Action Plans prepared under the Kerala forestry Project is of special priority.

General Forestry

6.193 In General Forestry, survey and demarcation of forest boundaries is one of the major activities. Out of an estimated boundary of 11220 kms, about 3000 kms. of forest boundary are yet to be demarcated and fixed. The activities of boundary protection during 2004-05 include construction of 9457 cairns and maintenance of 424 cairns. Fire protection is another important activity and during the period 1081.32 km fire lines were created and 341.45 kms fire protection works has been undertaken. Other activities are maintenance of plantation 8590.67 ha, construction of new buildings (2nos) and 648.21 ha. of plantation of various species were raised during 2004-05. Under 'Hardwood' species 46.85 ha of hardwood species was also raised during the year 2004-05.

6.194 The outlay and expenditure for various schemes implemented in the Forestry sub sector is shown in Table – 6.22

Table – 6.22
Outlay and Expenditure of 2004-05

(Rs. in Lakhs)

Plan	Budgeted outlay	Expenditure
State sector Schemes	4084.00	3377 20
Centrally sponsored Schemes	1625.00	1014.46
Total	**5709.00**	**4391.66**

6.195 The expenditure reported for various schemes implemented during the period include forest protection with an expenditure of Rs. 9.23 crore, regeneration of denuded forest with Rs. 3.41 crores, strengthening bio-diversity conservation and management of protected area with Rs. 5.67 crores, strengthening of infrastructure facilities with Rs. 2.53 crores, production of industrial raw materials with Rs. 3.78 crores and hardwood species with0.26 crores.

6.196 The World Bank aided Kerala Forestry Project was commenced in March 1998 and the project was completed on 31.12.2003. During 2004-05, a provision of Rs. 280 lakh was set apart for continuing the activities under the project including Forest Management Information system and expended an amount of Rs. 209.44 lakhs. Upto 31.3. 2005, the cumulative expenditure incurred for the project was in the tune of Rs. 167.51 crores.

Management of Non-Wood Forest Produce

6.197 The NWFPs including medicinal plants is being given a major thrust because of their importance around the world. The productivity and management of NWFPs are to be improved through sustainable and scientific management by adopting improved methods of harvesting processing, and value addition and marketing.

6.198 In addition to the protection and conservation measures taken by the department, these activities are to be strengthened by executing the same through actual consumer groups themselves. For this purpose Vana Samrakshana Samithies (VSS) were formed. The collection of NWFPs is entrusted with these user groups and they undertake collection.

6.199 During the year 2004-05, Rs.160 lakhs have been earmarked for management of medicinal plants and the expenditure was 131.27. In addition to State Plan support, some specific projects are being supported by the National Medicinal Plants Board.

6.200 In order to meet the growing demand of plant based medicines in the national and international market, it is essential to grow medicinal plants in degraded forests also. During Tenth Plan, it is proposed to establish 200 Vanaspati vans covering over one million ha. of degraded forests in the country. Eventhough Kerala prepared a project few years back, funding could not be mobilised.

Compensatory Afforestation Scheme

6.201 The Compensatory afforestation project was sanctioned at an estimated cost of Rs.113.00 crores to be implemented within a period of 10 years starting from 1993-94. The objective of the scheme is the afforestation of 57,180 ha. of forestland in lieu of 28588 ha. lost by way of encroachment prior to 01.01.1977 which is a pre-condition for obtaining Government of India clearance for issuing patta to the encroached land. During 2004-05, no new lands were afforested under the schemes but conducted maintenance of about 14310 ha of land afforested already. For this an amount of Rs. 401 lakh were spent. About 52954 ha. of degraded forest have been treated so far under the project.

Kerala Forest Development Corporation

6.202 KFDC is a public sector undertaking with shares owned by Government of India and Government of Kerala. The jurisdiction of the Corporation covers forest areas situated in 7 revenue districts and 10 territorial forests. The total area of 10717 ha. (8006.86 ha of tree plantations and 2710.13ha. cash crops) is under 9 divisions and 26 sub units and tree crops like Eucalyptus, Acacia, Teak, Albizia, Manjium etc. and cash crops like Cardamom, Coffee, Tea, Pepper etc. are cultivated.

6.203 The activities undertaken during 2004-05 include 581 ha. pulpwood plantations and 48 ha. softwood plantations. KFDC entered into an agreement with M/s. Hindustan Newsprint Limited for the supply of pulpwood during 2004-05 at subsidised rates and supplied 14631 tonnes against the above allotment. Eco-Tourism activities being carried out at Gavi and Munnar Divisions make a profit of Rs. 6.40 lakhs during the year. During the year 2004-05, KFDC received a profit of Rs. 37.98 lakhs from Cardamom cultivation. Vanilla was also cultivated in 9.5 ha in Gavi, Munnar and Nenmara Divisions.

Sanjeevanivanam (National Medicinal Plants Board Assisted Scheme)

6.204 This is a scheme implemented for the creation of awareness among the stake holders through appropriate extension activities including training , extension, marketing and documentation sanctioned by the NMPB for Rs. 25 lakhs for 3 years starting from 2002-03. The awareness and training programmes for stake holders have been conducted on promotion and cultivation of medicinal plants.

Project Elephant

6.205 The scheme is for protection of elephants and their habitat and corridors The elephants in the forests are protected from poaching and their habitats are improved with fire protection and planting fodder species. For the benefit of public electric fences and elephant proof trenches are created and compensation is paid for the damages caused to their person and property. Public awareness programmes are conducted and mahouts are trained for better handling the elephants in captivity The activities are executed as per the specific work programme approved by the Government of India.

CHAPTER 7

ENERGY DEVELOPMENT

Indian Scenario

India faces an energy crisis with a good percentage of villages without power. About 50 percent of Indian households have no access to electricity. Nation will have to overcome the existing grim situation, with growing awareness of the impact on the environment of the use of fossil fuels through the release of "greenhouse gases." The power sector is always linked with high visibility of environmental conflicts around large power plants and dams. Meanwhile the enormously rising electricity bill and frequent power shortage come to the forefront in any power sector discussion. All plans drawn up in the last two decades targeted to construct power plants with a capacity of 10000 MW a year. Due to the slow pace of progress in the power sector, the Tenth plan target to add over 41000 MW of generation capacity would be difficult to achieve. The total installed capacity of power generation and its percentage contribution by various sectors in India is shown in Table.7.1

Table.7.1
Installed Power Generating Capacity (India)

Sl.No	Sector	Installed Capacity (MW)	Percentage
1	State Sector	70,447	57.1
2	Central Sector	39,908	32.3
3	Private Sector	13,107	10.6
	Total	**123462**	**100.0**

Source: Ministry of Power, Govt of India

7.2 The demand for energy was 361575 MU but the actual consumption was only 335076 MU during April-October 2005 which shows a shortfall of 7.3 percent. The peak demand deficit was 9.1 percentage. Therefore, a capacity addition is required and estimates are shown in Table 7.2

Table 7.2
Sector wise Target and Present Installed Capacity during Tenth Plan

(In MW)

Sl.No	Area	Original Target	Commissioned	Under execution	Works to be awarded /Under Approval	Overall capacity addition now anticipated
1	2	3	4	5	6	7
1	Central	22832	8325	9150	1450	18925
2	State	11157	3945.64	7955.02	0	11900.66
3	Private	7121	1145.8	3752.8	0	4898.60
	Total	**41110**	**13416.44**	**20857.82**	**1450**	**35724.26**

Source: Ministry of Power, Government of India

7.3 The total installed capacity of power in the country is 123462 MW and the total number of consumers are over 130 million as on 31-10-2005.

Box 7.1
Future Plan

The Power Ministry has estimated that capacity addition in the Tenth plan will be 37000 MW against the targeted 41110 MW. The shortfall of 10% will however , be made up by absorbing an additional 5000 MW in the national grid from captive capacity. In the next plan period, capacity addition of 60896 MW will be required in order to meet peak demand and energy requirements in the country. It has been estimated that total thermal power addition is 33536 MW and hydro power 22420 MW. Nuclear power addition accounts for 4940 MW for the period between 2007-12. Each state has been asked to firm up the Eleventh plan capacity addition programme .

Source: TERI NEWS WIRE 1-15 June,2005

Power Scenario in Kerala

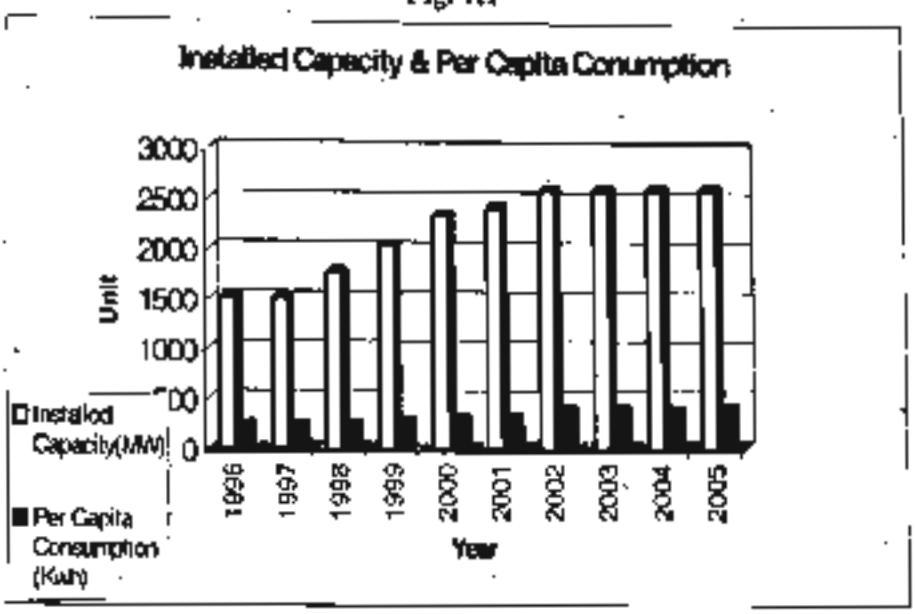
7.4 The history of Hydro power development in Kerala began with the commissioning of Pallivasal Hydro Electric Project in 1940 Next few decades witnessed the progressive development of various hydro electric projects Sabarigiri in 1966 and Idukki in 1976 were milestones in the endeavor of power development of Kerala State Electricity Board. The details of Kerala's power system from 1961 to 2005 is shown in Table7.3

Table 7.3
Growth of Power System in Kerala

Sl NO	Particulars	1961	1980	1995	2000	2001	2002	2003	2004	2005
1	Installed Capacity(MW)	132.5	1011.5	1491.5	2350.68	2420.68	2602.62	2601.62	2614.22	2617.22
2	Annual Sale (MU)	505	2384.4	7027.69	9812.88	10319	8667.32	8752.07	8910.84	9384.4
3	Per Capita Consumption(KWH)	30	96	231	300.54	311.67	395	392	386	400
4	EHT Line Circuit (KM)	1900	4404.5	6106.21	7598.97	8955.18	9021.13	9065.91	9256.12	9345.22
5	EHTS/S (Nos)	22	85	157	178.	190	194	198	205	212
6	HT Line Circuit (KM)	5449.4	13347.6	24509	28672	30035.67	30971.19	32054.42	33280.22	34235.67
7	LT Lines Circuit (KM)	8899.1	47605.9	125390	180499	187169.7	191930.8	196974	201637.6	207711.3
8	Distribution Transformers (Nos)	2898	10821	23478	29551	31329	32585	33455	34758	36640
9	Annual Revenue in (Rs. crores)	3.117	91.249	625.1937	1669.24	1811.125	1945.99	2480.68	2756.093	2917.362

Source : KSEB

Fig. 7.1



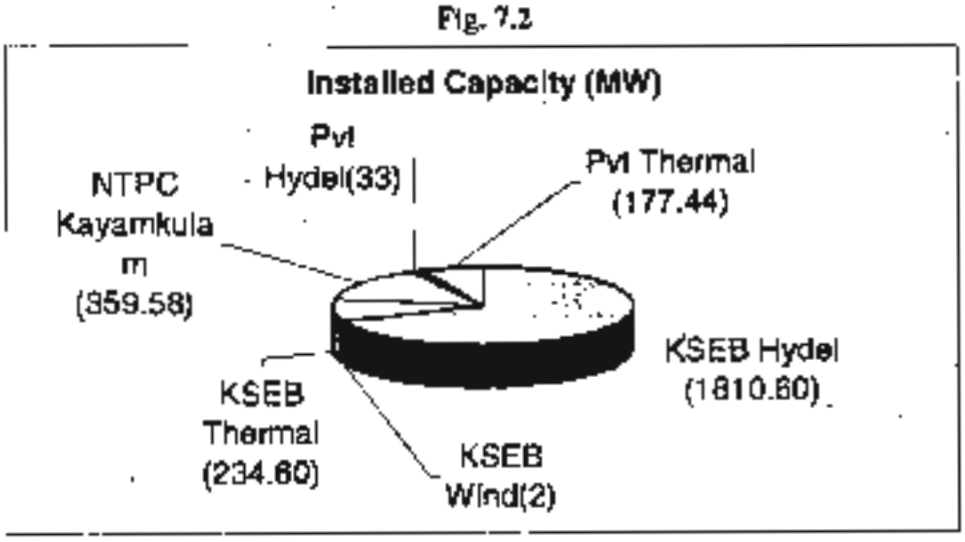
7.5 Details of Installed Capacity and per capita consumption during the last 10 years are shown in the figure 7.1

Generation

7.6 Kerala power system consists of 30 power generating stations, which include 24 hydel, five thermal and one wind . Of which KSEB own 22 hydel,one wind and two thermal stations.

7.7 The total installed capacity in Kerala as on 31-3-2005 is estimated as 2617.22 MW. Of which KSEB's hydel plants contribute 1810.60 MW, wind farm at Kanjikode 2.0 MW and thermal power plants 234.60 MW. Details are given in Figure 7.2

Fig. 7.2



7.8 Malankara Hydro Electric Project was commissioned on 23rd October,2005 As a result installed capacity has been increased by 10.5 MW . To meet the demand,necessiated import of power from the central sector. Due to good monsoon during 2005-06,the reservoirs have so far received an inflow of 7974MU and generation from hydel stations was 4949.15 MU (up to 30-11-

2005). This has enabled KSEB in backing down liquid fuel based thermal stations and helped in shielding consumers from the adverse financial implications that could have resulted from the unprecedented hike in international crude oil price during the year. The ratio of the hydro – thermal mix in Kerala from 1998-99 to 2004-05 is shown in Table 7.4

Table 7.4
Hydro Thermal Mix in Kerala from 1998-99 to 2004-05

Year	Hydel (MU)	Thermal (MU)+ Import (MU)	Total (MU)	Hydel(%)	Thermal + Import(%)
1998-99	7305	3652	10957	67%	33%
1999-2000	7038	4738	11776	60%	40%
2000-01	6167	6295	12462	49%	51%
2001-02	6716	6057	12773	53%	47%
2002-03	4819	7932	12751	39%	61%
2003-04	3910	8545	12455	31%	69%
2004-05	6077.21	6688	12766	48%	52%

Source. KSEB

7.9 The details of on-going projects and projects in the pipeline are given in Table 7.5

Table 7.5
On going projects and projects in the pipeline

Sl. No	Nature	Name of the project	Installed Capacity (MW)	Energy Potential (MU)
1	On Going Schemes	Kuttiadi Additional Extension	100	240
2		Kuttiadi Tailrace	3.75	15
3		Neriamangalum Extension	25	58.27
4		Lower Meenmutti	3.5	7.63
1	On going Diversion Schemes	Kuriar		37
1	Projects in Pipeline	Athirapalli	163	386
2		Pallivasal Extension	60	164.87
3		Shengulam Augumentation		85
4		Maniyar Tailrace	4	16
5		Chaitankottungala II	6	14.76
6		Poozhithodu	4.80	11.779
7		Vilangad	7.5	22.63

Source: KSEB

7.10 The energy requirement for the year 2005-06 is estimated at 13257 MU. Out of this about 6265 MU is expected from hydel sources, 6205 MU from central generating stations, and the balance from the remaining sources. The availability of power in 2003-04 and 2004-05 is shown in Table 7.6

Table 7.6
Energy Availability in the State during 2003-04&2004-05

Sl No	Source	2003-04	2004-05
1	Generation (Mu)		
a	Hydel	3910.68	6077.21
b	Thermal	574.89	297.6
c	Wind	2.49	2.25
	Total (1)	4488.06	6377.06
2	Purchase (MU)		
a	NTPC (Kayamkulam)*	1034.95	253.68
b	NTPC (Ramagundam)	2271.22	2,346.94
c	Neyveli lignite Corporaton	1348.11	1449.84
d	Western Region		
e	Madras Atomic Power Project	80.13	76.11
f	Eastern Region	467.52	214.15
g	Maniyar (captive)		34.69
h	Kaiga	373.6	340.47
i	BSES	992.21	110.06
j	Kuthungal (Captive)		36.11
k	KPCL Kasargode	77.23	15.52
l	PTC Power	71.2	
m	UI Units	682.15	346.16
n	GEL	12.03	
o	Talcher Stage II	605.06	1437.29
	Total (2)	8015.41	6661.02
3	Total (1)+(2)	12503.47	13038.08
4a	Less-Bilateral Exchange		199.43
b	Less-Loss in (MU)	3544.43	3335.37
c	Auxiliary consumption	48.1	48.08
	Total (4)	3592.53	3582.88
5	Net Availability in (MU) (3-4)	8910.94	9455.2

**Kerala Share alone*
Source. KSEB

7.11 The cabinet cleared the Baropol power project in Thalassery taluk, at an estimated cost of Rs.98.94 crores and the KSEB will implement the project.

Rennovation, Modernisation and Uprating (RMU) of old Generating Stations.

7.12 The renovation and modernization of Pallivasal, Panniyar & Shengulam projects have been completed. The capacity of Unit 6 of Sabarigiri increased from 300 MW to 335 MW and unit 1 of Neriamangalam increased from 45MW to 54 MW and its works are in progress.

Transmission

7.13 Provision in the Electricity Act 2003 such as open access to the transmission and distribution net work, recognition of power trading as a distinct activity, the liberal definition of a captive generation plant and provision for supply in rural areas are expected to introduce and encourage competition in the power sector.

7.14 The load despatch activities are carried out with the aid of State of art technology computerized Supervisory Control and Data Acquisition system (SCADA). The real time data from 30 Remote Terminal Units including generating stations and major sub stations are acquired at the

Load dispatch station. One more RTU is being installed. The State LD stations is connected to the Regional Load Dispatch centre, Bangalore through F.O link for real time data transfer. The real time generation details of all central sector stations are made available through the SRLDC. Transmission infrastructure facilities of the KSEB is depicted in the Table7.7

Table 7.7
Transmission Facilities in Kerala(as on 31.3.2005)

Sl.No	Capacity	Substation (Nos)	Lines (ckm)
1	400 KV	1	260
2	220 KV	13	2594.35
3	110 KV	107	3802.50
4	66 KV	91	2948.512
5	33 KV	39	530.69

Source : KSEB

7.15 In addition to the above, two 110 kv sub stations, three 66 kv sub stations three 33 kv sub stations .25.18 ckm of 110 kv lines, 11.35 ckm of 66 kv lines and 16.6 ckm of 33 kv lines were also commissioned during 2005-06. Power Grid Corporation of India Limited (PGCIL) has completed the construction of a new 400 kv sub station at Pallipuram in Trivandrum in 2005 .

Availability Based Tariff (ABT)

7.16 India was demarcated into five regional grids, which operate independently. Kerala is the part of the Southern Grid comprising Andhra Pradesh, Tamilnadu, Karnataka, Kerala and Pondicherry. In order to meet the increasing power requirements of the States, in addition to their own generating stations, they are entitled to get shares from central generation stations owned by NTPC, NLC and NPC.

7.17 ABT is a rational tariff structure for accounting the transaction of energy from interstate generating stations in the central sector.

7.18 ABT regime and Unscheduled Interchange (UI) Mechanism have effectively been utilized by KSEB to optimize the overall cost of purchase of energy. With the introduction of ABT, the performance of the grid has improved considerably. Number of Grid separation and cascading has been reduced considerably. The voltage profile has also improved considerably. All these achievements can be attributed to the mechanism under ABT; which penalizes any activity against grid security.

7.19 During 2004-05, KSEB has drawn 497.95 MU and exported 158.013 MU utilising favorable conditions as UI, while adhering strictly to merit order Despatch Principle. The net drawal is 339.94 MU at a daily average of 0.93 MU. During 2005-06 the UI export so far (30.11.2005) is 597.1175 MU and import is 69.1578 MU. The net export during 2005-06 is 527.9657 MU at a daily average of 1.45 MU . .

7.20 To fully utilize the copious inflow received during this mansoon and to avoid spilling of reservoirs, KSEB has resorted to sale electricity outside the State through public sector traders M/s N.T.P.C. Vidyut Vyapar Nigam Ltd. (NVVN) and Power Trading Corporation (PTC) and 271.1456 MU of power has been sold up to 30.11.2005

Power Highway

7.21 Demand for electricity has substantially increased in the recent past . Govt of Kerala have chalked out various measures to meet the demand . 400 KV power highway is being built with assistance from the Central Power Grid Corporation. The 400 KV power highway extending from

Kozhikode to Thiruvananthapuram, has been designed to draw electricity from the power stations at Koodankulam of Tamil Nadu and Kayamkulam and to transmit to various parts of the state.

7.22 As per the scheme approved by Southern Regional Electricity Board (SREB) 400 KV multi – circuit line is proposed from Thirunelveli – Edamon and 400 kv Double circuit line from Edamon – Kochi (East) Madakkathara. One 400 kv substation at Kochi (East) is also sanctioned as part of this evacuation scheme. KSEB has agreed to give the Right Of Way (ROW) of existing 220 KV line route to PGCIL between Kayathar – Edamon and from Keezhillam to Madakkathara.

7.23 Tremendous industrial expansion is being focussed at Kochi with the coming up of Smart City, LNG Terminal etc. Hence, there will be considerable increase in power demand during the next 10 years. The 400 kv substation at Kochi (East) is sanctioned, considering these factors.

Distribution

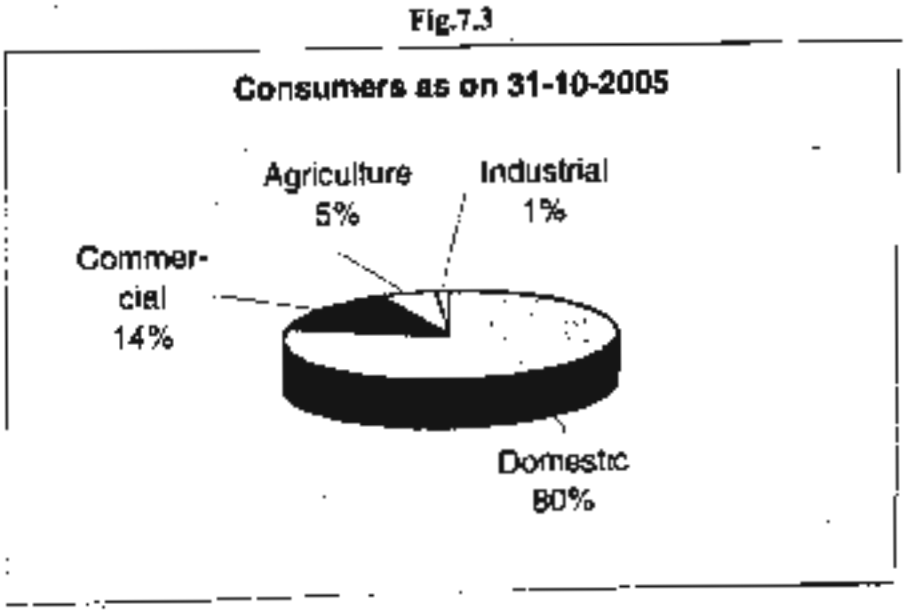
7.24 Distribution network of the KSEB covers various category of the consumers in Kerala. The distribution system of the KSEB as on 30-9-2005 is given in the Table 7.8 and fig.7.3

Table 7.8
Distribution Net Work of KSEB

Sl.No	Particulars	Position as on 30-9-2005
1	Consumers(Nos)	
i	Domestic	6377796
ii	Commercial	1171242
iii	Industrial	118255
iv	Agriculture	417577
2	11KV lines (Ckm)	34320
3	L.T lines (Ckm)	213999
4	Distribution Transformers(Nos)	37115
5	Street Light (in lakhs)	9.45

Source: KSEB

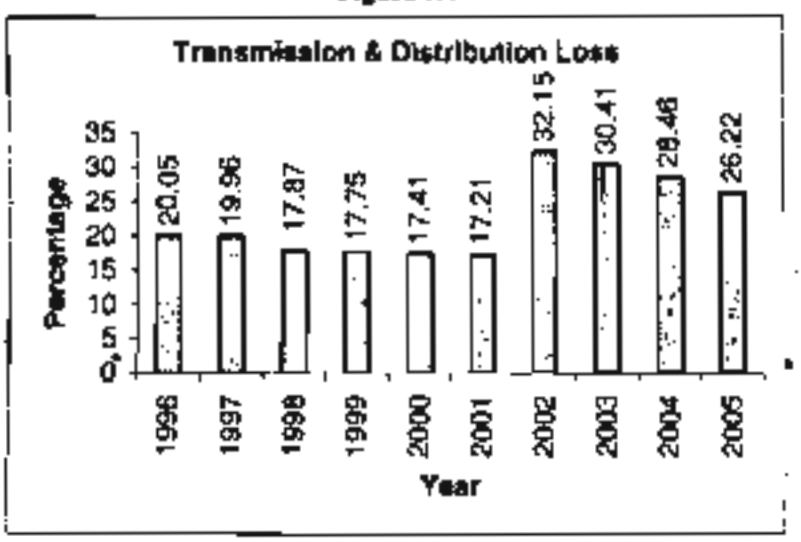
Fig.7.3



Transmission & Distribution Loss

7.25 Transmission and Distribution loss is the common phenomina faced by all SEBs and one of the major reasons for revenue loss. During 2004-05, T & D loss recorded in the state is 26.22% as against 28.46% in the previous year. As a result of the intensive anti power theft inspection conducted by the Board, the average T & D loss during the year 2005-06 (up to the end of the October 2005) substantially dipped to about 24.26%. Percentage of T&D loss in the last 10 years is shown in Fig.7.4

Figure 7.4



Box7. 2 T & D Loss in Developed Countries	
Types of Loss	**Average Losses in modern utilities in Developed Countries**
Technical losses in high voltage transmission system	2-3 percent
Technical losses in the distribution system	2 to 4 percent in urban areas 4 to 6 percent in rural areas
Commercial losses (unbilled consumed energy owing to pilferage,unauthorizedconnections, non metered connections, faulty meters, meter reading error, billing error etc)	Below 2 percent

Source: EPW May 14, 2005

7.26 The number of consumers of the Board marginally increased by 6.83%, from 73 lakhs as on 31.3.2004 to 77.99 lakhs as on 31.3.2005. Per capita consumption of energy has also increased to 400 kwh from 386 kwh in 2003-04.

7.27 Anti power theft activities of the Board are strengthened and widened all over the State Number of inspections, amount assessed, and amount realized by the Board are given in Table 7.9

Table 7.9
Anti Power Theft Activities in Kerala

Year	Inspections (Nos)	Amount Assessed (Rs. Crores)	Amount realized (Rs. Crores)
2001-02	6215	5.69	3.45
2002-03	7888	17.48	3.82
2003-04	14354	12.27	5.24
2004-05	10287	40.46	8.11

Source: KSEB

Accelerated Power Development and Reforms Programme (APDRP)

7.28 KSEB received an amount of Rs. 373.11 crores from Government of India during 2004-05. Under APDRP, 13 new town schemes and 3 city schemes were sanctioned during 2004-05 The financial status of the APDRP is shown in Table .7.10

Table7.10
Financial Status of APDRP Schemes (As on 30-11-2005)

(Rs. Crores)

Sl. No	Name of the Scheme	Year of sanction	Scheme Amount	Amount Received from GOI to GOK	Amount Received from GOK by KSEB	Counter part funding Received	Total Amount spend by KSEB
1	Circle Scheme (3circle)	26.8 2002	148 24	161.22	230 55	72 00	141.14
2	Town Scheme (7 Towns)	27.11 2002	160.72			55.07	103.85
3	New Town Scheme (26 Towns)	1 10.2004	123.91	15.49		15.49	22.47
4	New Town Schemes (13 Towns)	4.4.2005	57.18	53.84			2.376
5	New City Scheme (3 cities)	4.4.2005	373.57				
	Total		**863.62**	**230.55**	**230.55**	**142.56**	**269.836**

Source: KSEB

7.29 Under this programme, the improvement of sub transmission and distribution net work in three districts viz. Pathanamthitta, Malappuram and Kasaragod were completed and 46 town schemes and three city schemes are being implemented. The scheme interalia covers installation of energy meters, construction and replacing conductors of 11 kv lines, installation of 100 KVA transformers, computerization of billing etc so as to reduce T & D losses and to improve performance of distribution sector.

Rajiv Gandhi Grameen Vidyuteekaran Yojana (RGGVY)

7.30 In the light of launching the project "Rajiv Gandhi Grameen Vidyuteekaran Yojana (RGGVY) by the Government of India, proposals were submitted to Government of India with an outlay of Rs. 348.79 crores for the electrification of 3578 habitations in 930 villages covering 14 districts of Kerala. Government of India have sanctioned Rs. 221.75 crores to implement the scheme as first phase covering seven districts in Kerala; viz' Kasaragode, Kannur, Wayanad, Kozhikkode, Malappuram, Idukki and Palakkad.

Sponsored Works

7.31 KSEB has also undertaken various sponsored works such as Special Development Fund for MLAs (SDF), M.P's Local Area Development Scheme (MPLADS) and works under the Kerala Development Plan. The details are given in Tables 7.11 and 7.12

Table 7.11
Works under MPLADS/SDF for MLA's as on 31-8-2005

Sl.No	Area	Completed Works(Nos)	
		MPLADS	SDF for MLA
1	South	218	360
2	Central	109	186
3	North	131	279
	Total	458	825

Source: KSEB

Table 7.12
Works under Kerala Development Plan(Local Self Governments)

Sl. No	Area	No. of works completed	
		2004-05	2005-06(up to 31.8.2005)
1	South	1136	242
2	Central	981	116
3	North	374	15
	Total	2491	373

source: KSEB

7.32 Under Kerala Development Plan, Rs.1214.61 lakhs has been spent towards electrification and its related works during 2004-05 and 4094 houses were electrified under anti poverty sub plan projects by the Local Governments in 2004-05.

7.33 Sub sector wise distribution of plan grant expenditure of Local Self Governments in the Annual plan 2004-05 is given in the Table 7.13

Table 7.13
Plan Grant Expenditure of Local Self Governments 2004-05

(Rs.in lakhs)

Sl No	Component	Expenditure
1	Electrification	1169.32
2	Non-Conventional Energy	30.48
3	Energy Conservation	6.73
4	Power Production	8.08
	Total	**1214.61**

source :IKM

Voltage Improvement Works

7.34 KSEB is committed to provide 230 volts between phase and neutral at consumers premises in the LT services and corresponding higher voltages in the case of higher voltage services within allowable limits of toleration. KSEB cannot always fulfill this commitment due to rapid load growth and corresponding changes in system parameters. Converting existing single phase lines to 3 phase, strengthening distribution system by providing higher capacity conductors, providing additional

transformer on the existing 11 kv line or by extending 11 kv line by providing adequate size of capacitors are the works carried out for providing higher voltage in the distribution net work.

Issues Confronting the Sector:

7.35 Different subsidy rates are existing among different categories of consumers. Agriculture consumers are charged at 65 ps/unit, high-end commercial consumers are charged at 825ps/unit and non domestic consumers in LT VI © category at 860 ps/ unit. Similarly average rate for domestic consumption remain at 176 ps/unit, whereas average cost per unit is 359 ps and average tariff is 310 ps/unit. Naturally efforts in rationalizing tariff rates will hurt a vast majority of consumers. Consumption by domestic consumers has increased over the years.

7.36 With the enactment of Electricity Act 2003, power sector in the State is bound to function in a new legal frame work, which takes away KSEB's monopoly status. With provision for trading, multiple licensing and open access etc become functional through new operators, retaining the paying consumers who provides for the cross subsidy support, will be a real challenge.

7.37 Power theft causes an annual revenue loss of nearly Rs.250 crores to KSEB. The loss due to power theft alone is estimated as eight percent.

Status of Power Sector Reforms

7.38 The status of reforms implemented by the KSEB is given below:

- All the 15 lakhs households will be electrified by 2007 by effecting service connection to five lakhs per year. During 2004-05, 418814 and 2005-06 (up to August 2005) 153784 service connections were made.
- KSEB started its functioning with three profit centres viz. generation, transmission and distribution and a corporate office at the Head Quarters.
- Completed the energy audit to reduce system losses by metering all 11 KV and above feeders.
- KSEB has started to reduce the loss by 2% every year. T & D loss was brought down to 24.72% in August,2005 from 32.15% in 2001-02.
- Completed 100% Metering of all consumers.
- MIS cell started functioning with Head Quarter at Trivandrum and 2 Regional office formed at Ernakulam & Kozhikode.
- Action for reducing expenditure and increasing revenue collection is expedited.
- Out of 558 sections, 183 sections are computerised.
- *Computerised Billing & Customers Service centres at Sections*
- In Town schemes, completed all 54 sections.
- In Circle schemes completed all 88 sections
- Anti Power Theft (APT) activities are intensified and reorganised APT wing. Anti power theft ordinance promulgated by Government of Kerala.
- Order by SERC on ARR and ERC for 2003 -04, 2004-05 and for 2005-06 were issued. ERC notified supply code on 2.3.2005. SERC has approved estimated rates for distribution works.
- Renovation and modernization (R &M) works of Pallivasal, Sengulam and Panniar were completed and the units were also commissioned.
- Renovation works of Neriamangalum hydel generating stations is nearing completion.
- Unit 6 of the Sabarigiri hydel generating station is taken over by the KSEB for commercial operation, and renovation work of unit 5 is under progress.
- Out of the target of 8731 capacitors installation in sub transmission and distribution lines (9 KVAR) under APDRP scheme, 5526 numbers are installed.

- The aim of the Board is to achieve 3% ROR without subsidy from the Government . The revenue deficit has been brought down from Rs. 1007.43 crores in 2003-04 to Rs. 342.8 crores in 2004-05.
- Introduced ABT in southern Region with effect from 1.1.2003 and Kerala is strictly following grid regulations.
- Securitization of dues to CPSUs up to 30.9.2001 has been completed.
- Suggestions of KSEB on constitution of District Level Committee for Resource Planning, monitoring of distribution reforms and rural electrification has been furnished to Government.
- Government of Kerala has issued captive power policy on small hydro projects in January 2003.

National Electricity Policy (NEP)

7.39 Government of India have approved the National Electricity Policy.

- It implies robust competition and radical reforms in this sector, to ensure power for all by 2010.
- The policy aims to ensure availability of 1,000 units of electricity per capita by the year 2012 for which new capacity addition of more than 100000 MW is planned by 2012 .
- The policy encourages captive power plants to supply their surplus power to the grid.
- The electricity policy calls for a time bound programme to be drawn up by the SERC, for segregation of technical and commercial losses through energy audits. This is a very important step towards reduction of T & D losses. The policy requires State Goverments to prepare five –year plan with annual mile stones to bring down these losses to best international practices by 2012.

Financial Performance of KSEB

7.40 The Kerala State Electricity Board (KSEB) incurred revenue deficit of Rs. 1007.43 crores in 2003-04. This huge deficit has been substantially reduced to Rs.342.76 crores in 2004-05. The revenue deficit of the KSEB had progressively come down over the last three years. This has been possible not only due to the good performance of the monsoon, but also to the more efficient revenue collection and reduction in transmission and distribution loss. The revenue collection from the sale of power increased by 5.8 percent from Rs 275609.27 lakhs in 2003-04 to Rs.291736.23 lakhs during 2004-05. .

7.41 KSEB has filed a petition for its Aggregate Revenue Requirement (ARR) for the year 2006-07 before the KSERC for deliberation and approval. On the basis of the petition submitted by the KSEB, commission has admitted the petition. During 2005-06 Gross Expenditure of the KSEB is estimated .(ARR) as Rs. 3867.65 crores but KSERC has ordered an amount of Rs. 3374.26 by reducing the expenditure like power purchase, interest and finance charges, depreciation, employee cost, repair and maintenance, administration and general expenses and other expenses and finally KSEB fixed revised gross expenditure at Rs. 3729.04 crores .The revised estimate of the revenue gap is Rs. 309.50 crores during 2005-06. The Table 7.14 indicates ARR as per KSEB estimates and that ordered by the KSERC .

Table 7.14
Summary of Aggregate Revenue Requirement (ARR) for the Year 2006-07

(Rs. Crores)

Sl. No	Items	2004-05	2005-06			2006-07
		Actual	KSEB (ARR)	KSERC (Order)	KSEB (Revised)	(ARR)
1	2	3	4	5	6	7
1	Generation of Power	81.13	55.86	55.86	44.88	43.09
2	Purchase of Power	1463.03	1492.77	1427.31	1512.12	1646.02
3	Interest&Finance Charges	605.59	617.68	583.60	566.48	529.76
4	Depreciation	374.77	430.35	235.65	392.65	424.32
5	Employee Cost	789.64	939.43	845.89	868.82	882.20
6	Repairs& Maintenance	74.49	89.09	85.25	89.09	96.50
7	Administration & General Expenses	95.01	98.27	90.70	99.48	108.85
8	Other Expenses	117.54	144.20	50.00	151.52	146.75
9	Gross Expenditure (A)	3601.20	3867.65	3374.26	3729.04	3877.49
10	Less: Expenses Capitalised	42.88	158.95	138.77	40.68	43.90
11	Less: Interest Capitalised	62.04	99.15	85.59	54.97	53.50
12	Net Expenditure (B)	3496.28	3609.55	3149.90	3633.39	3780.09
13	Statutory Surplus ©	103.49	217.42	217.42	217.42	217.42
14	ARR (D) = (B) + (C)	3599.77	3826.97	3367.32	3850.81	3997.51
15	Less: Non-Tariff income	339.65	259.03	269.54	293.28	301.31
16	Less: Revenue from Tariff					
	(a) Within the State	2917.36	3075.69	3046.47	3146.35	3393.42
	(b) Outside the State					
17	Total income	3257.01	3334.72	3316.01	3541.31	3694.73
18	Revenue Gap	342.76	492.25	51.31	309.50	302.78

Source: KSEB

7.42 Ministry of Finance,Govt of India have sanctioned Rs. 64.94 crores to Kerala for the Accelerated Power Development of Reforms Programme (APDRP) under Incentive Component (incentive grant upto 2002-03) for reducing cash losses and further strengthening the Transmission and Distribution net work.

Realisation from Sale of Power

7.43 The overall realisation from sale of power has been slightly increased from 327.2 paise per unit in 2003-04 to 328.9 paise per unit in 2004-05. Category wise details of realization from sale of power are given in Appendix 7.5

7.44 Details of power consumption and revenue collected during 2004-05 is given in Table 7.15

Table7.15
Categorywise Power Consumption and Revenue Collected during 2004-05

Sl No	Category	%of consumers to total	Consumption as % to total	Revenue as % to total
1	Domestic	78.77	45.42	25.76
2	Commercial	14.41	10.11	21.72
3	Industrial LT	1.48	8.34	11.13
4	HT&EHT	0.03	29.44	37.07
5	Others	5.31	6.69	4.32
	Total	**100**	**100**	**100**

Source: KSEB

Savings of Power Purchase Cost

7.45 KSEB was able to save about Rs. 127.42 crores in 2003-04 and Rs. 112.42 crores in 2004-05 by way of sharing of 50% of the capacity of NTPC Kayamkulam Power with TNEB. By way of availing Unscheduled Interchange (UI) Power, KSEB was able to save an amount of Rs. 58 crores during 2003-04 and about Rs 35 crores in 2004-05.

7.46 KSEB has initiated several steps for swapping the loans with the donor agencies, as a result of which interest ranging from 9.75% to 17 per cent have been restructured with the lower interest rate ranging from 6.5 percent to 11 percent. Details relating to swapping of loan can be seen in Table.7.16

Table:7.16
Swapping of Loans

(Rs.Crors)

Sl. No	Source	Principal	Before Swapping		After Swapping		Premium Paid	Net Gain	Gain per annum
			Interest rate %	Amount payable	Interest rate %	Amount payable			
1	2	3	4	5	6	7	8	9	10
1	a) Non SLR Bonds	300.00	15.25	187.58	7.00	54.74	0.00	132.84	26.57
2	b) Premature redumption	6.13	13.25	2.11	6.50	1.03	0.00	1.08	0.41
3	NSLR Bonds								
4	REC Stage I	649.43	13 to 15	278.95	10.50	226.89	20.21	31.85	3.98
5	REC Stage II	118.97	10 to 13	39.97	10.00	29.36	2.96	7.65	0.85
6	REC Short term Loan	48.77	9.75	3.23	6.50	1.71	0.42	1.10	1.1
7	LIC	187.41	14.00	102.98	11.00	80.91	7.80	14.27	1.1
8	PFC State I	100.00	15 to 17	67.26	8.5 to 10.00	49.98	8.55	8.73	0.97

9	PFC State II	18.13	13.5 to 15	7.21	8.50	5.74	0.94	0.53	0.08
10	Commercial Banks (for KDPP)	125.00	13.75	48.35	6.90	25.47	0.00	22.88	2.29
	Total	**1553.00**		**737.64**		**475.83**	**40.88**	**220.93**	**37.35**

Source : KSEB

7.47 Borrowing of KSEB for the on going projects and others are depicted in the Appendix 7.7. Capital expenditure of the Board during 2004-05 is Rs. 452.28 crores which comprises of Rs. 88.16 crores for generation, Rs. 208.05 crores for transmission and Rs. 156.07 crores for distribution sector.

Box 7.3
Reduction in Tariff Rate

Kerala State Electricity Board has decided to reduce the tariff in respect of LT-1(a)Domestic and LT-VII (A)&(B) commercial category of consumers in the first time of the history of Kerala. Subsequently Board submitted the petition to KSERC. In the light of the petition submitted by the KSEB, Commission ordered the following.

- Existing Tariff shall continue to be in force until the commission revises it .
- KSEB shall collect the charges from LT-1(a) Domestic &LT-VII(A)&LTVII(B)-Commercial Consumers by reducing 20Paise per unit w.e.f.1-1-2006.
- The shortfall in revenue due to the Government directive for the remaining months of 05-06 shall be released by the Government as subsidy on monthly installment. In this context, to make things transparent to public, KSEB may split the energy bills of each consumer to exhibit the subsidy component distinctly, so that the Public will also be in a position to appreciate the quantum of subsidy they receive every month.
- The revenue gap for 2006-07 shall be decided based on the procedures laid down by the Commission for finalization of ARR & ERC for 2006-07.

The Kerala State Electricity Regulatory Commission.

7.48 Kerala State Electricity Regulatory Commission was constituted on 14th November, 2002 under the provision of Electricity Regulatory Commission Act, 1998 and came into effect from 10th June.

7.49 During 2004-05, the commission received 15 petitions from different organizations including the petitions related to the ARR and ERC of the KSEB for the year 2005-06 and disposed 14 petitions including three petitions received during 2003-04.

7.50 Regulations issued by the commission are the following.

- Kerala Electricity Supply Code 2005.
- KSERC (Consumer Grievance Redressal Forum and Electricity Ombudsmen) Regulations, 2005.
- KSERC(Procedure for filing appeal before the Appellate Authority) Regulations, 2005.

7.51 KSERC has issued orders on Aggregate Revenue Requirement (ARR) and Expected Revenue from Charges (ERC) for the year 2005-06 to KSEB, Tata Tea Ltd, Technopark, Rubber Park, Cochin Port Trust. Kerala Electricity Ombudsman Regulations, 2005, Terms and conditions of Tariff for Retail Sale of Electricity Regulations,2005, Kerala State Electricity Grid Code,2005, Terms and conditions for Open Access Regulations, 2005 and Licensing Regulations, 2005 will be issued very soon.

Non Conventional Energy Programmes

7.52 India is slowly and steadily progressing in the field of generating power through non conventional sources, the cheapest pollution free method. Non Conventional Energy sources generated 5 per cent more energy by 31.12.2004 than the target.(10 Percent) set by the ministry in the Tenth Five Year Plan and the total grid interactive installed capacity from renewable for power generation in India has reached 5500 MW. Wind power accounts for 85 percent of renewable, biomass 10 percent while solar accounts for 5 percent. New and emerging technologies like hydrogen energy ,fuel cells, bio fuels hybrid and hybrid electrical vehicles, geothermal energy and tidal energy hold major promises for meeting the growing energy needs in the country.

Box 7.4
Hydrogen Energy and Fuel Cells

In recent years hydrogen has been receiving world wide attraction as a clean and efficient energy carrier with a potential to replace hybrid fossil fuels. Significant progress has been reported by several countries including India in the development of hydrogen energy as an energy carrier and an alternative to fossil fuels. Serious concerns relating to energy security, depleting fossil fuels, fuel reserves, green house gas emission and air quality are driving this global transformation effort covers a hydrogen based economy. Hydrogen has huge energy content and when it is burnt, it producers water as a by product.

Fuel cells are merging as a clean and fuel efficient technology for stationary and portable application. Fuel cells can be potentially used in domestic, inudsirial, transport,agriculture sectors and also in remote areas for renewable power supply. Medium and High temperature fuel cells(up to 100 degree centigrade) are preferred for power generation .

Source : MNES

Wind Energy Programme

7.53 In wake of the rising oil prices, the leading energy companies are harnessing wind energy. For fear of the depletion of oil resources in the near future and the continuous rise in the oil prices in the overseas market, prominent energy companies in both Indian public as well as private sectors are taking precautionary measures by tapping wind energy. ONGC, HPCL and REL have already taken a step in this direction by making plans. ONGC plans to replace nearly half of the 350 MW of electricity that it draws from the grid, for operation in six states with wind power. Faced with a huge power crisis, big Corporations such as the Tata Group, Aditya Birla Group, Goderaj Group and Bajaj Group have started setting up wind power generation units. India is the fifth largest in wind power generation industry in the globe after Germany, US, Spain and Denmark. The installed capacity of wind power in India (as on 31.12.2004) has reached 2980 MW with a record addition of 496 MW in a period of nine months from April to December 2004. Statement of wind power installed capacity is given in Table 7 17

Table 7.17
State-wise Wind Power Installed Capacity(MW)

Sl.No	State	Additional Installed Capacity		Total Installed Capacity (as on 31.12.2004)
		2003-04	2004-05	
1	Andhra Pradesh	6.20	2.50	101.30
2	Gujarat	28.90	17.90	219.90
3	Karnataka	84.90	66.80	276.00
4	Kerala	0.00	0.00	2.00
5	Madhya Pradesh	0.00	5.00	27.60
6	Maharashtra	6.20	3.80	411.20
7	Rajasthan	117.80	84.70	263.22
8	Tamil Nadu	371.20	315.90	1677.4
9	West Bengal	0.0	0.0	1.10
10	Others	0.00	0.0	0.50
	Total	615.20	496.6	2980.22

Source:MNES

7.54 Under the National Programme for Wind Resource Assessment of MNES, ANERT has established two wind monitoring stations at Pasavaikumbe in Kasargod District and Kalyanathandu in Idukki District aimed for studying the feasibility of establishing Wind Generation Stations in Kerala. The programme is being implemented jointly by ANERT and the Centre for Wind Energy Technology (C-WET0), Chennai with 80 percent assistance from MNES.

Solar Photo Voltaic Programme

7.55 Solar Photo Voltaic(SPV) system is an option for meeting electrical energy needs of remote areas where chances of getting grid electricity is remote .

Solar Thermal Energy Programme (STEP)

7.56 STEP envisages the promotion of use of solar heat energy to meet the various thermal needs. The most popular solar thermal devices are Solar Water Hating Systems (SWHS), solar cookers, Solar Dryers, Solar stills etc. These devices help to save considerable amount of fuel used for heating.

Bio Energy Programme

7.57 Bio Energy Programme includes bio gas programme, biomassgasification programme, alternate fuels and waste to energy programme.

7.58 A subsidy scheme for promoting the installation of bio gas plants having individual capacity not less than 15 cu.m was announced during 2004-05. Subsidy given per cu .m for bio gas plants for thermal application and for electricity generation are Rs.3000/ and Rs. 4000/ respectively. During 2004-05 , sanction was given to 14 bio gas plants for thermal application and six bio gas plants for electricity generation. District-wise details of Bio gas sanctioned during 2004-05 are given in Table 7.18

Table7.18
Bio gas for Thermal Application and Electricity Generation

Sl.No	District	Bio gas plants sanctioned (Nos)	Total capacity in (cu.m)
	A. Bio gas for Thermal Application		
1	Kollam	1	35
2	Alappuzha	1	20
3	Idukki	1	25
4	Ernakulam	1	40
5	Thrissur	1	15
6	Palakkad	1	15
7	Kozhikode	3	55
8	Malappuram	3	60
9	Kannur	2	35
	Total	14	300
	B. Biogas plants for Electricity Generation		
1	Thrissur	3	50
2	Kozhikode	1	15
3	Kannur	2	35
	Total	6	100

source: ANERT

Box 7.5
Creating Energy from Food Waste

The Vizhinjam Panchayat in Thiruvananthapuram District has taken the lead and installed 575 family size biogas plants in the panchayat .Most of the beneficiaries are either farmers or fishermen.

source:MNES

7.59 In Kerala, 2544 chullahs have been installed during 2004-05, of which 2185 are domestic chullahs(2+1model), 152 are community chullahs for anganawadis and 207 are community chullahs for schools. During 2004-05, 16 solar cookers and 39 CFLs were sold through Adithya Solar Shops. District Advisory Committee for Renewable Energy had been constituted in each district . The two disurict level Renewable Energy parks (Thiruvnanthapuram and Palakkad) had been sanctioned during 2003-04 and submitted proposals to MNES for Renewable Energy parks in two more districts(Idukki & Ernakulam).

Rural Energy Programme

7.60 As part of Remote Village Electrification Programme inKerala, a survey was carried out with the help of IREP offices. It is estimated that out of 1521 colonies surveyed, 1114 colonies are not electrified and 407 colonies are partially electrified. District wise results of the survey to identify remote unelectrified colonies are given in Table 7. 19

Table 7.19
District Wise Details of Survey Conducted for Identifying Remote Electrified/un electrified Colonies in Kerala

(Nos.)

Sl. No	District	Colonies surveyed	Houses surveyed	Unelectrified colonies	Houses in unelectrified colonies	Partially electrified colonies	Un electrified houses in partially Electrified colonies
1	Thiruvananthapuram	127	3793	109	2933	18	860
2.	Kollam	38	2595	38	2595	0	0
3.	Pathanamthitta	79	3295	66	3082	13	213
4	Alappuzha	65	52206	9	209	56	51997
5	Kottayam	9	215	9	215	0	0
6	Idukki	197	19483	197	19483	0	0
7	Ernakulam	52	2588	39	1942	13	646
8	Thrissur	305	4884	91	1872	214	3012
9	Malappuram	49	1280	49	1280	0	0
10	Palakkad	39	2135	22	1361	17	774
11	Kozhikode	158	4439	144	4140	14	299
12	Wayanad	160	58226	125	52597	35	5629
13	Kannur	57	1695	55	1656	2	39
14	Kasaragod	186	7063	161	6198	25	865
	Total	**1521**	**163897**	**1124**	**99563**	**407**	**64334**

Source.ANERT

Enforcement of Standards and Statutes.

7.61 The Electrical Inspectorate enforces the statutes and standards of all electrical installations in the State

- To ensure standard and quality of electrical installations and thereby ensure safety and efficiency in the generation, transmission, distribution and use of electricity.
- To give prior approval for electrification of Extra High Tension installations, multistoryed buildings and cinema theatres, installation of X-rays, Lifts, Neon-signs and generators.
- To conduct periodical inspection of all electrical installations except those supplied at low voltage as prescribed by the Government.
- To investigate electrical accidents and submit reports to the Government enumerating the causes and suggestions to avoid recurrence.

7.62 The Meter Testing and Standards Laboratory under the control of Electrical Inspectorate, tests and specifies the specifications and quality of electrical equipment, materials and gadgets as per the standards prescribed by the Bureau of Indian Standards (BIS) The Meter Testing Standards Laboratory has been accredited to the National Accreditation Board of Laboratories.(NABL). The Chief Electrical Inspector is the Appropriate Authority to implement the provisions of Household Electrical ,Appliance (Quality Control) Order, 1981 Quality of Electrical Wire cables, Appliances and Accessories are ensured by conducting the relevant tests prescribed by the BIS.

7.63 Kerala State Electricity Licensing Board give licenses to Electrical Contractors, Supervisors and Wiremen.

Energy Conservation

7.64 EMC, an autonomous body under the Department of Power, Government of Kerala is the designated agency to enforce the Energy Conservation Act, 2001, devoted to the improvement of energy efficiency in the state, promotion of energy conservation and encouraging development of technology related to energy through research, training, demonstration programmes and awareness creation. The centre is networking with institutions within and outside the state for research and training. The Centre has initiated a project to develop and create model installations of Information Technology (IT) – based energy management systems in traditional rice milling industries in India and Sri. Lanka, which would result in reducing the operating energy costs and there by contributing to reduction in greenhouse gas emissions, improving productivity and enhancing the profitability and viability of the traditional small and medium industries sector. EMC has taken up the following programmes during 2004-05.

7.65 Consultancy assignments, consultancy and project report preparation for local bodies, field visits and awareness creation in SHP development for tribal population, preparation of bankable DPR of 10 SHP schemes for allotment etc.

7.66The Regional Centre of UNIDO is developing programmes and projects related to the development of small hydro power for promoting and accelerating sustainable development through creating replicable income generating activity models and Community Development Centres (CDC) for remote rural areas. In order to implement 100 KW Micro Hydro Power Scheme in Pambukayam, Panchayat raised resources and created a four km stretch of 11 KV line and the UNIDO – Regional Centre and EMC completed the distribution network to provide power to about 30 families and other fifty establishments including the upcoming telephone exchange.

CHAPTER 8

INDUSTRY AND MINING

Kerala is becoming an industrially competitive State and the investment climate has been most favourable to investors. Adequate growth of investment has encouraged the pace of modernization and technology upgradation so that the existing industries become more competitive and the industrial product structure is diversified in tune with the changing demand conditions. With a clear and pragmatic approach of the State on its own policies for encouraging private investment, a number of attractive incentives are offered to the investors. A number of constructive changes were evolved to increase the efficiency of thrust sectors, small-scale industrial units, medium and large-scale industries and the traditional industries. For accelerating the growth rate of industrial sector, the new vision and strategy could make the State an investor friendly and labour friendly location for manufacturing industry. This could be done by utilizing the comparative advantage in human resources, placing greater emphasize on developing knowledge based and service industries and by gaining the confidence and cooperation of workers in efforts to raise productivity.

Box 8.1

Thrust Sectors

All 100% export oriented units and tiny, small, medium or large units in sectors like IT, tourism, agro based business including food processing, readymade garments, ayurvedic medicines, mining, marine products, engineering, biotechnology and rubber based industries are considered as thrust sectors.

8.2 The new Industrial Policy 2003 offers a promotional package for these sectors, encompassing specific incentives, support for research and technology development, improved information sharing and assistance in marketing and export promotion.

Industrial Growth

8.3 Even though a negative industrial growth was recorded in 2002-03, there was considerable improvement compared to the previous year. In 2003-04, manufacturing sector shows an increased growth rate of 7.14 per cent and in 2004-05, it shows a growth rate of 5.77 per cent. Growth of manufacturing sector (NSDP) of Kerala from 1999-2000 to 2004-05 is given in Table 8.1 and figure 8.1.

Table 8.1

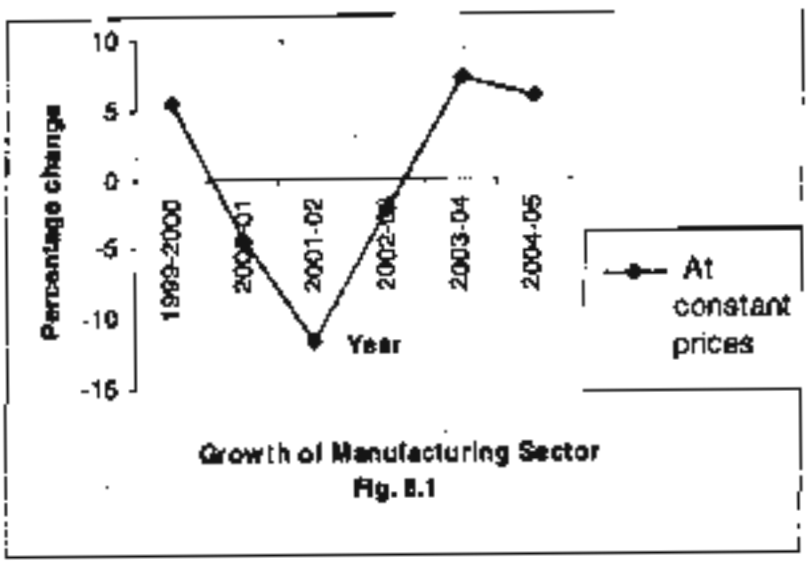
Growth of Manufacturing Sector in Kerala (NSDP)

Base Year (1993-94) (Rs. Lakhs)

Year	Actual	Percentage changes over years (at constant prices)
1998-99	350458	...
1999-00	369687	5.49
2000-01	353129	-4.48

2001-02	312153	-11.60
2002-03	305182	-2.23
2003-04*	326967	7.14
2004-05**	345837	5.77

Source: Economic & Statistics Dept, Thiruvananthapuram
**Provisional* ***Quick Estimate*



Growth of Manufacturing Sector
Fig. 8.1

Index of Industrial Production

8.4 The General Index of industrial production in the State continuously declined from 302.29 in 2001-02 to 262.59 in 2003-04. Negative growth was recorded in several items such as beverages, tobacco, cotton textiles, basic chemical and chemical products, non metallic mineral products, basic metals and alloy industries, metal products, machinery and equipment, transport equipment and other manufacturing industries. Only some items such as food products, wool, silk, man made fibre textiles, textile products, wood and wood products, rubber, plastic, petroleum and coal products recorded positive growth.

Industrial Exports

8.5 Performance in industrial exports of almost all major products recorded positive growth. But coffee and tea recorded negative growth. Software exports increased by around 66% from Rs. 240 crores to Rs. 400 crores. Details of major commodities exported from Kerala in 2003-04 and 2004-05 are given in Table 8.2.

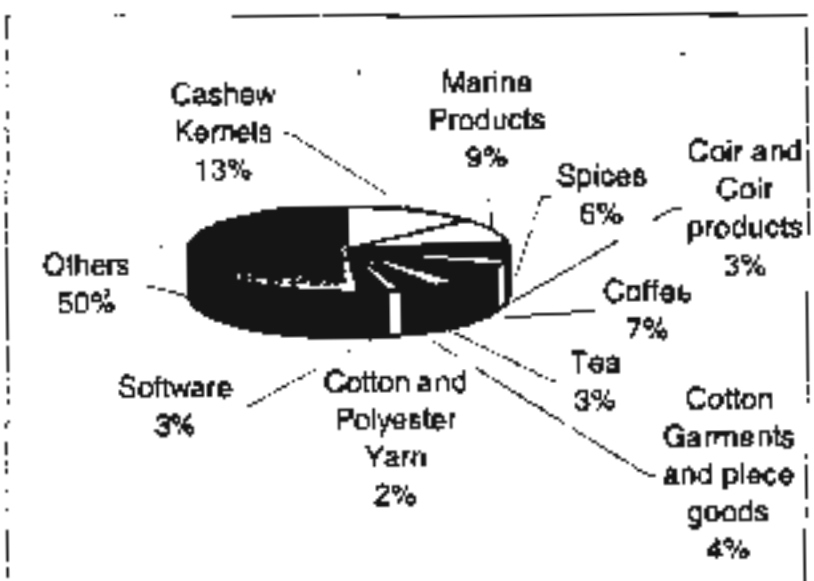
Table 8.2
Industrial Exports from Kerala

Sl. No.	Item	2003-04		2004-05	
		Quantity (MT)	Value (Rs crores)	Quantity (MT)	Value (Rs. Crores)
1	2	3	4	5	6
1	Cashew Kernels	67821	1192	79950	1716
2	Marine Products	87508	1205	87378	1158

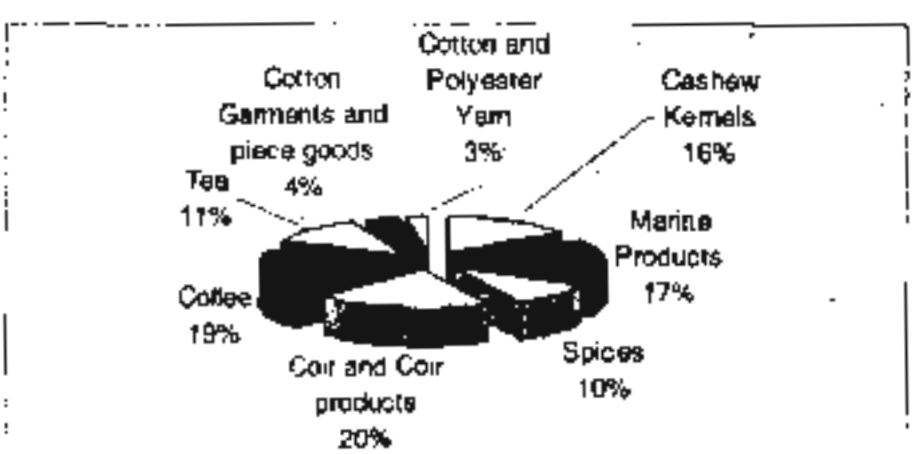
3	Spices	44386	660	49655.	779
4	Coir and Coir products	87091	357	105794	415
5	Coffee	132247	865	99933	842
6	Tea	73802	518	57966	370
7	Cotton Garments and piece goods	17660	433	18792	458
8	Cotton and Polyester Yarn .	12379	182	14340	201
9	Software		240		400
10	Others		5654		6596

Source: Kerexil, Thiruvananthapuram

8.6 Percentage contributions of different commodities to industrial exports (value and quantity) are given in Figures 8.2 and 8.3.



Value of Industrial Export 2004-05
Fig 8.2



Industrial Export 2004-05 (Quantity)
Fig 8.3

Central Sector Investment

8.7 The Central sector investment in the State as on March 2004 is Rs. 15301 crores which accounts 2.56% to total investment in India as against 2.77% during 2002-03. In the gross block investment, Kerala is placed in the 16th rank during 2003-04 as against 14th rank during 2002-03. Maharashtra, Andhra Pradesh, Uttar Pradesh, and Gujarath are the top rank States in the central investment. In the central sector PSUs in the State, 45,000 employees are working as on March 2004 as against 48000 during 2002-03 which shows a decrease of 3000 employees. In the case of central sector employment Jharkhand, West Bengal, Maharashtra, and Madhya Pradesh are the top States. Details of central sector investment in Kerala and other States are given in Appendix 8.6. The situation is expected to improve with the implementation of projects like expansion of NTPC Power Plant at Kayamkulam, LNG Terminal etc.

Foreign Direct Investment in India

8.8 From 2000 January to 2005 February, an amount of Rs. 68106 crores has been brought to India as Foreign Direct Investment, of which, Kerala's share is only Rs. 275 crores. Delhi ranked first in the list with an FDI of Rs. 18278 crores followed by Maharashtra (Rs. 16198 crores), Karnataka (Rs. 4925 crores) and Tamilnadu (Rs. 4223 crores).

Box 8.2

Industrial Licensing Policy

- Deregulation of industrial sector
- Prior to 1991, investment decisions were subject to Government directives
- Progressive deregulation and decontrol
- Industrial license is now required only for six industries under compulsory licensing
- Manufacture of items reserved exclusively for small-scale sector
- Project is to be located around large cities
- No industrial license is required for remaining items
- Atomic Energy and Railway Transport: only sectors reserved for Public Sector

Industrial Disputes

8.9 The number of industrial disputes pending is 2658 by 2004-05 end, which is lower than that in 2003-04. Number of strikes and lockouts during 2004-05 decreased compared to 2003-04. Even though the number of workers affected due to strike has been decreased, it marginally increased in the case of lockout. Man-days lost due to strike and lockout also increased during 2004. Details of industrial disputes, handled, settled etc are given in the Appendix 8.5 and the details of industrial strikes and lockouts in India and Kerala are given in Table 8.3.

Table 8.3
Industrial Strikes and Lockouts

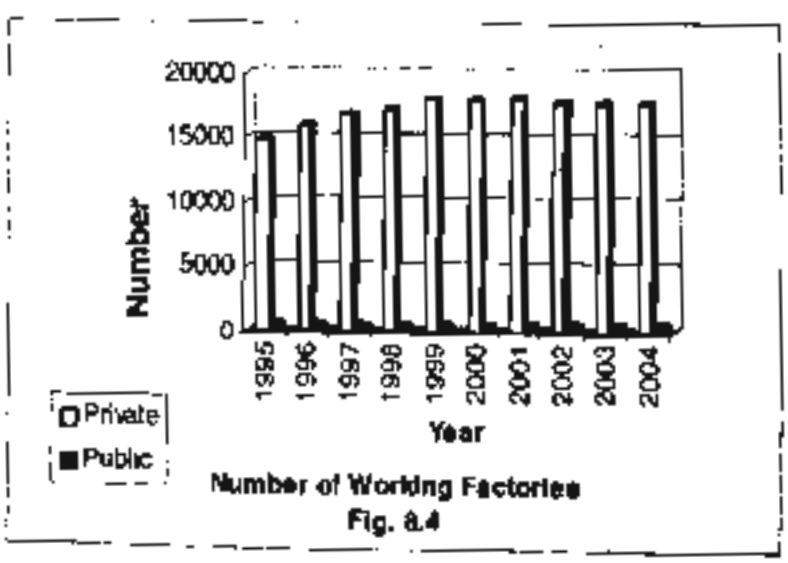
Year	Strikes				Lockouts			
	India		Kerala		India		Kerala	
	No.	Man-days lost (Million)	No.	Man-days lost (Million)	No.	Man-days lost (Million)	No.	Man-days lost (Million)
1	2	3	4	5	6	7	8	9
2000	426	11.96	21	0.28	345	16.80	40	NA
2001	372	5.56	9	0.39	302	18.20	38	1.40
2002	295	9.66	7	0.64	284	16.92	49	1.77
2003	255	3.2	22	0.09	297	27.14	35	1.80
2004	189	3.40	14	0.15	215	10.13	30	1.98

Source. : Labour Commissioner, Thiruvananthapuram and Labour Bureau, GOI

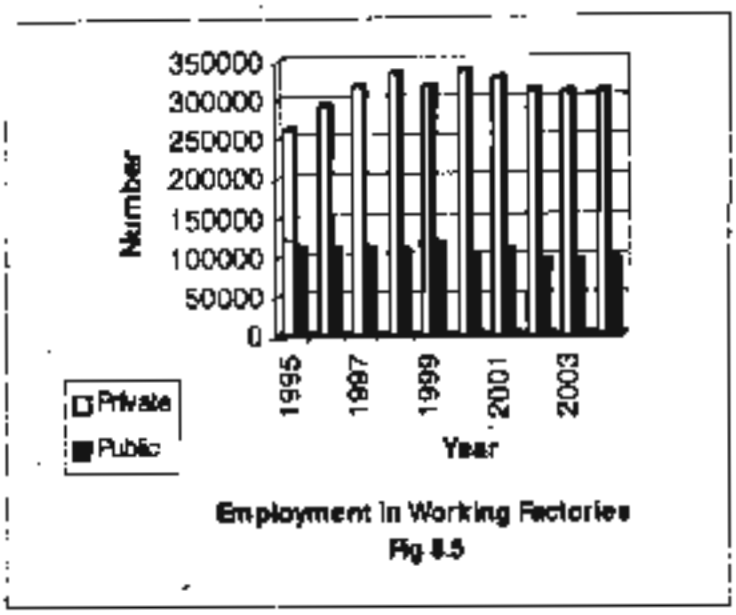
Working Factories and Employment

8.10 In the case of working factories only a marginal increase (32) was recorded from 18239 in 2003 to 18271 in 2004 and the increase was in private factories. The total number of employment in the working factories increased from 404257 in 2003 to 405251 in 2004, which record an increase of 994. Of the total 405251 workers, 310884 are in private and 94367 are in public factories.

8.11 The growth of working factories during the last ten years is shown in Fig. 8.4. When we analyze the increase in the district wise distribution of factories, it is seen that only marginal increase was recorded in nine districts and it remained the same in Wayanad and Kasaragod districts and marginally decreased in Pathanamthitta, Malappuram and Kannur. The largest number of working factories are in Ernakulam (2935) followed by Thrissur (2526), Kollam (1897) and Palakkad (1870). The lowest number of working factories are in Wayanad district (133) followed by Kasaragod (255) Idukki (335) and Pathanamthitta (504). Wayanad and Idukki districts are the most industrially backward districts and the Government is initiating action to improve the position. The highest growth in the working factories is in Thrissur district and in all other eight districts, the growth is marginal. The growth of employees in working factories is given in fig. 8.5.



Number of Working Factories
Fig. 8.4



Employment in Working Factories
Fig 8.5

Joint Stock Companies

8.12 In Kerala 14655 Joint Stock Companies were working as on 31.3.2005 which includes 13210 private limited and 1445 public limited companies. During 2004-05, 1072 joint stock companies are newly registered and two companies are transferred from other States. Four private limited companies are transferred to other States. A total of 254 joint stock companies comprising of 198 private and 56 public are wound up/ dissolved/ struck off / amalgamated during 2004-05. No Company has been converted from public to private limited but five companies have been converted from private to public limited. The total number of Government companies stood at the same level by registering one new company and winding up one company. Out of the 111 Government companies, 60 are private limited and 51 are public limited.

State Level Public Sector Enterprises

8.13 Kerala has the largest number of PSUs in India (113 out of 1071) which employ 1,15,697 persons. Of these, 63 are manufacturing units and are classified under chemical, engineering, electrical equipment, textiles, electronics, ceramics, infrastructure, agro and wood- based sectors. The performance of SLPEs under industrial department is given in Table 8.4.

Table 8.4
Performance of SLPEs under Industries Department

(Rs. Lakhs)

Sl. No	Name	Total Income		Net Profit /Loss	
		2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6
A	**Profit Making Units**				
1	The Kerala Minerals and Metals Limited	32,533	31,950	4,648	4,448
2	Kerala State Industrial Development Corporation Limited	2,648	2,348	881	1,333

3	Travancore Titanium Products Limited	11,741	12,249	118	482
4	Kerala State Industrial Enterprises Limited	792	1,084	276	400
5	Kerala Automobiles Limited	4,479	4,425	209	205
6	Transformers and Electricals Kerala Limited	9,256	9,459	652	192
7	Steel and Industrial Forgings Limited	2,164	3,172	110	130
8	Kerala Clays & Ceramic Products Limited	397	410	91	115
9	Forest Industries (Travancore) Limited	602	616	21	30
10	Foam Mattings (India) Limited	605	575	5	27
11	Steel Complex Limited	803	489	-181	25*
12	The Travancore Sugars & Chemicals Limited	495	678	59	19
13	Kerala Hitech Industries Limited	1,180	1,517	16	12
	Total	**67,695**	**68,971**	**6,906**	**7,419**
B	**Loss making units**				
1	Kerala State Palmyrah Products Development	32	7	-19	-12
2	Kerala Artisans Development Corporation Limited	93	197	-8	-18
3	The Metal Industries Limited	178	171	-15	-19
4	Keltron Electro Ceramics Limited	359	410	-5	-20
5	Keltron Magnetics Limited	295	337	-10	-30
6	Kerala Garments Limited	89	27	-56	-47
7	Keltron Resistor Limited	120	151	-47	-49
8	CAPEX	602	2,059	-177	-57
9	The Kerala State Coir Corporation Limited	410	311	-11	-69
10	Handicrafts Development Corporation of Kerala Limited	609	561	-133	-92
11	The Kerala Ceramics Limited	572	603	-71	-121
12	Kerala Small Industries Development Corporation Limited	4,082	7,938	-123	-132
13	Sitaram Textiles Limited	627	640	-257	-173

14	The Malappuram Co-operative Spinning Mills Ltd	2,171	2,058	-221	-186
15	Kerala State Textile Corporation Limited	3,469	3,621	-800	-192
16	Keltron Component Complex Limited	3,036	2,484	-165	-239
17	Autokast Limited	1031	1417	-381	-246
18	The Trichur Co-operative Spinning Mills Ltd.	1,232	1,306	-343	-260
19	Kerala State Drugs & Pharmaceuticals Limited	217	No operations	-747	-260
20	The Travancore Cements Limited	2,750	2,397	-288	-270
21	Kerala State Bamboo Corporation Limited	785	966	-257	-283
22	The Kerala State Cashew Development Corporation Limited	1,193	3,627	-1,782	-297
23	The Quilon Co-operative Spinning Mills	822	891	-361	-299
24	Kerala Electrical and Allied Engineering Company Limited	4,988	5,459	-628	-357
25	The Travaoncore –Cochin Chemicals Limited	10,785	10,216	90	-401
26	Cannannore Co-operative Spinning Mills Ltd	446	808	-271	-414
27	Kerala State Handloom Development Corporation Ltd	1,524	1,170	-652	-418
28	United Electrical Industries Limited	1,052	821	-322	-425
29	Malabar Cements Limited	16,444	13,883	176	-471
30	Steel Industries Kerala Limited	1,268	1,151	-685	-504
31	Traco Cable Company Limited	2,266	4,859	-812	-599
32	Kerala State Electronics Development Corporation Limited	9,088	8,673	-5,244	-5,709
33	Kerala Construction Components Limited	Closed down		Closed down	
34	Kerala State Detergents and Chemicals Limited	Decided to Divest		Decided to Divest	

35	The Metropolitan Engineering Company Limited	Closed down		Closed down	
36	Keltron Counters Limited	Decided to Divest		Decided to Divest	
37	Scooters Kerala Limited	Decided to invite proposal from Employees Co-operative Society		Decided to invite proposal from Employees Co-operative Society	
38	Astral Watches Limited	Decided to Divest		Decided to Divest	
39	Trivandrum Spinning Mills Limited	Closed down		Closed down	
40	Travancore Plywood Industries Limited	Decided to Divest		Decided to Divest	
41	The Co-operative Sugars Ltd. Chittur	Non-operational		Non-operational	
42	Keltron Crystals Limited	139	96	-161	-212
	TOTAL	**72,773**	**79,314**	**-14,787**	**-12,881**

Source: RIAB, Tvpm.
** Other income Rs. 5.35 Crores*
Note: Figures during 2004-05 are provisional

8.14 Only 13 SLPEs of the Industries Department made profit and others incurred loss during 2004-05. Steel Complex Ltd has made profit during 2004-05 as against loss during 2003-04. The following companies are decided to divest.

1. Kerala State Detergents and Chemicals Ltd
2. Keltron Counters Ltd
3. Astral Watches Ltd
4. Travancore Plywood Industries Ltd

8.15 Kerala Construction Components Ltd., Metro Politan Engineering Company Ltd and Thiruvananthapuram Spinning Mills are closed down. It is decided to invite proposals from Employee Co-operative for Scooters Kerala Ltd. Kerala State Drugs and Pharmaceuticals Ltd and Co-operative Sugars Ltd, Chitoor are non-operational during 2004-05. The following companies are non-operational for more than five years

- Sidkel Television Ltd
- Special Refractories
- Chalkkudy Refractories Ltd
- Mannam Sugar Mills Co-operative Ltd
- Keltron Power Devices Ltd
- Keltron Rectifiers Ltd
- Kerala Soaps & Oils Ltd
- Kerala State Salicylates & Chemicals Ltd

Box 8.3

State PSUs Performed Better in 2004-05

There had been an improvement in the over all profitability of public sector units under the Industries Department in 2004-05. In all, 13 units made profit totaling to Rs. 74.19 crores during the year as against a total profit of Rs. 69.06 crores by 14 units during 2003-04. Thirty-three units incurred a loss of Rs. 128.81 crores during 2004-05 as against a total loss of Rs.147.87 crores in 2003-04. Among the profit making units, KMML topped the list with a profit of Rs. 44.48 crores.

SLPE Reforms in Kerala

8.16 Consequent to the New Industrial Policy, Government constituted the Enterprises Reforms Committee (ERC) for spearheading SLPE Reforms in Kerala. The approach paper of the ERC on SLPE Reforms was approved by the Government. A Social Safety Net Programme (SSNP) proposed by ERC was also approved for the employees in SLPEs.

Snap shot of progress achieved

- No. of SLPEs in which ERC forwarded recommendations 45
- No. of SLPEs in which Government have taken decision based on the recommendations of ERC 30
- No. of SLPEs of which ERC recommendations have been processed by Government 15
- Units being closed down based on Government decision 10 units & 3 divisions

(More than 2000 personnel have been brought under SSNP in 2003-04 & 2004-005.)

- No. of SLPEs closed down in the past (winding up process being initiated) 9
- No. of personnel brought under VRS in SLPE, since 1996 Around 5345 (Amount Rs. 135.85 crores)

8.17 Government have further decided to stop the functions of ERC and constituted a Sub Committee of Ministers to examine the approach on SLPE Reforms Programme. The strategy to be adopted for implementation of SLPE reforms will be decided by the Committee of Ministers. Certain policy decisions have been taken to settle the claims of retired employees.

- No. of SLPEs in which VRS proposals are recommended by Cabinet Sub Committees (CSC) 6
- No. of SLPEs in which financial assistance recommended by CSC 3

8.18 Details on the status of implementation of VRS/SSNP on SLPEs are given in Table 8.5.

Table 8.5
Implementation of VRS /SSNP in PSUs

(Rs. Lakhs)

Sl. No	Company	No. of Employees	Amount
1	Trivandrum Spinning Mills Ltd *	358	396.47
2	Steel Complex Ltd	330	592.10
3	Kerala State Drugs & Pharmaceuticals	218	750.38
4	Chalakkudy Refractories Ltd	130	178.00
5	Kerala Soaps & Oils Ltd	347	642.85
6	Mannam Sugar Mill Co-operative Ltd	146	169
7	Travancore Plywood Industries Ltd	404	935.71
8	Keltron Power Devices	104	321
9	Sitaram Textiles Ltd	284	392.20
10	KELTRON	623	2661
11	Kerala State Textile Corporation	512	875.02
12	Sidkel Televisions Ltd	50	100.00
13	Cannanore Co-operative Spinning Mills Ltd	60	98.40
14	Malappuram Co-operative Spinning Mills Ltd	37	53.91
15	Autokast Ltd	100	302.71
16	Keltron Counters Ltd	247	1273.81
17	Kerala Ceramics Ltd	89	222.00
18	Keltron Rectifiers Ltd	99	377.11
19	CEI Ltd	123	331.28
20	Kerala Construction Components Ltd	105	164.08
21	Astral Watches Ltd	44	77.40
22	Metropolitan Engg. Company Ltd	119	345.14
23	Travancore –Cochin Chemicals Ltd	38	194.00
24	Scooters Kerala Ltd	48	101.18
25	Kerala Garments Ltd	147	171.96
26	Tranvancore Sugars & Chemicals Ltd	50	163.00
27	Kerala Electrical & Allied Engineering Co. Ltd.	202	883.00
28	Transformers & Electricals Kerala Ltd	17	75.00
29	Co-operative Sugars Ltd, Chittoor	314	7387.01
	Total	**5345**	**13584.76**

** Job offered to their wards for 53 employees*

Source: RIAB, Trpm

8.19 Details of assistance offered to PSUs through Kerala Industrial Revitalization Fund Board (KIRFB) for restructuring of PSUs are given in Table 8.6.

Table 8.6
KIRFB – Details of Loan Outstanding

(Rs. Lakhs)

Sl. No.	Company	Amount Released	Amount Outstanding as on 31.10.2005	
			Principal	Interest
1	Kerala Garments Ltd	167	163	131
2	Travancore Cochin Chemicals	4706	4575	287
3	Traco Cables Ltd	1500	486	593
4	Kerala State Textile Corporation	773	820	512
5	Trichur Coperative Spinning Mills	410	434	221
6	Kerala Construction Components	60	66	46
7	Cannannore Co- operative Spinning Mills	125	135	63
8	The Kerala Ceramics	75	82	51
9	KELTRON	12409	2171	826
10	Autokast	580	552	20
11	Keltron Component Complex	730	0	104
12	Keltron Counters	397	158	47
13	Kerala Electrical and Allied Engineering Company	1827	700	136
14	Kerala State Detergents and Chemicals	88	59	32
15	Kerala State Drugs and Pharmaceuticals	330	329	185
16	Kerala State Palmyirah Workers Welfare	10	10	1
17	QETCOS	35	30	3
18	Scooters Kerala Limited	59	59	16
19	Steel and Industrials Kerala	750	750	413
20	The Metal Industries	16	8	1
21	Metropolitan Engineering Company	20	20	14
22	Transformers and Electricals Kerala	1500	1500	1245
	Total	**26567**	**13108**	**4948**

Source: KIRFB, Trpm

8.20 As on October, 2005 an amount of Rs. 56435.38 lakhs was released to PSUs from the lump sum provision for revival / diversification and the details are given in the Table 8.7.

Table 8.7

Details of Funds Released to PSUs under the Industries Department from the Lump sum Provision for Revival /Diversification -SLPE Reforms

(Rs. lakhs)

No.	Company	Total
	Chemical Sector	
1	Kerala State Detergents & Chemicals Ltd	232.00
2	Kerala State Drugs & Pharmaceuticals Ltd	1,960.77
3	Kerala Soaps & Oils Ltd	2,636.44
4	Travancore –Cochin Chemicals Ltd	694.00
5	Kerala State Salicylates & Chemicals Ltd	1,097.88
	Electrical Sector	
6	Kerala Electrical & Allied Engineering Company Ltd	3898.00
7	The Metropolitan Engineering Company Ltd	816.26
8	United Electrical Industries Ltd	331.28
9	Traco Cable Company Ltd	521.00
10	Transformers and Electricals Kerala Ltd	2308.84
	Ceramics & Refractories Sector	
11	Kerala Construction Components Ltd	208.38
12	The Kerala Ceramics Ltd	582.29
13	The Chalakkudy Refractories Ltd	198.00
	Engineering Sector	
14	The Metal Industries	127.00
15	Steel Complex Ltd	1,472.00
16	Steel Industrials Kerala Ltd	660.65
17	Astral Watches Ltd	94.90
18	Scooters Kerala Ltd	518.43
19	Kerala Automobiles Ltd	43.00
20	Steel and Industrial Forgings Ltd	177.00
21	Autokast Ltd	1,625.71
22	Kerala Hi-tech Industries Ltd	756.00
	Textiles Sector	
23	Kerala Garments Ltd	252.43
24	Sitaram Textiles Ltd	1,090.69
25	Kerala State Textile Corporation Ltd	1,838.04
26	MSWM – a unit of KSTC	5
27	The Malappuram Co-operative Spinning Mills Ltd	125.00
28	The Quilon Co-operative Spinning Mills Ltd	190.00
29	The Cannanore Co-op. Spinning Mills Ltd	110.00
30	The Trichur Co-operative Spinning Mills Ltd	200.00
31	Texfed	1,575.00
32	Trivandrum Spinning Mills Ltd	1,121.16
33	Alleppey Co-operative Spinning Mills Ltd	355.93
	Electronics Sector	

34	Kerala State Electronic Development Corporation Ltd	11357.27
35	Keltron Counters Ltd	1,455.85
36	Keltron Crystals Ltd	84.00
37	Keltron Resistors Ltd	24.49
38	Keltron Rectifiers Ltd	580.39
39	Keltron Compoent Complex Ltd	730.00
40	Keltron Power Devices Ltd	553.00
41	Sidkel Televisions Ltd	267.00
	Wood & Agro Sector	
42	The Co-op. Sugars Ltd., Chittur	871.51
43	Travancore Sugars & Chemicals Ltd	464.82
44	Forest Industries (Travancore) Ltd	50.00
45	Travancore Plywood Industries Ltd	1,288.73
46	The Mannam Sugar Mills Co-operative Ltd	240.35
	Development & Infrastrucutre Sector	
47	Kerala Small Industries Development Corporation Ltd	50
	Traditional Sector	
48	Handicrafts Development Corporation (Kerala) Ltd	25.00
49	Kerala State Bamboo Corporation Ltd.	180.00
50	Kerala State Handloom Development Corporation Ltd	325.00
51	Kerala State Coir Corporation Ltd	150.00
52	The Kerala State Cashew Development Corporation	5787.00
53	Kerala Artisans Development Corporation Ltd	115.00
54	KELPALM	29.00
55	CAPEX	2436.99
56	COIRFED	450.00
57	HANTEX	832.00
	Others	
58	Keltron Projectors Ltd	6.00
59	G.O (Rt) No. 929/03/ID, dated,04.09.03 Financial assistance to 31 PSUs	258.90
	TOTAL	**56435.38**

Source: RIAB, Tvpm.

Industrial Promotion

8.21 Government of Kerala assists industrial units by providing financial assistance, infrastructure and training/ consultancy services. Important agencies/ departments engaged in the industrial promotion in the State are:

- Kerala Financial Corporation
- Kerala State Industrial Development Corporation
- Small Industries Development Bank of India

- KINFRA
- Directorate of Industries & Commerce
- Small Industries Development Corporation
- Small Industries Services Institute
- KITCO
- Centre for Management Development

Industrial Financing

8.22 Kerala Financial Corporation (KFC) provides term loan assistance up to a maximum of Rs. 500 lakhs per unit for corporate sector and Rs. 200 lakhs for others to develop and promote small and medium scale industrial units in the State. For the SSI segment, KFC sanctioned an amount of Rs. 3939.02 lakhs for 213 projects and the total sanction amounts to Rs. 10950.78 lakhs in 385 projects. During the year 2004-05, KFC disbursed an amount of Rs. 8547.82 lakhs, earmarking Rs. 4096.56 lakhs to SSI segment for 187 projects. Capital to Risk Assets Rates (CRAR) improved from 15.20 per cent to16.96 per cent as on 31st March 2005 and is well above the benchmark prescribed. The total recovery during 2004-05 was Rs. 246.68 crores as against Rs. 272.84 crores during 2003-04. Though the Corporation could earn an operating profit of Rs. 53 lakhs, after providing for non performing assets, taxation and other usual and necessary provision, the net result was a net loss of Rs. 249 lakhs. An amount of Rs. 2.98 crores was paid to the State Government as commission for guarantee provided for SLR Bonds and fixed deposits. Performance of KFC is outlined in Table 8.8.

Table 8.8
Performance of Kerala Financial Corporation

(Rs. Lakhs)

Sl. No.	Item	2004	2005
1	Sanctioned Amount (Gross)	16958	10981
2	Disbursed Amount	11902	8548
3	Recovery of Arrears	27284	24468
4	Total Income	12040	9504
5	Total Expenditure	11086	9451
6	Operating Profit	953	53
7	Net Profit /Loss	181	-249
8	Capital Adequacy Ratio / Capital Risk Assets Ratio	15.20	16.96
9	Current Recovery %	45	29.09
10	Debt Equity Ratio	5:1	5:1
11	Net Worth to Capital Employed	14.49	16.63

Source: KFC, Thiruvananthapuram

8.23 KSIDC focuses on its role as a facilitator rather than a lending agency in view of the fact that the alternate and cheaper sources of credit are available for projects from other financial institutions. The primary role of the Corporation as a promotional agency catalyzing the development of physical and social infrastructure required for the sustained growth of the industry will be further strengthened. During the year under review the Corporation has embarked on study of various sectors of the industry, with a view to identify the inputs required to strengthen. The Corporation has also taken up identification of industrial projects suitable for

Kerala and preparation of project profiles. The Single Window Clearance Mechanism put in place through the enactment titled Kerala Industrial Single Window Clearance Boards (SWCB) and Industrial Township Area Development Act 1999 is the first in India. On behalf of the Government, the Corporation is working as a bid manager for the massive project of computerisation of LSGIs in Kerala and linking them into a State wide net work connected with different offices. The Gas Authority of India Ltd (GAIL) signed an MoU with the Corporation to study the feasibility of implementing the Letter of Intend held by it for a petrochemical project in Kasaragod district. GAIL has conducted pipeline route survey for the following routes.

- Kochi - Trichur – Kozhikode – Kasaragod - Mangalore
- Kochi – Trichur - Palakkad - Coimbatore – Salem – Bangalore
- Kochi – Kayamkulam

8.24 The mega investments being facilitated by KSIDC include the Rs. 7000 crore Port-based SEZ Project, Rs. 2500 crore LNG Terminal, Rs. 7000 crore Petro Chemical Complex, Rs.7000 crore NTPC Expansion and Rs. 450 crore City Gas Distribution Project.

8.25 Other projects being promoted by the Corporation are

- A permanent trade fair centre at Kalamassery, Kochi to facilitate Industrial promotion and to identify markets for products from the State.
- The Gem and Jewellery Park in Kochi near Kochi International Airport.

8.26 During 2004-05, KSIDC assisted eleven projects with a total investment of Rs. 30 crores by creating employment to 401 persons. It sanctioned financial assistance to 25 projects with an estimated investment of Rs. 192 crores for giving employment to 1487 persons. Twenty-eight projects with an estimated cost of Rs. 670 crores are under implementation which will provide employment to 1731 persons. During the year 2004-05, KSIDC sanctioned Rs. 91 crores and disbursed Rs. 24 crores. The recovery of principal and interest on loans from assisted units amounted to Rs. 55 crores. The total overdue to the Corporation as on 31st March 2005 stood at Rs. 415 crores. During 2004-05, KSIDC's operating profit was Rs. 13 crores as against Rs. 8.00 crores in 2003-04.

8.27 As regards the projects of GIM, 13 projects are in operation with a total investment of Rs. 165.50 crores and 10 projects costing Rs. 592 erores are in progress. All other projects in which MoU signed are at various stages of implementation. Kochi Refinery has completed the quality upgradation scheme at a cost of Rs. 270 crores.

8.28 SIDBI, Kochi sanctioned Rs. 221.47 crores and disbursed Rs. 142.17 crores under its various schemes of assistance during the financial year 2004-05 to the small scale sector in the State of Kerala. SIDBI's assistance to the Small Scale Industries can be broadly classified into three categories;

(i) Indirect assistance by way of refinance to primary lending institutions viz, KFC, KSIDC and Commercial Banks

(ii) Direct assistance to small and medium scale units and through its direct credit scheme, Technology Development and Modernization Fund (TDMF) Scheme, Technology Upgradation Fund Scheme (TUFS) for Textile Industries, Marketing Scheme, Integrated Infrastructure Development (IID) Scheme, Credit Linked Capital Subsidy Scheme, ISO 9000 Scheme etc.

(iii) Development and Support Services – SIDBI is the nodal agency for channelising assistance under the Scheme. SIDBI is also extending Credit Linked Capital Subsidy Scheme (CLCSS) for Technology Upgradation of the Small Scale Industries to facilitate technology upgradation of SSI units in specified products/ sub-sectors for providing capital subsidy for induction of proven technologies. As on date, Ministry of SSI, GOI has identified 44 products / sub-sectors eligible under the scheme. Some of the sectors included at present is leather products, food processing, information technology (hardware), pharmaceuticals, auto components, dyes & intermediaries, toys, bicycle parts etc.,

8.29 Kerala Financial Corporation and Commercial Banks in the State availed major share under the refinance scheme from SIDBI. It may be mentioned that sanctions and disbursements in the State were lower during 2005 as compared to the previous year.

8.30 The salient details of developmental activities for which assistance has been provided by SIDBI in 2004-05 are as follows:

a) Under its Micro Credit Scheme, SIDBI has sanctioned Rs. 120.00 lakhs and disbursed Rs. 228.56 lakhs (which includes sanctions made in the previous years) in the State of Kerala. This includes grant support of Rs. 53.56 lakhs towards the capacity building of the NGOs in the area of governance, management practices, etc.
b) SIDBI has started implementing Rural Industries Programme (RIP), a comprehensive programme for promotion of micro enterprises in the rural areas of Kerala since 2003-2004. To begin with, Malappuram and Wayanad Districts were identified, and was extended to Thrissur and Palakkad Districts of Kerala during 2004-05. The total number of units grounded under the programme in Malppuram and Wayanad districts during 2004-05 was 258 and 61 respectively. A grant support of Rs. four lakhs was sanctioned to APITCO Ltd., Hyderabad for implementing the programme in Thrissur and Palakkad districts, of which an amount of Rs. 1.90 lakhs has been disbursed so far. The implementing agency is also paid performance incentives based on the number of units set up under the programme. Under the programme, 91 units were grounded in the districts of Thrissur & Palakkad during 2004-05.
c) An assistance of Rs. 4.65 lakhs was sanctioned to various agencies in the State during 2004-05 for conducting seminars/workshops on topics relevant to SSI sector, skill upgradation programme for SSI managers & entrepreneurs, entrepreneurship development programme, trade fairs etc.
d) Under Credit Guarantee Trust for Small Industries (CGTSI) Scheme, a joint initiative of Ministry of Small Scale Industry, Govt. of India and SIDBI, collateral free credit facility is being extended by commercial banks to various small scale units in the country. As on March 31,2005, 17 Banks operating in Kerala had extended and covered loan assistance of Rs. 47.17 crores to 4,746 units constituting 17.08% of the all India average in terms of number of units.

Industrial Infrastructure

8.31 KINFRA, the industrial catalyst of the State, has been following a conscious effort of industrial development, specifically aimed at the economic development of the industrially backward regions of the State. The Corporation has been setting up industrial parks, townships, zones etc which provides all the facilities required by entrepreneurs in starting an industry in the thrust sectors identified by the Industrial Policy of the Government.

8.32 KINFRA has 17 industrial parks in various sectors wherein there are 150 operating units with an annual turnover of about Rs.1000 crore, creating an employment to 5000 persons.

8.33 Major activities of KINFRA during 2004-05 are the following.

- KINFRA Film & Video Park, Kazhakootam – Development of Animation Centre
- IIDC, Koratty – Development of Ist phase of the Small Industries Park under IIDC Scheme of GOI is completed
- IIDC, Kunnamthanam - Development of Small Industries Park is in progress
- Herbal Village, Wayanad is being developed in 240 acres of land
- WSS for KINFRA Techno Industrial Park, Kakkancherry is under implementation and phase I work of the internal works have been completed
- Biotechnology Parks, Kochi & Thiruvananthapuram – Being developed in 50 acres at Kalamassery
- A Biotechnology Incubation Centre is being developed in the Biotechnology Park, Kochi
- IIDC for Food Processing and Biotech Industries, Adoor
- Developing Industrial Development Zones at Thiruvananthapuram, Kochi, Kozhikode and Palakkad through private sector participation and the project is in progress

Box 8.4

KINFRA to set up a Textile Park at Kannur

KINFRA is establishing a Textile Centre near Thaliparambu in Kannur District, which aims at providing the basic infrastructure for the growth of Textile Industry in the area. The Central Government is extending a financial assistance of Rs. 20 crore for setting up of the Centre, which is coming up on a 120 acre plot. The Textile Centre would pave the way for the rapid growth of textile export from the region and also help in the development of textile related industries. This would provide direct employment to around 10000 people.

Industrial Estates

8.34 Directorate of Industries and Commerce provides infrastructure facilities for small-scale sector by acquiring land and developing it into development area/ plots with facilities like developed land, road, water supply, electricity, necessary building etc.

8.35 Industries Department has an area of 1701.49 acres as Development Area and 703.03 acres as Development Plots in which a total of 1739 units are functioning. Further 40.46 acres of land is available for Coir Parks at Cherthalai with 13 units. In addition to these, 78 Mini Industrial Estates are existing with 620 working SSI units by employing 2379 persons. The details of DP/DA and Mini Industrial Estates of Industries Department are given in Appendices 8.48 and 8.49.

8.36 The Small Industries Development Corporation also undertakes works on provision of infrastructure facilities for the small-scale sector through its major industrial estates and mini industrial estates. Details are given in Appendices 8.50 and 8.51.

Special Economic Zones (SEZ)

8.37 One of the major thrust areas for export promotion has been the Special Economic Zone. The scheme intends to set up Special Economic Zones in the country with a view to provide an internationally competitive and hassle free environment for exports.

Box 8.5

First City with three Special Economic Zones

Kochi is the only City in India having three Special Economic Zones

- Electronic Park at KINFRA in Kalamassery
- Cochin SEZ
- Port Based SEZ

Other SEZs

- Malappuram Food Park
- Technopark

Proposed SEZs

- Thiruvananthapuram Apparel Park
- Film and Video Park Animation SEZ (The first Animation SEZ in India)

8.38 Government of India sanctioned Special Economic Zone status to the Animation Zone at KINFRA Film and Video Park, Thiruvananthapuram.

Box 8.6

SEZ Status for Animation Zone

This is the first time that the Central Government is granting SEZ status to an animation zone in the country. Ten hectares of land in the park has been earmarked for the animation zone. Independent units and co developers who start ventures in the animation zone are eligible for concession in power, income tax, and customs duty for exports and sale tax for a decade. The benefits are given for 100% export oriented companies that open new ventures in the zone. Major animation company in the world has started outsourcing and with the special status, the State will be able to attract many potential investors. The SEZ status is expected to boost the growth and development of the capital city.

Table 8.9

Industry-wise Export Performance of 100% EOUs in Kerala & CSEZ Units under the Jurisdiction of DC, CSEZ

(Rs. Lakhs)

Sl. No.	Sector	No. of exporting units as on 31.10.2005		2003-04		2004-05	
		EOU	CSEZ	EOU	CSEZ	EOU	CSEZ
1	Electronic Hardware	0	9	0	17938	0	29771
2	Electronic Software	2	17	359	1067	311	1083
3	Garments /Textiles	2	2	18149	1777	19204	2287
4	Gem & Jewelry	0	6	0	1849	0	2641

5	Plastics and Rubber Products	0	9	0	3566	0	2818
6	Engineering	2	10	103	2619	36	3706
7	Food & Agro	14	7	34651	6680	39445	5491
8	Others	25	19	27710	4922	33583	15920
9	Total	45	79	80972	40419	92578	63717

Source: Development Commissioner, CSEZ, Kochi

Human Resource Development

8.39 The prime moto of SISI is to provide technical consultancy for the development of small – scale industries in the State of Kerala and Union Territory of Lakshadweep and render assistance to both prospective and existing entrepreneurs in areas like selection of product, location, machinery, lay-out, raw materials, product process, managerial and marketing consultancy and training. To this end technical advice was given to existing and prospective entrepreneurs visiting the Institute. The officers also visit industries and render assistance at their premises. The Insitute set up a Technology Resource Centre to provide technology-related information to existing and new entrepreneurs using Internet.

8.40 The Institute conducts motivation campaigns and Entrepreneurship Development Programmes (EDP), in specified areas so as to motivate and equip young people to set up their own enterprises. Institute also conducts short-term Management Development Programmes with a view to improve the managerial skills of Owner –Managers of SSI.

8.41 The Institute also extends assistance to units in acquiring ISO – 9000 certification, assists traditional clusters in cluster development activities, prepares study reports/project profiles having potential scope for development for the benefit of existing ad prospective entrepreneurs, organizes various seminars like WTO, IPR, Geographical Indication, assistance in export field, mentoring services to the units and other promotional programmes for the development of SSIs in the State. The Institute also maintains close liaison with the State, Industries Department, Small Industry Associations and other promotional agencies in the developmental activities for SSI undertaken in the State.

8.42 The technical assistance rendered by the technical officers of the Institute up to September 2005 is given in Table 8.10.

Table 8.10
Details of Assistance Rendered by the SISI Officers up to Sept 2005

Sl. No	Item of Work	No. of units/persons assisted
1	No. of units visited by SISI Officers	227
2	Total visitors/ enquires received at SISI	1592
3	No. of persons trained	360

Source: SISI, Thrissur

Cluster Development Activities of SISI

SIDO Cluster

8.43 For the purpose of cluster development, the Rubber Industry Cluster located at Changanacherry was chosen and interacted effectively with the Cluster Development Agent appointed by the Government and promotional programmes organized for the benefit of Rubber Industry Cluster Members.

Other Clusters

8.44 SISI, Thrissur plays a catalytic role in the promotion of industrial clusters in the State of Kerala. The interaction with the following clusters are progressing and SISI is playing an active role in promoting the following clusters:

1. Coir Cluster at Alappuzha
2. Rice Mill Cluster at Kalady
3. Plastic Cluster at Aluva
4. Playwood Cluster at Perumbavoor
5. Tiles Cluster at Thrissur

8.45 The Small Industry Service Institute (SISI) in association with SIDBI, Kochi & Matha Amrithananda Mayi Matt, Vallikavu, Kollam has started two product and process oriented Entrepreneurship Development Programmes for the benefit of Tsunami Victims in the following disciplines with a view to train the Tsunami victims in specialized skill areas as part of rehabilitation programme. Sixty-five Tsunami victims are attending the programmes. This will help the Matt to implement the project for rehabilitation of Tsunami victims at heavily devastated Alappat Panchayath, which has been selected by the Matt as MATHRU GRAMAM.

- Skill Oriented EDP on Readymade Garments and Embroidery
- Skill Oriented EDP on Leather Footwear and Fancy Leather Goods Manufacturing
- Further feasibility of conducting more Process and Product Oriented EDPs for Tsunami victims are being explored in association with Matt

8.46 During the year under review, Kerala Industrial and Technical Consultancy Organization (KITCO) has gross earnings of Rs.438.67 lakhs as against Rs.362.98 lakhs during 2003-04. They achieved a growth rate of 20.85 per cent during 2004-05 as against 4.22 per cent during the previous year. The company involved in a variety of activities rendering consultancy services in different fields, but mainly in the fields of detailed engineering and human resources development. The other activities include special studies, valuation of assets and energy audit. Major assignments completed by KITCO during 2004-05 are given in Box 8.7.

Box 8.7

Major Assignments of KITCO

- Design, construction, supervision and project management of ROB at Meenchanda and Neeleswaram for RBDCK
- Detailed investigation of 56 ROBs
- Infrastructure projects of Cochin Special Economic Zone
- Revamping of the HT and LT power distribution system at CSEZ.

- Consultancy services for the development of IIDCs at Thalasserry, Mazhuvannur, Kasaragod and Wayanad.
- Completed energy audit in seven industrial financial units.
- Conducted 74 PMRY training programmes and 3180 persons were trained.
- Ten EDP training were completed and 472 persons trained.
- Conducted capacity building programmes for setting up of "Proficiency Interface Cell" in DIC.
- Completed five market surveys.

Small Scale Industry (SSI)

8.47 The Small Scale Industrial Sector is one of the most dynamic and vibrant sectors in the Indian Economy in terms of employment generation. The sector contributes the maximum production for both domestic and export markets. This sector contributes to 40 percent of industrial production and 35 percent of direct export. The sector produces a variety of products ranging from traditional to hi-tech industrial units with an investment in plant and machinery less than Rs. One crore fall under SSI category with some exemptions like pharma, hand tools, hosiery and stationery item where the limit is Rs.five crores. Even though the quantity of production is very large, the quality of products, productivity, energy consumption and environmental effects have always been a concern in the sector.

8.48 The Small Scale Industrial units registered in Kerala as on 31.3.2005 was 280584 with an investment of Rs. 4230.03 crores and an employment to 1260007 persons. During 2004-05, 4935 units with an investment of Rs. 198.63 crores providing employment to 22585 persons were registered. The 3rd All India Census of small-scale industries was conducted during 2002-03 with reference year 2001-02 by covering the registered units as on 31.3.2001. The census revealed that out of the total registered units, only 146988 units are actually working and others are found closed as on 31.3.2001 by creating an investment of Rs. 4943 crores and employment to 540260 persons. But as on 31.3.2005, the actual number of working SSI units increased to 187676 with an investment of Rs. 5703 crores and employment of 682380 persons. The details of district wise working SSI units are given in Tables 8.11, 8.12 and 8.13.

Table 8.11
District–wise Details of Registered Working SSI Units in Kerala as on 31.03.01
(As per 3rd All India Census)

Sl. No.	District	No. of SSI units promoted by					Invest-ment (Rs. lakhs)	Value of goods & services produced (Rs. lakhs)	Employ-ment provided (nos)
		SC	ST	Women	Other	Total			
1	TVM	718	151	3844	12023	16736	40162	37687	62127
2	KLM	848	55	2563	6402	9868	26380	45903	53621
3	PTA	420	37	1981	4161	6599	13217	10408	16369
4	ALP	336	77	2522	10528	13463	43466	75624	51027
5	KTM	315	156	4005	11028	15504	52123	65722	44946
6	IDK	279	145	1253	2141	3818	19436	16399	11174
7	EKM	375	157	3037	15651	19220	79888	124020	76745

8	TSR	835	87	2515	13315	16752	61027	81035	62493
9	PKD	1122	104	1963	8185	11374	42439	45377	37426
10	MPM	318	61	982	6576	7937	28333	33575	25025
11	KZD	372	74	1825	10353	12624	49307	62651	47802
12	WYD	44	114	800	1376	2334	5736	7495	7115
13	KNR	133	57	920	5887	6997	22853	28984	25313
14	KSD	117	86	750	2809	3762	9961	10796	19077
	Total	**6232**	**1361**	**28960**	**110435**	**146988**	**494328**	**645676**	**540260**

Source: DIC, Trpm.

Table 8.12

District – wise details of SSI units Registered in Kerala during 2001-02 to 2004-05

Sl. No.	District	No. of SSI units promoted by					Invest ment (Rs. lakhs)	Value of goods & services produced (Rs Lakhs)	Employ-ment provided (nos)	Total no. of units commenced commercial operations
		SC	ST	Women	Other	Total				
1	TVM	59	7	1122	2994	4182	6858.94	53890.86	17626	4182
2	KLM	115	0	1499	3311	4925	5361.81	14519.77	12980	4925
3	PTA	62	0	536	1630	2228	2047.49	7506.28	6096	2228
4	ALP	50	2	1246	2349	3647	4762.78	23704.89	12888	3647
5	KTM	56	12	1059	2678	3805	7286.26	30404.51	10250	3805
6	IDK	36	9	351	573	969	1548.56	5800.69	3791	969
7	EKM	0	0	1338	3228	4566	17543.76	214095.01	22188	4566
8	TSR	37	1	1237	3438	4713	8286.05	29613.6	17164	4713
9	PKD	20	1	480	2296	2797	4420.55	10011.9	7174	2797
10	MPM	37	13	314	1503	1867	4676.66	26659.02	7683	1867
11	KZD	57	1	463	2471	2992	5202.82	24058.04	8983	2992
12	WYD	1	0	146	325	472	1245.29	289.58	2545	472
13	KNR	0	0	376	2109	2485	4430.51	23821.97	6636	2485
14	KSD	0	0	35	1005	1040	2270.17	7208.18	4116	1040
	Total	**530**	**46**	**10202**	**29910**	**40688**	**75941.65**	**471564.3**	**142120**	**40688**

Source. DIC, Trpm

Table 8.13

District–wise Details of Registered Working SSI Units in Kerala as on 31.03.05

Sl. No.	District	No. of SSI units promoted by					Invest ment (Rs. lakhs)	Value of goods & services produced (Rs. Lakhs)	Employ-ment provided (nos)
		SC	ST	Women	Others	Total			
1	TVM	777	158	4966	15017	20918	47020.94	91577.86	79753
2	KLM	963	55	4062	9713	14793	31741.81	60422.77	66601
3	PTA	482	37	2517	5791	8827	15264.49	17914.28	22465
4	ALP	386	79	3768	12877	17131	48228.78	99328.89	63915

5	KTM	371	168	5064	13706	19309	59409.76	96126.51	55196
6	IDK	315	154	1604	2714	4787	20984.56	22199.69	14965
7	EKM	375	157	4375	18879	23786	97431.76	338115.01	98933
8	TSR	872	88	3752	16753	21465	69313.05	110648.6	79657
9	PKD	1142	105	2443	10481	14171	46859.55	55388.9	44600
10	MPM	355	74	1296	8079	9804	33009.66	60234.02	32708
11	KZD	429	75	2288	12824	15616	54509.82	86709.04	56785
12	WYD	45	14	946	1701	2806	6981.29	7784.58	9660
13	KNR	133	57	1296	7996	9487	27283.51	52805.97	33949
14	KSD	117	86	785	3814	4802	12231.17	18004.18	23193
	Total	**6762**	**1407**	**39162**	**140345**	**187676**	**570269.65**	**1117260.3**	**682380**

Source: DIC, Tvpm.

8.49 Even though registration of SSI units with Industries Department is voluntary, a considerable number of units were not seen registered accordingly. In the Third Census it was found that out of 452826 units in SSI sector only 146988 working units are seen registered with the Department. Summary results of the 3rd Census of SSI units (2001-02) are given in Table 8.14

Table 8.14
Summary Results of the 3rd All India Census of SSI Units (2001-2002)

Sl. No	Characteristics	Unit	Registered SSI sector	Unregistered
1	Size of the Sector (working)	Nos	146988	305838
2	Rural Units	Nos	98186	235231
3	Women Enterprises	Nos	32989	106236
4	Units managed by	Nos		
	(a) SC		6232	14991
	(b) ST		1361	5122
	(c) OBC		74415	173268
	(d) Others		64980	112457
5	Total Employment	Nos	540260	574401
6	Per Unit Employment	Nos	3.68	1.88
7	Total Fixed Investment	Rs. Lakhs	494328	205155
8	Exporting Units	Nos	474	1707
9	Value of Exports	Rs Lakhs	73571	443

Source: DIC, Thiruvananthapuram

Prathyasa

8.50 Government of Kerala drawn up an investment promotion programme, named as Kerala Local Industry Promotion Programme (KLIPP) under the banner name of PRATHYASA through District Industries Centres. The objective of the scheme is to facilitate the setting up of 25000 units in the small-scale sector generating 1,00,000 employment during 2005-06. It is intended to provide entrepreneurs with a set of focused services to ensure that project ideas are realized with better and enhanced levels of services within the shortest possible time. About 43070 investors were registered under the programme involving a project cost of Rs. 1700 crores. It is expected that 25000 cases can be materialized involving an amount of Rs. 700 crores.

Cluster Development

8.51 New Industrial Policy lays great emphasis on cluster development. Sector specific clusters of industrial units are being promoted with the assistance of financial institutions and skill development facilitated through common facility centres and training institutions. In line with the objective of the Industrial Policy, Government have initiated several steps aimed at ensuring committed efforts towards the development of clusters in the State. Government have trained eighty officials from the Department to enable them to fulfill the role of cluster development agents. Government have short listed a few thrust sectors where intensive cluster development will be focused during the initial phase. Government have also launched two new schemes viz. Margin Money Loan for Cluster Development Activities and Grant Assistance for Cluster Development Activities.

8.52 The cluster consortia are setting up ventures such as common facility centres, raw material bank etc with the financial assistance of banks. Sixty clusters have been identified and 27 clusters have been developed and approved under the Cluster Development Programme. Details of developing clusters are given in Table 8.15.

Table 8.15
Developing Clusters

Sl. No.	Name of the Cluster	Progress
1	Cane and Bamboo Thiruvananthapuram	Diagnostic study completed and validated. Registered a consortium as "Travancore cane and Bamboo products (P)Ltd". Delegates were sent to north eastern states to find ideal suppliers, innovative designs & technologies A building for RMB and common work shed is under construction with the support of local body. Organised a training programme for the women artisans in association with state Bamboo mission
2	Silk Fabric Thiruvananthapuram	Diagnostic study completed. Consortium formed as "Kerala Silk Handloom Consortium (P) Ltd" Established Raw material Bank. Setting up of CFC is under progress
3	Wood Kollam	Trust building completed. Registered a consortium as " Wood Empire Consortium (P) Ltd" for setting up CFC & Marketing outlet. Visited a trade fair in Delhi Preparing a project report for CFC Submitted application to SIDCO for the allotment of space to set up CFC
4	Bamboo Kollam	Trust building going on. Organised a training programme for the artisans in association with State Bamboo Mission
5	Dairy Kollam	Trust building completed among SHGs Provided Financial assistance under PMRY for cattle rearing

		Provided training to manufactures dairy products for the selected members from the various groups
6	Cashew Processors Kollam	Diagnostic study completed Formed a consortium as " Kairali Cashew Processors & Exporters Consortium (P) Ltd " for setting up RMB and common marketing
7	Garments at Alappuzha	SHGs under one NGO has been formed a consortium as " Vastra Garments" Diagnostic study completed and validated Setting up of RMB and CFC is under process
8	Food Pathanamthitta	Registered a consortium as "Pathanamthitta Agro Food Consortium (P) Ltd" Conducted a quality evaluation workshop in the cluster Discussion with CFTRI officials regarding product improvement and value addition, was held Conducted a workshop about VAT
9	General Engineering Pathanamthitta	Trust building and diagnostic study completed Consortium registered as "Adoor General Engg. Consortium (P) Ltd' Conducted an exposure visit to engineering cluster at Trichy A building taken on lease for setting up RMB
10	Leather Footwear Kottayam	Consortium registered as "Kottayam Leather Goods & Wears Consortium Pvt. Ltd" Conducted a training programme in association with DIC and IILP, Chennai Established a RMB Conducted an exposure visit to Chennai Planning to expand the RMB with the assistance of SBT
11	Toy Kottayam	Consortium registered as" Kottayam Mother Toy Consortium (P) Ltd" Conducted a training programme among the members Participated in Kerala B2B meet 2005 Planning to set up a RMB/CFC
12	Food Kottayam	Consortium registered as "Omax Food (P) Ltd. Setting up of CFC is under process
13	Garments, Kottayam	Two consortia were registered as "Holy Apparels and Providence Apparels" Holy apparels started a common marketing Providence apparels established a RMB Both consortia participated in B2B 2005
14	Agarbathies Kottayam	Consortium registered as "Sabari Agarbathi Consortium (P) Ltd" Established RMB and common brand for marketing
15	Garments Idukki	Consortium registered as "Art'O Computerized Garments (P) Ltd" Established a CFC Conducted a training programme on fashion designing and

		garment manufacturing Conducted an exposure visit to Tirupur /Salem in Aug 04 Setting up of RMB is under process
16	Plywood Ernakulam	Consortium formed as "Perumbavoor Plywood (P) Ltd" Established a CFC
17	Rice Mill Ernakulam	Consortium registered as 'Kalady Ricemill Consortium (P) Ltd' A common rice brand oil extraction unit is under construction Orissa rice mill cluster members and UNIDO personnel visited the cluster National expert of CDP conducted a case study in this cluster
18	Garments Ernakulam	Consortium registered as 'Mahila Apparels (P) Ltd' Angamaly Conducted training for SHGs (around 100 members) Established a CFC
19	Plastic Ernakulam	Consortium formed as 'Aluva Plastic Consortium (P) Ltd" Established a RMB A common tool room under process
20	Hawai Chappal Ernakulam	Consortium registered as ' Cochin Foot Wear Consortium (P) Ltd' Setting up of CFC is under process Decided to manufacture as a common brand
21	Printing Ernakulam	"Printers Consortium Kerala (P) Ltd Setting up of RMB is under consideration
22	Thread Rubber Ernakulam	Registered a consortium as 'Millennium Tread Rubber Consortium (P) Ltd' RMB established Imported materials from Russia and Thailand
23	General Engineering Ernakulam	Consortium registered as "Paravoor Iron and Steels (P) Ltd Established a RMB Participated in B2B meet 2005 Setting up of CFC is under process
24	Tiles Thrissur	Consortium registered as 'Tera Tile Consortium Pvt. Ltd' Clay processing unit as CFC is under construction
25	Diamond Thrissur	Consortium formed as 'Thrissur Diamonds (P) Ltd' Put forth a proposal to Bank for setting up RMB Planning to set up a CFC
26	Screw Pine Thrissur	Trust building completed among the SHGs Decided to form two consortia Foundation stone laid for CFC with central assistance
27	Agricultural Implements Palakkad	Registered a consortium as "Shornur Agricultural Implements Consortium Pvt Ltd" Setting up of RMB under process
28	Bamboo Palakkad	Decided to form a consortium under Charitable Society Act Local body offered land/ building for setting up CFC Trust building going on
29	Food (Rice Murk) Palakkad	Registered a consortium as "Karipode Rice Food (P) Ltd' CFTRI scientists visited the cluster and made a study to improve the production process

30	Rubber Malappuram	Registered a consortium as "Malabar Rubber Products Consortium (P) Ltd.'
31	Wood Malappuram	Registered two consortia as 'Valluvanad Wood Consortium (P) Ltd' at Perinthalmanna and 'Edavanna Timber & Furniture Consortium (P) Ltd' at Edvanna Setting up of CFC with local body's support is under process
32	Garments Malappuram	Registered a consortium as 'Malabar Garments Consortium (P) Ltd'
33	Food (Halwa) Kozhikode	Consortium registered as 'Kozhikode Halwa Consortium P. Ltd' MoU signed with CFTRI for the standardization/GMP of the product Established a RMB
34	Food (Banana Chips) Kozhikode	Consortium registered as 'Calicut Chips Consortium (P) Ltd'
35	Gold Ornaments Kozhikode	Consortium formed as "Anil Basu Gold Consortium Pvt. Ltd" Setting up of RMB and CFC under progress
36	PVC Foot Wear Kozhikode	Consortium registered as "Malabar Footwear Consortium Pvt Ltd"
37	General Engineering Kozhikode	Registered a consortium as "Kadathanad Steels Consortium Pvt Ltd"
38	Bamboo Wayanad	Registered two consortia as "Uravu Eco Links Ltd" and "Wayanad Bamboo Consortium" Conducting training programmes for the artisans of various bamboo clusters in association with State Bamboo Mission
39	Rubberised Coir Kannur	Setting up of CFC and RMB is under process
40	Gen Engineering. Kannur	Consortium registered as "Payyanur Light Engg. P. Ltd. Established a RMB
41	Jewellery Kannur	Registered a consortium as "Viswasilpi" Consortium opened a common show room at Kannur town
42	Garments Kasaragod	Consortium registered
43	Rubber Kottayam	Consortium registered as "Natural Rubber & Fiber Products Manufactures Consortium (P)Ltd. Established RMB Central mixing plant is under construction Upgraded roads, water, drainage and electricity facilities in the cluster Purchased three acres land to implement two projects, cost comes to Rs. 12 Crore

PMRY - Self Employment Programme

8.53 The PMRY programme has achieved a very good performance during 2004-05 also. The target of 25500 number of cases has been exceeded to 25585 and disbursement of loan also witnessed highest performance. An amount of Rs. 98 crores has been disbursed during 2004-05 as against the disbursement of Rs. 82 crores during 2003-04 by registering an increase of 20 per cent. The increase in the number of cases sanctioned was 17% compared to the previous year. Details of performance under PMRY in 2004-05 are given in Appendix 8.23.

Industrial Co-operatives

8.54 As on 30.6.2005, the total number of Industrial Co-operative Societies is 1250, 12 new societies were registered during 2004-05 as against 17 societies during 2003-04. Out of the twelve newly registered societies, two are SC/ST, two are women and eight societies are general. Seven societies are in Thiruvananthapuram district and other five are in the districts of Pathanamthitta, Alappuzha,Thrissur and Malappuram. Details of Industrial Co-operative Societies in Kerala as on 30.6.2005 are given in Appendix 8.24.

Business to Business Meet 2005

8.55 The Kerala Business to Business Meet 2005 was a part of State's effort to promote Small and Medium Enterprises (SME) in the global markets and help the manufacturing sector to access larger markets for their products. The Meet highlighted eight core sectors, viz. coir, handloom, handicrafts, food processing, ayurveda, rubber, construction materials and printing & packing. Two hundred and ninety one industrialists from all over the State in the above eight sectors participated and enlisted their products, services and technologies. More than 400 national and international buyers registered, participated and interacted with the sellers. Out of these 400 buyers, 320 were national and 80 were International buyers from UK, Netherlands, Sudan, Jordan, Sreelanka, Belgium, UAE, Bahrain, Saudi Arabia, South Africa etc.

8.56 Majority of the manufactures received trade inquiries from the buyers. It is observed that 6916 trade inquiries were received, of which, more than 107 were converted into firm orders.

Box 8.8

Sick Unit Revival

Salient features of sick unit revival are the following

- District Level Committee reconstituted by including experts, project consultants etc.
- DLRC is competent to make Sub Committee
- Margin money loan limit enhanced to Rs. two lakhs
- Fifty per cent of the Revival Project cost can be given as subsidy - maximum Rs. 10,000/-
- Fifty per cent of the cost of Technical Committee charges can be given as subsidy – Maximum of Rs. 15000/-
- Sales tax exemption subject to conditions
- Stay for RR till a decision on revival proposal by DLRC
- Start up expenses for meeting up to 75% of the cost for certain items
- All Government dues (other than sales tax) will be resheduled for a further maximum period of five years (Approval from Government required if the total dues is above Rs. two lakhs)
- Concession in interest and penal interest dues on existing margin money loan
- Support of escort officers
- Priority to tiny sector units, units under WIP, units started by SC/ST

Food Processing

8.57 KINFRA has given special thrust to promotion of Food Processing Industry due to the enormous potential of the sector for development. For this purpose, it has set up an Agency for

the Development of Food Industries –Kerala (ADFIK), an organization for dedicated efforts in the Food Processing Sector.

8.58 ADFIK has established linkages with all the major institutions associated with Food Processing sector like Central Food Technological Research Institute (CFTRI), Mysore, Defence Food Research Laboratory (DFRL) Mysore, Government Departments, Industry Associations etc. to facilitate the support and information for the industry. For the purpose of proper support to entrepreneurs, ADFIK has also empanelled consultants in the food-processing sector. The service of these consultants is used to provide information and assistance sought by entrepreneurs.

8.59 KINFRA is the State nodal agency to the Ministry of Food Processing Industries (MOFPI), Govt. of India. ADFIK undertakes complete activities on behalf of KINFRA for all the functions related to the nodal agency for MOFPI. So far the Ministry has sanctioned/released financial assistance to 61 proposals amounting to Rs. 2383.30 lakhs for the food-processing sector in the State including the Food Parks. The financial assistance has been granted for projects such as setting up of food processing units, expansion as well as modernization of food processing units, setting up of training and educational infrastructure including entrepreneurial development programmes and quality management systems. In the year 2004-05, thirty-two proposals for assistance to the tune of Rs. 799.13 lakhs have been recommended to the Ministry. About 16 proposals amounting to Rs 417.57 lakhs have been sanctioned by the Ministry.

8.60 The design and layout of the laboratory at KINFRA Parks in Kakkancherry and Mazhuvanoor has been completed with the help of the consultant M/s Central Food Technology Research Institute, Mysore (CFTRI). The equipment required along with its specification, tendering of the equipment as well as its evaluation have also been completed utilizing the services of CFTRI in 2004-05.

8.61 ADFIK has taken the initiative for setting up a Regional Quality Control Laboratory (an apex laboratory, which undertakes complicated and specialized analysis and also acts as a reference laboratory) at Kochi to cater to the needs of the four Southern States. Preliminary discussions with the Ministry of Food Processing Industries, GOI, have been conducted. A project report is being prepared with the help of the M/s Food Research and Analysis Centre (FRAC), a body sponsored by FICCI (Federation of Indian Chamber of Commerce and Industry) and CIFTI (Confederation of Indian Food Trade & Industry – the food processing wing of FICCI). The estimated investment of the project is Rs. 25.00 crores.

8.62 The cold storage at KINFRA Small Industries Park, Wayanad has been completed. The cold storage at KINFRA Small Industries Park, Mazhuvanoor has reached final stages of completion.

KINFRA Food Parks

8.63 The response of the industry to the Food Parks has been encouraging. At KINFRA Small Industries Park, Mazhuvanoor about 30 units have been allotted plots utilizing the entire area for the Food Processing Zone. At Kakkancherry allotment to 18 units have been completed accounting for nearly 60% of the area.

8.64 Sanction has been accorded for earmarking an area of 30 acres as Special Economic Zone for 100% EOUs at Kozhikode. This is expected to give a boost to export oriented units in North

Kerala. The Food Park at Adoor is under implementation. During the year 2004-05 (up to 30-09-05) about 27 projects related to food processing have been allotted plots in various KINFRA Parks. The details are given in Table 8.16.

Table 8.16
Details of Food Processing Units in KINFRA Parks during 2004-05

Sl. No.	Name of Park	Total area acquired (acres)	No. of units	Area allotted (acres)	Investment (Rs. Lakhs)	Employ-ment (Nos)
1	Small Industries Park, TVPM	80	2	0.60	134.5	38
2	Kinfra Small Industries Park, Mazhuvannur	1040	16	14.60	1501.31	332
3	Food Processing Park, Malappuram	60	1	0.35	70	20
4	Small Industries Park, Koratty	80	5	9.7	1237.09	230
5	Small Industries Park, Wayanad	102	3	0.7	71.16	26

Source: KINFRA, Tvpm

Brand Creation Campaign

8.65 The objective of the Brand Creation Campaign is to create awareness of the potential for processed food from the State and to invite investment into the sector. It has created a good impact with the generation of a number of enquires on Food Processing as well as exposure of ADFIK to the investing public. The allotment of the space at KINFRA Food Park Mazhuvanoor has been completed, while at Kakkancherry nearly 60% of the area has been allotted.

Investment Profiles

8.66 ADFIK is developing investment profiles covering the whole spectrum of food processing industry in order to direct entrepreneurial initiatives into the food processing industry. Investment profile includes all the essential details in brief about the project to help an entrepreneur to make his decision about the project.

8.67 ADFIK is involved in promoting the KINFRA food parks. KINFRA's core activity is establishing ready-to-use industrial parks with all modern facilities and amenities across the State of Kerala. With the objective of boosting the age of industrial growth, KINFRA has been promoting the concept of Theme Parks – theme parks are those parks, which have been set up for the exclusive growth and development of chosen and specified industrial sectors. Food Processing Parks, Apparel Park, Film and Video Park, Herbal and Ayurveda are some examples of the theme parks already implemented by KINFRA. Two Food Processing Parks have already been set up by KINFRA, one at Kakkancherry near Kozhikode and the other at Mazhuvannur near Ernakulam. A third Food Park at Adoor is under implementation at present.

8.68 Food parks offer a host of sector specific common facilities like quality control laboratories, water treatment plant, effluent treatment plant, cold storage, pre-processing center etc. Apart

from these, there are general common facilities such as common business center, guest accommodation, cafeteria, single window clearance, common security etc in all the parks.

Incubation Center

8.69 ADFIK along with KINFRA has undertaken the pioneering effort to establish an Incubation Center for the Food Processing Industry. Agro Food Business Incubation Center is being set up at KINFRA Techno Industrial Park at Kakkancherry near Kozhikode. This Incubation Center is being set up with the consultancy services form M/s Defence Food Research Laboratory, Mysore and will be run by M/s Kitchen Outsource India Private Limited on behalf of KINFRA.

8.70 Incubation Center is a very novel concept and the one at Kakkancherry would be the first one of its kind. Incubation Center offers facilities where existing as well as potential entrepreneurs can approach with their ideas on innovative or new products, which will be then taken by the Incubation Center through a development process on a mini commercial scale. The products so developed could be test marketed by the entrepreneur and if found satisfactory could be adopted on a full commercial scale in the entrepreneur's own facility.

8.71 Strength, weakness and issues of food processing sector in the State are given below.

Strength

- Abundant natural resources
- Unique products having good domestic and export potential
- Traditionally strong and leading in food exports in marine products, spices, cashew etc.
- Availability of skilled man power.
- High literacy rate
- Excellent infrastructure facilities
- Proximity to export market
- Developed market and high consumer spending

Weakness

- High wage rate
- High price of the land
- Dependence on other states for raw materials
- High prices of fruits and vegetables produced in the State.
- Continuous shift in cropping area from food crops
- Lack of sufficient infrastructure

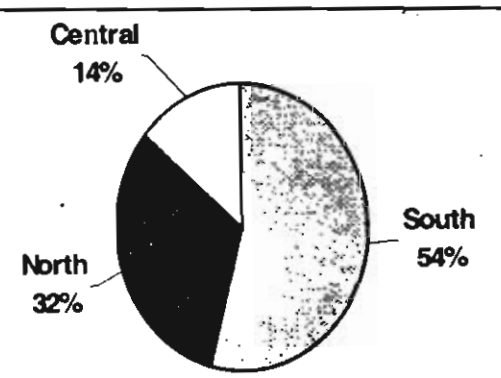
General Issues

- Food processing industries are in the unorganized sector with little or no technology, poor quality and standards
- Long and fragmented supply chain with independent players engaged in various value addition activities.
- Country's share of global food and agriculture trade is about 1%
- Low level of processing for perishable commodities- around 10%
- Low per capita income and higher share of food in the consumption basket.
- Lack of credible quality testing facilities
- Restrictive regulatory requirements

Handloom Industry

8.72 The handloom sector in Kerala employs about 1.75 lakh people and this industry stands second to the coir industry in providing employment among the traditional industries of the State. The handloom industry in the State is 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 with 94 per cent of looms. The remaining six per cent of handloom units are owned by industrial entrepreneurs. The co-operative sector consists of factory type and cottage type societies. By the end of March 2005, there were 758 PHWCS consisting of 155 factory type societies. The district-wise details of handloom societies in the State are given in Appendix 8.26.

8.73 Of the total number of 50200 looms in the State, the share of Kannur District is around 11000. There are 73-registered co-operative weavers' societies and 79 private handloom units in Kannur and they are largely engaged in the production of export variety items. The major varieties produced in the handloom sector of the State are dhothies, furnishing material, grey saree and lungi. Estimates show that the production of these items comes to 67% of the total production. About 54% of the major items are produced in southern region followed by the North (32%) and Central (14%) regions. The region- wise share of handloom production in Kerala is given in Fig.8.6. The overall production of cloth in Kerala shows a marginal increase of 1.82 million metres from 60.48 million metres in 2003-04 to 62.30 million metres in 2004-05. Of the total production, 96.15 % is contributed by the co-operative sector and the balance of 3.85% is by the units in the entrepreneurial sector.



Handloom Production in Kerala-2004-05

Fig. 8.6

8.74 The Department has evolved a new strategy for development of handloom industry by involving Self Help Groups of weavers and submitted three projects, THANIMA, at a cost of Rs.14.64 crores for Thiruvananthapuram District, KRITHIKA at a cost of Rs.11.08 crores for Kannur district and PRATHIBHA at a cost of Rs.12.68 crores for Ernakulam and Palakkad districts.

8.75 Under Deen Dayal Hathkargha Protsahan Yojana (DDHPY), cluster development approach was taken as a component for the development of handloom industry. The scheme covers weavers both under co-operative and non-co-operative fold. Out of the 385 project proposals sent to Government of India, 295 were sanctioned.

8.76 Under DDHPY scheme, an amount of Rs.2644.98 lakhs was released by Government of India so far. This along with the state share, amounting to Rs.5660.30 lakhs, has been released to the beneficiary societies as on 30-9-2005. Reputed National agencies such as National Institute of Fashion Technology, National Centre of Textile Design, Weavers Service Centre, Indian Institute of Management - Kozhikode etc. are involved in the process of cluster development as support institutions.

8.77 The National Institute of Fashion Technology, New Delhi had identified Kozhikode Handloom Cluster for a project on Development of Craft/Textile cluster to be implemented as a special project under Swarna Jayanthi Gram Swarozgar Yojana. The project is proposed by the Ministry of Rural Development, Government of India with 75% Central share and 25% State share.

8.78 Benefits of Integrated Handloom Cluster Development (IHCD) Centre.

- Assistance for setting up of common facility centre and showroom.
- Assistance for upgradation and purchase of accessories and appliances.
- Organizing/participation in exhibitions/fairs.
- Assistance for developing publicity material.
- Assistance for declaring the cluster as legal entity
- Assistance for organization of workshops/seminars
- Market Research and Technical Consultancy
- Cost of engaging designer as per the project price.
- Organizing buyer seller meets

8.79 Government of India has also accorded sanction for the establishment of Handloom Project Development Centre (HPDC) at Balaramapuram and an amount of Rs 39.38 lakh is released for setting up of weaving equipment, dyeing equipment, printing equipment, design development equipment etc. Expenditure towards the establishment of Textile Project Development Centre is envisaged as a one-time investment by Government in its initial stage. The micro level entrepreneurs in the form of NHG/SHG net works will actively form the strategic partners of this endeavor. The centre will enter the needs of 400 co-operatives and hundreds of SHG/NHG/ private entrepreneurs. Further, Government of India had upgraded the HPDC into Textile Project Development Centre to co-ordinate central scheme also.

8.80 Procurement and marketing of handloom fabrics in the State are being undertaken by two state level organizations, namely, Hantex and Hanveev. Hantex is the apex organization of handloom co-operatives. Main activities of Hantex include distribution of required inputs to member societies and procurement and processing of goods produced by the member societies. Five primary societies were started during 2004-05 and thus total number of societies increased to 463. The total value of cloth produced has decreased from Rs.10.46 crores in 2003-04 to Rs.8.75 crores during 2004-05. Hantex conducted 14 exhibitions during 2004-05. The working results of Hantex are furnished in Appendix 8.28.

8.81 The Kerala State Handloom Development Corporation (Hanveev) set up in 1968 is another agency to accelerate the development of Handloom Industry in the State. During the year 2004-05, the Corporation procured yarn worth Rs.424.16 lakhs compared to Rs.506.51 lakhs in the

previous year. The Corporation's income through sales of products also decreased from Rs.1640.85 lakhs to Rs.1603.84 lakhs during 2004-05. The net loss of the Corporation decreased from Rs.685.02 lakhs to Rs.417.89 lakhs during 2004-05.

8.82 Kerala Garments Ltd. is a fully owned subsidiary of Hanveev, incorporated in 1974. The main activities of the company are stitching garments, on job works and sale of readymade garments.

8.83 During 2004-05, the Company produced 35000 pieces of readymade garments valued Rs.25 lakhs against the production of 80292 garments valued Rs.60 lakhs in the previous year. Sales turn over of the readymade garments of the company during 2004-05 also came down to Rs.6.03 lakhs from the previous year of Rs.13.24 lakhs. The Company incurred a loss of Rs.63.26 lakhs during 2004-05

Powerloom Industry

8.84 The total number of powerlooms in Kerala is 3800, of which 1381 are in the co-operative sector. The looms are mostly in Kannur, Thrissur and Palakkad districts. The number of powerloom co-operative societies in the State at the end of March 2005 is 33 and the number of members is 6600, of which 1223 are women. Production of cloth increased from 60 lakh metres in 2003-04 to 62.15 lakh metres during 2004-05 and its value increased from Rs.735 lakhs to Rs.761.34 lakhs.

Coir Industry

8.85 Coir Industry in Kerala is a traditional industry, generating employment to more than 3.75 lakh workers, of which 76 per cent are women. Though we took intensive effort to boost the sector, it still remains as a sick traditional industry due to the competition from products such as natural as well as synthetic fibres both in domestic and international markets. Problems like non-professionalized management system in the co-operative sector, reluctance to adopt mechanization, shortage of husk due to attack of mandari disease, unhygienic surroundings and conditions in work area of traditional setting and beating operations have resulted in the reduction of fibre production and an unprecedented increase in the price of fibre in the State. As part of the Government effort to revive the existing defibering units in the co-operative sector and opening such units in the private sector, Coir Department is offering 50 per cent subsidy on their capital investments limited to Rs. 10 lakhs per unit. As a result, 59 applicants in private sector have been given registration by the department for setting up defibering units.

8.86 Out of 802 registered coir co-operative societies, 455 are now working and only 21 are making profit. A good number of societies are on crisis due to inability to produce new designs and more value added items as per the changing taste of the consumers. Details of various types of societies and their activities during 2004-05 are given in Appendix 8.31.

8.87 To help small scale producers in coir sector, a scheme called Common Facility Service Centre is being imolemented and during 2004-05, an amount Rs. 23.36 lakhs was expended for it. An amount of Rs 486 lakhs was spent for various welfare schemes of coir workers during 2004-05. And an amount of Rs 59 lakhs was also spent on Geo-textiles Development Programme.

8.88 Total expenditure of Rs. 30.52 crores was made for various plan schemes in coir sector during the year under review. Among the items of export, handloom mat, tufted mat, coir pith,

powerloom mat, rubberised coir and coir fibre have showed an increase and curled coir, handloom mattings, powerloom mattings and coir geo-textiles have recorded a decrease. The export of coir and coir products from India during the year 2004-05 was 122926.78 tones valued at Rs. 47340.27 lakhs against 102253.41 tones valued at Rs. 40749.66 lakhs in 2003-04. USA is the largest importer of coir products from India, followed by Germany, UK, France, Netherlands and Italy. Item-wise details of export of coir and coir products from India during 2003-04 and 2004-05 are given in Appendix 8.34.

8.89 COIRFED is the Apex Federation of Primary Co-operative Societies, which are engaged in the manufacture of coir fibre, coir yarn and coir products. Their entire output is marketed by the Coirfed, while the coir products are marketed by concerned societies themselves. The turnover of Coirfed during 2004-05 was Rs. 14.50 crores. The annual sales turn over of Foam Mattings (India) Ltd and Kerala State Coir Corporation were Rs. 638.06 lakhs and Rs. 367.71 lakhs respectively during 2004-05.

8.90 Action has also been initiated for setting up a National Coir Research and Management Institute in order to strengthen the R & D activities in the coir sector with a view to enable the coir industry to produce more value added and new design products, to sustain an upper hand in the domestic and international markets.

Box 8.9
Coir Parks

1. Alapuzha

i. Cherthala Taluk, - Alapuzha District
Extent - 23.40 acres
Area allotted - 21.15 acres to 14 entrepreneurs
Investment expected by entrepreneurs - Rs. 95 million

ii. Cherthala Taluk - Alappuzha District
Extent - 17.06 acres
Area allotted - 17.06 acres
Alottee - 4 govt. undertakings
Investment expected by entrepreneurs - Rs. 150 million

2. High Tech Coir Park At Perumon - Kollam

This High-Tech Park provides a meeting ground for scientists, technologists and entrepreneurs with universities, research establishments, manufacturing units and is expected to open up possibilities to develop a wide range of eco-friendly products based on coconut fibre. The park is to be implemented by the Centre for Development of Coir Technology (DOCT) Trivandrum with the assistance of State, central and national financing institutions at an estimated cost of Rs. 170.8 million.

Khadi and Village Industries

8.91 Khadi and Village Industries Board carries out its activities through co-operative societies, registered institutions and departmental units by availing financial assistance from the State Government, Khadi Commission and Nationalized Banks.

8.92 During 2004-05, under Rural Employment Generation Programme of Government of India, Khadi Board has disbursed an amount of Rs. 437.23 lakhs to 436 units as margin money grant by creating employment opportunities to 7492 persons. Financial assistance was also given for conducting workshops, exhibitions and other schemes for the publicity and propaganda of this programme. Kuppadom weaving, one of the schemes under PRODIP implemented during the period has been extended to Uzhamalakkal Khadi Production Centre under Thiruvananthapuram Project.

8.93 During 2004-05, 537 co-operative societies, 1196 registered institutions, 12805 individual units and 389 departmental units were financed under the pattern of Consortium Bank Credit Schemes through Khadi Board.

8.94 Khadi and village industries goods worth Rs. 181.69 crore were produced through these units and goods worth Rs. 206.87 crores were sold. Employment has been provided to 171586 persons. Products worth Rs. 970.98 lakh have been sold through the departmental sales outlets of the Board. Details of production, sales, employment and wages paid are given in Appendix 8.37.

8.95 Under 'Jan Shree Bhima Yojana', the insurance scheme for Khadi artisans, 4020 artisans were working in the Khadi Production Centres of the Department. 573 artisans working in the aided units of the Board were enrolled and educational benefits @ Rs. 1200 has been extended to children of 595 artisans.

8.96 The Board participated in the India International Trade Fair at New Delhi, organized in connection with the Nehru Jayanthi and won the best pavilion award consecutively for three years. Awards were also distributed for the best spinner and weaver in connection with the Gandhi Jayanthi and celebrated two weeks as Khadi Pracharana Paksham starting from October 2, 2004.

Sericulture

8.97 Sericulture is an agro-based industry promoted as a subsidiary occupation in Kerala. State Sericulture Co-operative Federation (SERIFED) is the nodal agency for promoting sericulture activities. A cluster based development, active involvement of local body and member societies and emphasis on post cocoon technology sector are the three components of sericulture development strategy during the 10th plan.

8.98 Under cluster based approach for development of sericulture, 125 Grama Panchayats covering 40 clusters were selected for the integrated development of the activity. The cocoon production was 77.61 MT in 2004-05 against 59.11 MT in 2003-04. As a part of commercial production, a project, called "Community Silk Weaving" has been implemented in association with the Thiruvananthapuram Taluk Sericulture Co-operative Society.

8.99 Performance under sericulture with regard to mulberry plantation, number of farmers covered, DFLs distributed and raw silk yarn produced is given in Table 8.17.

Table 8.17
Status of Sericulture

Year	Production in acre (cum)	No. of farmers (cum)	DFLs Distributed (Nos)	Cocoon Production (Kg)	Raw Silk Production (Kg)
2002-03	1414	2366	98369	33229	2602
2003-04	1981	3216	154125	59113	4041
2004-05 (up to Sep.05)	2678	4308	100645	38066	2110

Source: Serifed

8.100 The district-wise physical achievements during 2003-04 and 2004-05 are shown in Appendix 8.39.

Cashew Industry

8.101 The total export of cashew kernels from India during 2004-05 was 126667 MT, valued at Rs. 2709.24 crores by showing an increase of 25.63 per cent in quantity and 50.14 per cent in value. The export of this item from Kerala during 2004-05 was 79950 MT worth Rs. 1715.94 crores. It shows that the share of Kerala is at 63 per cent in terms of quantity and value. More than one crore additional man-days of employment generation in rural area were made possible during 2004-05 due to the creditable efforts of the cashew exporters.

8.102 The Kerala State Cashew Development Corporation (KSCDC) and Cashew Workers' Apex Co-operative Society (CAPEX) are the two State agencies engaged in the cashew processing sector in Kerala. In KSCDC, there are 14916 workers and only 20 per cent of the capacity of all cashew processing companies have been utilized during 2004-05. The company could give continuous work only for 67 days during the year. The Corporation purchased 871.97 MT raw cashew nuts from Kerala and imported 9460.49 MT from outside India. The total sales turnover of all the products during 2004-05 is Rs.3587.13 lakhs. The loss of the Corporation is Rs. 297.16 lakhs during 2004-05 as against 1782.30 lakhs during 2003-04.

8.103 The unit export price of cashew kernels went up during 2004-05 and the average unit export price realized was Rs. 213.89 per Kg compared to Rs.178.96 per Kg during the previous year, recording an increase of 19.5[illegible] per cent. The unit price of cashew nut shell was Rs. 10.58 per kg during 2004-05.

8.104 Details of export of cashew kernels and cashew nut shell liquid from Kerala and India from 2000-01 to 2004-05 are given in Tables 8.18 and 8.19.

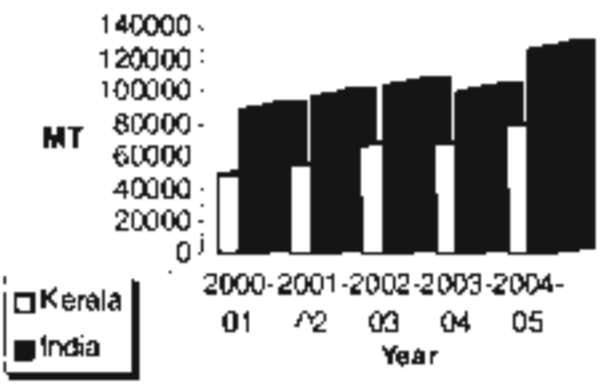
Table 8.18
Export of Cashew Kernels from Kerala and India from 2000-01 to 2004-05

(Quantity in MT, Value Rs. Crores)

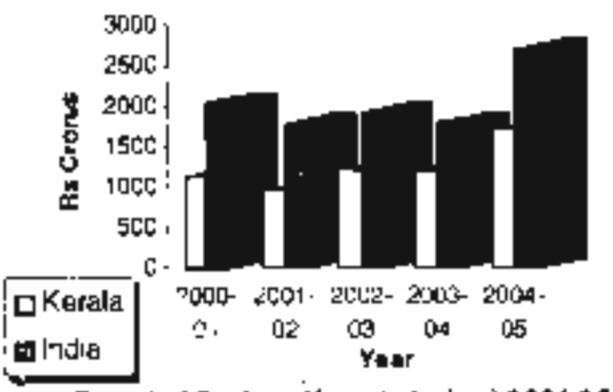
Year	Kerala		India		Share of Kerala (%)	
	Quantity	Value	Quantity	Value	Quantity	Value
2000-01	49874	1152	89155	2050	56	56
2001-02	54717	971	98203	1789	56	54
2002-03	66859	1217	104137	1933	64	63
2003-04	68119	1205	100828	1804	68	67
2004-05	79950	1716	126667	2709	63	63

Source: Cashew Export Promotion Council, Kochi.

8.105 Growth of cashew export from Kerala and India (Quantity and Value) are given in figures 8.7 and 8.8.



Export of Cashew Kernels (Qty.) 2004-05
Fig.8.7



Export of Cashew Kernels (value.) 2004-05
Fig.8.8

Table 8.19
Export of Cashew Nut Shell Liquid from Kerala and India from 2000-01 to 2004-05
(Quantity in MT, Value Rs. Crores)

Year	Kerala		India	
	Quantity	Value	Quantity	Value
2000-01	907	1.31	2246	3.89
2001-02	3365	4.56	4178	5.93
2002-03	6424	7.55	7215	9.26
2003-04	6784	6.68	6926	7.03
2004-05	6674	6.58	7474	7.91

Source: Cashew Export Promotion Council, Kochi.

Mining

8.106 Kerala is rich in deposits such as heavy mineral sand, china clay, iron ore, graphite etc. Heavy mineral sand and china clay contribute a higher share of the total value of mineral production in the State. Department of Mining & Geology has undertaken exploratory drilling for china clay at the following areas

1. Erikulam and Paivalike area in Kasaragod District
2. Kadayattu near Mulavana, Kollam District

8.107 A reconnaissance survey to locate good quality china clay bearing area around the captive mines of M/s Kerala Ceramics Ltd at Kundara was taken up by the department.

8.108 Survey for mineral quarries were carried out at Pathanamthitta, Idukki and Kannur districts to collect details such as location, ownership, production, rock type etc for creation of database.

8.109 The main activities of the Geo-technical and Mineralogical Wing are given below.

- Environmental appraisal at various tile clay mining sites in Thrissur to ascertain the availability of sand below the clay horizon
- Investigation to map the landslide prone areas in Nadapuram, Kozhikode district
- Field study to ascertain the environmental impacts due to sand mining at Kattikunnu area of Kottayam district, Neyyar in Thiruvananthapuram district and Chavara in Kollam District
- Geotechnical studies at the proposed site for Medical College in Vattiyoorkavu Panchayat
- Impact study due to dredging activities for lineshell in Vembanadu Lake

8.110 The Department has conducted investigation of clays in the following areas during 2004-05:

- Pallippuram area, West of CRPF group centre
- Thundathil area, Andoorkonam and Airoorpara Villages
- Miyapadavu, Erikulam and Kandapoyil in Kasaragod district.

8.111 The Department has also taken up mapping of minor mineral quarries in Kollam and Palakkad districts for creation of a database on minor minerals in Kerala

8.112 The Department identified a primary gold deposit in Maruda by its earlier exploration activities. They entered into an MoU with Geological Survey of India on the identification of palaeo channels using remote sensing techniques for locating exploitable reserves of sand deposits in Bharathapuzha, Pamba and Periyar basins as an alternative source of river sand for construction purposes.

8.113 The Mineralogy and Gem Testing Laboratory of the Department has tested 1383 gem stones / synthetic stones and issued certificates to the public by collecting an amount of Rs. 2.50 lakhs during 2004-05 which shows an increase of 85 per cent compared to the previous year. The analytical laboratory analyzed a total of 387 samples of clay, gold rock etc.

CHAPTER 9

TOURISM

Tourism to Kerala is what apple growing is to Himachal Pradesh. Both these regions offer all the pre-conditions for the sustained and successful growth of the respective activities. The factors stimulating a flourishing tourism sector include; scenic splendour, moderate climate, clean environment, a friendly and peace-loving people with high tolerance for cultural diversity and the potential for creating unique 'tourism products'

9.2 The country offers much scope for promoting differentiated tourism products like beach resorts, the one-of–a– kind products woven around Backwaters, health tourism, plantation tourism etc.

9.3 The State Government realizing the enormous potential of the tourism sector for creating productive employment opportunities matching the lifestyle aspirations of the educated Keralites, has been designing and implementing smart strategies jointly with the private entrepreneurs. These pro-active efforts have now started yielding handsome dividends.

9.4 Kerala is increasingly rated as one of the must-visit destinations not only by the highly discerning foreign tourists but also by the domestic tourists. The strategy which heavily focuses on class tourism (as opposed to mass tourism) leveraging the product differenciation possibilities does seem to be the ideal option for the State. Such careful nurturing of the unique tourism resources we have is absolutely critical to ensure that our fragile ecology is safeguarded for the sustained but moderately-paced growth of the industry.

9.5 Tourism is a major phenomenon of modern world and is one of the world's highest priority industries and employers. Kerala is today the most sought and trusted tourism brand in India. It is sought after for its breath taking natural splendors, the zillion shades of green, endless peace and innovative tourism products; trusted for its transparent quality control systems, eco-friendly practices and long-term approach to tourism as well as tourists.

9.6 Kerala's tourism brand is listed among the 101 strongest brands in India by Super brands India Pvt. Ltd and has been accorded the highly coveted "Super Brand Status"-internationally known as the 'Oscars in the world of branding'. Kerala Tourism enjoys the privilege of being the only tourism destination in the listing which is being done for the first time in the country.

9.7 Foreign tourist arrivals to Kerala are showing an increasing trend for the last few years. In 2004, it recorded 17.28% growth over the last year. During 2004 the foreign exchange earnings from tourism in the State was Rs. 1266.77 crores which shows an increase of 28.82% over 2003.The total revenue generated from tourism to the State in the year 2004 is worked out at about Rs. 6829 crores.

9.8 According to World Travel and Tourism Council (WTTC) report, Travel and Tourism in Kerala is expected to grow at the rate of 11.4% per annum in real terms between 2004 and 2013.

BOX-9.1
WTTC's Projection

- Tourism demand of Kerala to grow by 11.6% per annum over the next decade (This is the highest recorded growth in the world, surpassing Turkey's 10.2% as well as India's 9.7%)
- A record growth of 23.5% is also predicted in terms of external account earnings from travel and tourism over the next 10 years (India's estimates for this period are 14.3% while the world average is only 6.5%)
- Tourism employment to be 2 million by 2012.

9.9 During 2004-05 the Department of Tourism has concentrated in the development of basic infrastructure, conservation of nature and heritage, development of new tourism products and ensuring its quality, focused promotion in targeted markets both domestic and international, effective use of Information Technology etc. Government has acted as facilitator and catalyst in encouraging private sector investment in the development of tourism infrastructure.

Awards and Recognition

9.10 Kerala Tourism continued to win worldwide awards and recognitions, few of them are;

- 2003 PATA Gold award for marketing as well as for its CD-ROM titled Kerala – The Green Symphony
- Kerala is the only tourism destination selected for super brand in India
- World Tourism Organisation (WTO) selected Thenmala Eco-Tourism Project as one of the best 64 eco-friendly tourist destinations, spread over 47 countries.
- Kerala Tourism won best debut destination award at otdykh – leisure 2003, Moscow
- Kerala bagged PATA grand Award for Heritage for Fort Kochi project
- Kerala won PATWA International Award for Leisure Tourism
- Kerala Tourism bagged the National Award for best performing State for 4 times during the last 5 years.
- Six National Awards from Government of India during 2003-04 consisting of Best performing State, Most effective use of information Technology, Best Practices by State Government. The Best Eco-friendly Projects ; Zero Waste Kovalam and Thenmala,The Best Eco-Friendly tourism organization and the Best Maintained Tourist Friendly Wild Life Sanctuary : Tiger Reserve Thekkady.
- Kerala bagged PATA Grand Gold Award for Heritage for the East Fort Conservation Project, Best CD-ROM – 'Niramaya' Best Eco-tourism Project, in the year 2004.
- During the current year Kerala Tourism's seven-brochure kit, Life in a new light and CDs, where the Season Never Ends – Malabar Mystique and A Day with the Masters won the Indian Association of Tour Operators (IATO) awards for the best brochure and the best CD.
- Six National Awards during 2004-05 consisting of Best maintained Tourism friendly monument (East Fort), Innovative most unique tourism product (Kalamandalam), Best publication in English (Panchakarma), Best Tourism promotional collateral materials, Best Audio-Visual-Symphony celestial by Invis, Award for best promotion and marketing.

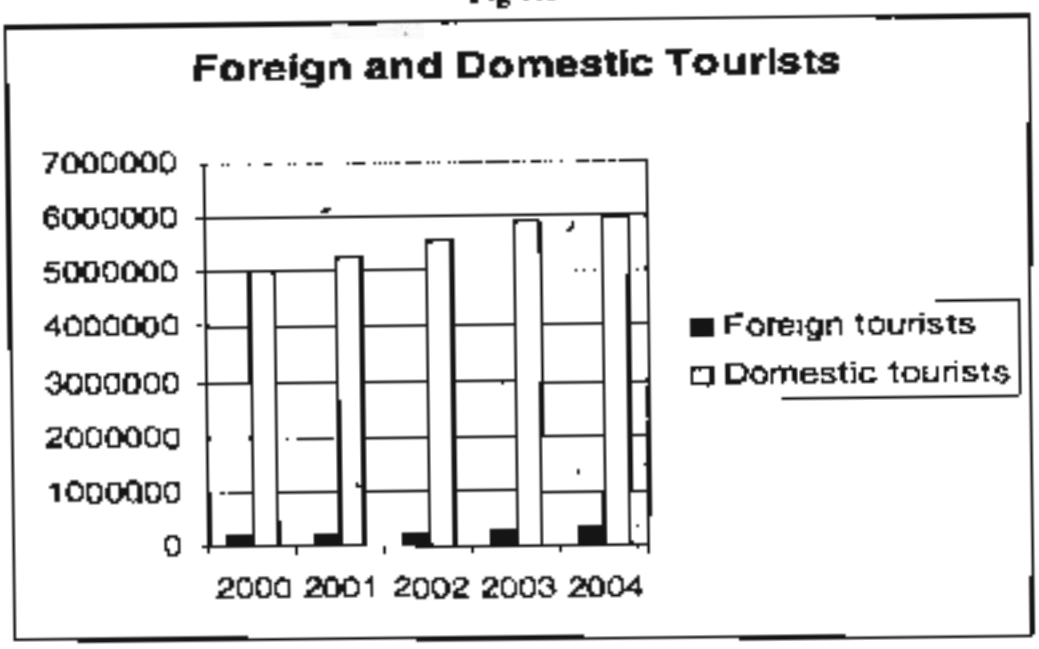
Tourist Statistics

- **Foreign and DomesticTourist Arrivals**

9.11 In 2004, 345546 foreign tourists visited Kerala as against 294621 in 2003, showing an increase of 17.28%, which constitute 10.26% of total foreign tourists, visited India. The details of foreign tourist arrivals from 2000 to 2004 and share of Kerala in tourism market is given in Appendix 9.1.

9.12 Domestic tourist arrivals during 2004 are estimated to be 5972182 as against 5871228 in 2003, showing an increase of 1.72%. Appendix 9.2 gives the domestic tourist flow to Kerala during the last five years and percentage variation over the previous 5 years.The growth of foreign and domestic tourist arrivals from 2000 to2004 is given in fig 9.1

Fig 9.1



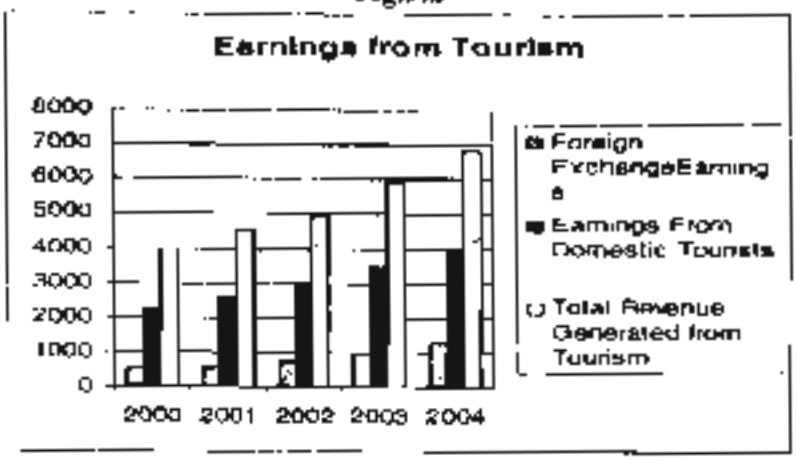
- **District wise arrival of foreign and domestic tourists in Kerala.**

9.13 Appendix 9.3 gives the comparison of district wise arrival of foreign and domestic tourists in Kerala during 2003 and 2004. Ernakulam is the leading district on the basis of foreign tourist arrivals and Thrissur is the leading district on the basis of domestic tourist arrivals to Kerala.

- **Income and Employment from Tourism**

9.14 The foreign exchange earning from tourism during 2004 is Rs. 1266.77 crores. When compared to 2003, there is an increase of 28.82%. The earnings from domestic tourists during 2004 is Rs 3881.92 crores. Total revenue generated from tourism (directly and indirectly) in the State are worked out as about Rs. 6829 crores. Tourism employs about 8 lakh persons in the State. The investment in tourism is about Rs. 500 crores per year. The details of earnings from tourism are given in Appendix 9.4 and shown in fig.9.2

Fig.9.2



Accommodation

9.15 The number of classified rooms available in hotels during 2004 was 7011 as against 5049 in 2003. The number of classified hotels increased to 204 in 2004 from 142 in 2003. The details of availability of Accommodation facility is given in Appendix 9.5

9.16 The table 1 gives the preference of foreign tourists in choosing accommodation in the year 2004. 81.72% of tourists preferred Hotel Accommodation as shown in fig.9.3.

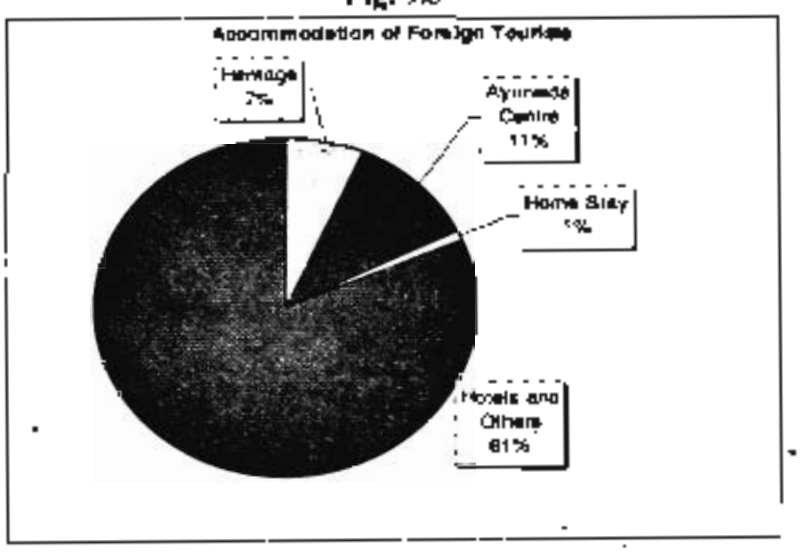
Table -9.1

Classification of foreign tourists according to Accommodation during 2004

Sl.No.	Type of Accommodation used	% of tourists to total
1	Heritage	6.78
2	Ayurveda Centre	10.86
3	Home Stay	1.09
4	Hotels and Others	81.27
	Total	**100.00**

Source : Dept. of Tourism

Fig. 9.3



Major Tourism Destinations

9.17 Triruvananthapuram City, Kovalam, Poovar, Ponmudi, Varkala, Palaruvi, Paravoor, Alappuzha, Kuttanadu, Erumeli, Thekkady, Munnar, Vagamon, Kumarakom, Kochi City, Aluva, Kalady, Cherai Beach, Maradu, Guruvayoor, Chalakudy, Athirappalli, Parambikulam, Nelliyampathi, Malampuzha, Nilambur, Kozhikode City, Kappad, Wayanad, Kadalundinagaram, Muzhupilangad and Bekal are the Identified Tourist Destinations of Kerala.

9.18 The art forms of Kerala are embodiments of Kerala's culture. Beaches, backwaters, hill stations, waterfalls, wild life, Ayurveda, year round festivals and the diverse flora and fauna make Kerala quite distinct from the other Indian States. The pleasant climate is also a positive factor.

Box –9.2 Tourism Products and Destinations	
Major Beaches	Kovalam, Varkala, Fort Kochi, Kappad and Bekal
Major Wild Life Sanctuaries	Thekkady (Periyar), Parambikulam, Wayanad, Silent Valley, Aralam, Peechi-Vazhani, Chimani, Shenduruny, Idukki, Chinnar, Peppara, Neyyar
Bird Sanctuary	Thattekad, Kumarakom
Major Hill Stations	Ponmudi, Peerumade, Thekkedy, Munnar and Wayanad
Art Forms	Kadhakali,Koodiyattom,Kalarippayattu, Mohiniyattom,Chakkiyarkoothu etc.

Promotion And Publicity

9.19 Department of Tourism has taken various innovative initiatives in Promotion and Publicity. The result is evident from the very high growth rate of tourist arrivals, to Kerala The major initiatives include

- Overall Strategy for marketing
- Initiatives in Promotion
- Kerala Travel Mart (KTM)
- India International Boat Show (IIBS)
- Mystiques of Malabar – Exclusive Biennial Travel MART Unveiled North Kerala:
- Nishagandhi Dance & Music Festival:
- Kerala's Initiative in Promoting South India:
- International Television Campaign Extended to New Channels
- New Advertisement Film for Kerala Tourism
- Kerala becomes theme State in Dubai Shopping Festival 2004
- Participation in International and National Tourism Marts

9.20 In addition to the above the Department of Tourism participated in the following National tourism fairs; Travel and Tourism Fair Bangalore, Travel and Tourism Fair Chennai, Travel and Tourism Fair Hyderabad, Travel and Tourism Fair Kolkata, Travel and Tourism Fair New Delhi, Travel and Tourism Fair Mumbai, India International Travel Mart Banglore, India International Travel Mart, Chennai, India International Travel Mart Hyderabad, India International Trade Fair New Delhi, South Asia Travel and Tourism Exchange New Delhi, IATO Conference Agra, TAAI

Conference Calcutta, FHRAI Meeting Dubai, FICCI Conference New Delhi, Arogya Fest Chennai.

Focus on Use of Information Technology :

9.21 More than half of the world is connected to the world wide web and the desceming traveler surfing the web for the latest information on tourism destinations and facilities, the Government of Kerala taps the potential of information technology as an effective communication medium. Stress is therefore on the electronic media & the use of latest devices in IT to promote tourism. This includes website, CD-ROMs, VCDs, DVDs, VHSs etc.

Infrastructure Developments at Tourist Destinations and creation of en-route facilities:

9.22 Department of tourism has initiated various projects for the development of basic infrastructure at tourist destinations, improvement of tourism attractions at the destinations, creation of new tourism products and creation of en-route facilities. Department make use of various schemes offered by State and Central Government to implement these projects. The projects are either executed directly by Department of Tourism or through Line departments or other government agencies. Thrust has been given to the development of basic infrastructure along the backwaters for tourism promotion. Projects under implementation are

- Construction of houseboat terminals are being taken up at major backwater nodes such as Alappuzha, Kumarakom, Thanneermukkom, Chettuva, Vadikkal and Neeleswaram. The construction of the terminal at Kumarakom is completed and other are in progress.
- Tourism infrastructure and basic amenities are being developed along the Pamba-Kuttanad backwater cruise routes after detailed studies through NATPAC. Tourist resorts at Pallathuruthy, Nedumudi, Kotharathode and Vattakkayal are being developed.
- Houseboats have been deployed at Neeleswaram, Parassinikkadavu, Kozhikode and Chettuva as part of extending backwater based activities to the Malabar area. Valliyaparamba is already developed as a major backwater centre. At Iringal, Azhhkal, Kotti & Ayittikadavu boat jetty complexes are being developed.

Eco-Tourism

9.23 Thenmala Eco-Tourism Project features a tourist facilitation centre, shop court, garden, plazas, picnic area, nature trail, rock climbing, river crossing amphitheatre, restaurant, suspension bridge, lotus pond, musical dancing fountain, sculpture garden, deer rehabilitation centre, boating, battery powered vehicles etc.

9.24 The details of the revenue generated and the number of tourists visited at Thenmala from 2000 to 2004 are furnished in Table 9.2

Table 9.2
Tourists visited in Thenmala and Revenue generated from 2000 to 2004

Year	Tourists visited (Nos)	Revenue generated (Rs)
2000-01	26148	445437
2001-02	41161	1138839
2002-03	65075	2147985
2003-04	118404	4044571
2004-05	104622	3563820
Apr. 05 to Sep. 05	47853 (provisional)	1685695

Source: Directorate of Ecotourism

Eco-tourism Initiatives Implemented Through Forest Department

9.25 The forest department is evolving modalities for developing community based ecotourism products in the already identified potential ecotourism spots through the institution of Vana Samrakshana Smithy (VSS)/Eco-Development Commiuees (EDC), that is, the Committee of the local dependent communities. Certain successful models of these efforts are programmes at Athirapally, Vazhachal and Thekkady. Community led ecotourism activities are already in place at Palaruvi, Kallar, Chinnar, Aralam, Thommankoothu etc.

9 26 During 2005 new initiatives have been taken to establish community led ecotourism in the following areas.

1. Neyyar Wildlife Sanctuary (Thiruvananthapuram District)
2. Peppara Wildlife Sanctuary (Thiruvananthapuram District)
3. Shendurney Wildlife Sanctuary (Kollam District)
4. Konni Ecotourism (Pathanamthitta District)
5. Periyar Wildlife Sanctuary (Idukki District)
6. Eravikulam National Park (Idukki District)
7. Chinnar Wildlife Sanctuary (Idukki District)
8. Chimmony Wildlife Sanctuary (Thrissur District)
9. Nilliampathy (Palakkad District)
10. Parambikulam (Palakkad District)
11. Nilambur (Malappuram District)
12. Peruvannamuzhy (Kozhikode District)
13. Kakkayam (Kozhikode District)
14. Kuruva Islands (Wayanad District)
15. Aralam Wildlife Sanctuary (IInd Phase) (Kannur District)and
16. Pythalmala (Kannur District)

Focus on Malabar Region:

9.27 Special focus is giyen to Malabar region by developing the tourism potential of this region Special packages are taken up for the infrastructure development of backwaters, high ranges, development of beaches, eco-tourism etc in the Malabar Region with the financial assistance of Government of India.

Box-9.3
Projects at Malabar -Views

- The focus in Malabar area has been increasing. In the year 2004-05, almost equal amounts were spent in Malabar and Non-Malabar area
- From Rs. 4 crores in 2002 03, the amount spent during 2004-05 in Malabar area reached Rs. 30 crores.

Human Resource Development

The Kerala Institute of Tourism & Travel Studies (KITTS):
9.28 KITTS imparts quality education and training in the field of Travel & Tourism. Apart from the courses, the Institute gives importance to developing character and extra circular activities. The Institute provides opportunities to students to develop their managerial and organizing skills by encouraging them to organize various activities in and out of the campus.

Courses offered at KITTS
9.29 The Institute offers various job-oriented courses, both short term and long term.

- The long term regular course offered at the institute is the two-year Post Graduate Diploma in Business Administration – Travel & Tourism. AICTE has granted approval for MBA (Travel & Tourism) course for the academic year 2005-06. Recognition of the course is sought from CUSAT and the inspection team from the University has already visited the institute

- Cambridge International Diploma in Travel & Tourism is a six-month's course conducted by the Institute in association with University of Cambridge and the British Council, Chennai. The certificate courses in Customer Relations and Service Management, and Airfare Ticketing and Travel Agency Management are the other two six months courses offered from the main campus at Thiruvananthapuram.

- Kerala Institute of Hospitality Management Studies (KIHMS) is the hospitality wing of KITTS, operating from the Yatrinivas building at Malayattoor, Ernakulam. A short term course (one year) for training masseurs is conducted at this Institute. Two certificate courses – (i) Certificate in Food Production and (ii) Housekeeping & Front Office Management – are also offered from this Chapter.

- During 2004-05, 316 students were in roll, out of which 193 students completed their courses and 123 students continue their studies.

Training Programmes
9.30 Institute develops and implements continuous training programmes to the host community to be visitor friendly so as to create a positive mindset to the concept of tourism. The Institute is actively involved in awareness campaigns in various schools and colleges in the state through training programmes for Teacher Coordinators and Student Coordinators of Tourism Clubs.

Facilitating Private Sector

9.31 Ever since tourism was declared an industry in 1986, several incentives which were available to investors in other industrial sectors have been extended to the tourism sector as well by the State Government. These include subsidies, technical guidance, marketing assistance, publicity through governmental publications, help in availing loans etc.

New Initiatives
9.32The new initiatives of Kerala Tourism during 2004-05 are as follows:

- Kerala Tourism (Conservation and Preservation of Areas) Act 2005: Government have passed the Kerala Tourism (Conservation and Preservation of Areas) Act 2005 on 9th February 2005. The Act envisages the conservation, preservation and integrated

development of 'Special Tourism Zone'. Special Tourism Zone is any area which is identified and declared by the notification of Government in Gazette as Special Tourism Zone. As per the act, no development activity including construction in Special Tourism Zone shall be carried except in accordance with such guidelines as may be issued by State Tourism Conservation and Preservation Committee constituted under section 4 of Act. As the first phase of implementation of the above enactment, Department of Tourism desires to declare Kovalam, Munnar, Kumarakom and Fort Kochi as Special Tourism Zones

- Vazhiyoram: Vazhiyoram the way side facility with minimum standardized facilities is proposed to be set up along all the major roads/waterways in the State through private sector initiatives. Vazhiyoram will be located in such a way that there will be at least one facility within 10-20 kms in National Highways, major State Highways/waterways and roads leading to tourist destinations. The project will be implemented in phases after prioritizing the roads/waterways with respect to their importance. Vazhiyoram units will have typical designs and will be branded. Department will also facilitate the entrepreneurs in getting finance from the funding agencies. The construction has to be done by the entrepreneur. Approval to function the unit will be given by a committee after inspection.
- Clean Destination Programme: Department of Tourism has introduced a scheme for upgrading the quality of destination by upkeeping them in clean and hygienic conditions. "Clean Destination Campaign". "Kudumbashree" is the executing agency of Clean Destination Campaign.
- Registration of Tourism Societies: Government Order G.O.(P) No.11/05/GAD dated 5.1.2005 have conferred the powers of Registrar of Co-operative Societies to Director of Tourism in respect of all Tourism and Hospitality Co-operative Societies.
- Re-structuring of DTPCs: The DTPCs are restructured inorder to undertake new responsibilities such as implementation of District Level tourism projects, co-ordination of various tourism projects being implemented by the Department of Tourism, formation and monitoring of Tourism Clubs, implementation of Tourism Awareness programme etc.
- Town Squares as Tourism Nodes; Department of Tourism decided to formulate a new scheme for the development of Town Squares at important centers which act as tourism nodes where sufficient open space is available to create quality facilities such as public toilets, parking area, large open space for relaxing, meeting space, information and facilitation centers within tourism important urban nodes. The scheme is proposed to be implemented in association with Local Self Governments.
- Pilgrim Facilitation Centres; Department of Tourism decided to formulate a new scheme for the development of Pilgrim Facilitation Centres at important pilgrim centres in association with the Temple/Church/Mosque authorities in charge of the pilgrim centre, to promote the unique cultural heritage of the State.
- My Village, Tourism Destination Village;Department of Tourism in partnership with Local Self Governments decided to start a new project "My Village, Tourism Destination Village" to ensure tourist friendly environment in the Villages.
- Alappuzha to be back as 'Venice of the East':It has been decided to develop Alappuzha as a major tourist destination. Various projects are taken up for the development of backwaters of Alappuzha, cleaning up of various canals of Alappuzha etc. Government of India have sanctioned the following projects at Alappuzha during 2005-06.

- Rejuvenation of heritage canal
- Development of Backwater Tourism Complex, Alappuzha

- Boat Terminal Complex
- Backwater-front walkway, Punnamada
- Floating jetty at Punnamada
- Beach Beautification

President's Mission

9.33 The President of India ,Dr.APJ.Abdul Kalam, in his Address to the Members of the Legislative Assembly of Kerala on 28th July 2005 discussed the missions which Kerala can undertake using the core competence of the State Tourism including General,Spiritual,Health and Science is the first among them.According to The President "Tourism is a major mission and has a tremendous potential of growth in this beautiful territory. Kerala has many tourism and pilgrim centres such as Sabarimala, Kottayam, beaches like Kovalam, hill stations like Munnar, and Wildlife sanctuaries like Eravikulam and Periyar, architectural and civilizational heritage. Kerala is one of the rare places where tropical forests, vast beautiful coast lines, mountains,water bodies,lakes, beautiful sunshine etc coexist. It is nature's special manifestation. In addition to this it is endowed with number of scientific and R & D organizations of interest to scientific tourists.'

Box. 9.4
Target (within Next 3 years)

- Indian Tourist to 12 million /year from 6 million /Year
- Foreign Tourist to1 million /year from3.5 lakh/Year
- Additional Employment : 20 lakh people
- Business ; Rs. 3000 crore foreign exchange

Suggestions

1. Clean green environment and accommodation
2. Good road, rail, air and waterways connectivity
3. Virtual Walk through on the tourists spots in the website.
4. Customise the tour to suite tourist needs through tourism portal to attract international tourism
5. Develop and train tourist friendly human resources to guide and help the converging tourists
6. With all these additional inputs implement the new tourism policy a stress on product diversification and dispersal of tourism activities in far-flung areas.

Box. 9.5

While promoting Tourism we should ensure that ecology is not disturbed and the natural environment is fully protected as in Sikkim.

- President of India , Dr.APJ.Abdul Kalam

CHAPTER 10

INFRASTRUCTURE

Presence of quality infrastructure is vital for social, economic and industrial development of the country. The Transport infrastructure in India largely consists of roads, railways, air and inland water. As regards roads, it occupies prime position because even for using other modes of transport road is needed. Roads cover every corner of the country that the railway could not even cover.

10.2 The most important challenge in the road sector revolves around building all weather roads connecting each and every village. Even though Kerala is comparatively better placed than most other States, as regards road length, the condition of many of these roads is very poor. Therefore, the main emphasis under road development in Kerala has been on improvement and upgradation of existing roads rather than construction of new roads. The investment need in the road sector is of high magnitudes that are beyond the resources available with the Government. Therefore, there is an imperative need to motivate the private and other non-governmental agencies/corporate sectors to participate in road construction and upgradation especially in the projects like express ways and selected highways. It is therefore, imperative to strengthen the road infrastructure for carrying out all sorts of development.

Transport Infrastructure

10.3 Transport system of the State consists of 1.54 lakh Km of road, 1148 kms of Railways, 1687 km of Inland Waterways and 111 statute miles of Airways and 18 Ports.

Road Transport

10.4 Road traffic in India accounts for about 85% of passenger traffic and 65% of goods traffic. As regard to total length of roads, it has increased from four lakh km in 1950-51 to 33.19 lakh km in 2001-02, which make it one of the largest road network in the World, comprising of National Highways, State Highways, Major/Other District Roads and Village/Rural Roads.

National Highways

10.5 National Highways form the prime arterial routes and span about 58112 Kms through out the country and cater to about 45 percent of the total road transport traffic. In order to give a boost to the economic development of the country, a massive programme for 4/6 laning to 13146 Km of national highways has been taken up since 1999 unde National Highways Development Project (NHDP) and is targetted to complete by December 2007 at an estimated cost of Rs 54,000 Crore (at 1999 prices). This is perhaps one of the largest programmes of road development taken up in the country. The project is implemented by National Highway Authority of India (NHAI).

National Highways in Kerala

10.6 The length of National Highways in Kerala increased from 1523.954 km in 2003-04 to 1525.570 Km during 2004-05. National Highways in Kerala is only 2.3% of the total National Highway length spread over 1525.570 Km in India. Improvement and strengthening of 320 km of National Highways was carried out by providing Bituminous Macadam and Asphalic concrete in the year 2004-05.

Table 10.1
National Highway in Kerala

Sl.No	Name of National Highway	Length (km)
1	NH 17 Thalappady – Edappally	420.777
2	NH 47 – Walayar - Kaliyikkavila	416.800
3	NH 47 A – Wellington Island to Kochi Bypass	5.920
4	NH 49 –Bodimettu – Muvattupuzha - Kochi	167.593
5	NH 208 – Kollam -Aryankavu - Muvattupuzha	81.280
6	NH 212 Kozhikode - Kallegel	117.600
7	NH 213 - Kozhikode – Palakkad	125.300
8	NH 220 – Kollam – Kottayam-Kumily - Theni	190.300
	Total	**1525.570**

Source. PWD (NH)

10.7 The National Highway Development Project has the following two components

- Golden Quadrilateral (GQ) comprising. National Highways connecting four Metro Cities viz, Delhi. Mumbai. Chennai and Kolkata. Total length of GQ is 5846 Km
- North – South and East – West corridors comprising the National Highways connecting Srinagar to Kanya Kumari including Kochi – Salem spur and Silchar to Porbandar is about 7300 Km. The North-South and East West corridors is targetted for completion by December 2007.

10.8 With a view to strengthen the infrastructure network of the country, the National Highways Authority of India (NHAI) is also implementing four laning of 361 Km for connectivity to 10 major ports of the country.

10.9 With a view to further augment flow of funds to the sector and to encourage private sector participation in Road Development, Government has already announced several incentives such as tax exemptions. duty free import of road building equipments and machinery

10.10 The major bottleneck to private sector participation is recognized as upfront capital investment and high risks of revenue collection. which sometimes deter the investors to invest in the sector. To address these issues apart from giving several incentives. the Government has decided to offer some projects on annuity mode.

10.11 National Highway Authority of India have undertaken the following projects in Kerala under NHDP phase II

- Four laning of Tamilnadu /Kerala Border (Walayar) to Thrissur section (km 182/0-270/0) of NH 47
- Length of the project : 88 kms
- Four laning of Thrissur – Angamali section (KM – 270 (0-316/7 m) of NH 47 length : 40 kms
- Four laning of Angamali – Aluva section (km 316/700 – 332 / 600)of NH 47
- Four Laning of Aluva – Vyttila section (km 332/600 – 342/00) of NH 47
- Four laning of Vyttila – Aroor section (km 348/300 to 358/750) of NH 47.

Project under Port connectivity

- Four laning of Kalamassery – Vallarpadam section (km 0/0 to km 17/2) of NH 47 A

Project under NHDP in NH 47

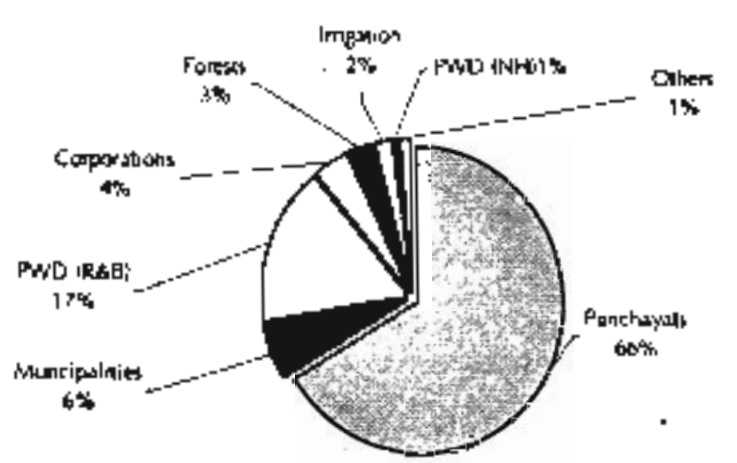
- Four laning of Cherthala – Thiuvananthapuram section (km 388/756 – km 552/0) of NH 47
- Four laning of Thiruvananthapuram – Kerala /Tamilnadu Border (Thottiyudai) section km 552/0 – km 626/00) of NH47

Project under phase III in NH 17

- Four laning of Karnataka /Kerala boarder (Thalapadi) to Kannur section (km 18/0 to km 156/0) of NH 17
- Four laning of Kannur to Kuttippuram section (km 156 / 0 to km 318/20 of NH 17
- Four laning of Kuttipuram to Edappalli Junction (km 318/20 to km 438/60 section of NH 17

State Road Network

10.12 The major development indicators of transport and communication sector in the State since 1999 are given in Appendix 10.1. On the road front, traffic has been growing at a rate of 10 to 11 percent every year, resulting in excessive pressure on the roads in the State. Total road length in Kerala during 2004-05, increased to 154679 Kms from 145704 kms in the previous year, registering an increase of 6 percent. Road density in the State is 398 km / 100 sq.km and it is far ahead of national average of 74 9 km/100 sq.km The length of road per lakh population is 485.8 km and it is much higher than the national average of 259.2 km. The roads maintained by Panchayats has also increased by 5.34 percent in 2004-05. Roads maintained by different agencies are given in Table 10.2. Category of road network in Kerala is shown in figure 10.1



The length of roads maintained by different agencies in Kerala during 2004-05
Fig 10.1

Table 10.2
Agency wise Distribution of State Roads

Sl.No	Name of Department	Length (KM)	Percentage
1	Panchayats	104257	67.54
2	PWD (R & B)	26269	17.02
3	Municipalities	8917	5.78
4	Corporations	6644	4.30
5	Forest	4075	2.64
6	Irrigation	2664	1.72
7	PWD (NH)	1525	0.98
8	Others (Railway, KSEB)	328	0.21
	Total	**154679**	**100**

The Road profile of Kerala is given in Box No. 10.1

Box No. 10.1
Road Profile

- Kerala has a wide network of roads, comprised of
  - Total length = 154679 Km
  - Road network under PWD(R&B) = 26269 Km
  - Road network under NH Wing = 1525 Km
- But most of roads are narrow, poorly developed and inadequately maintained
- Road width is insufficient to accommodate present traffic volume and future growth
- Kerala's villages are large (average population 50000) and "100% road connectivity" does not mean the same here as in other States

10.13 Out of the total road length of 104257 Km held by Panchayths 26870.5 km (25.77%) are black topped and 62408.157 km (60%) are gravelled. Out of the total roads maintained by PWD 26269.305 km Ernakulam district has the major share with a road length of 2590.893 km (9.86%). Wayanad district has the lowest share 802.922 km (3.05%). Details of district wise length of roads maintained by PWD (R&B) as on 31.3.2005 is given in Appendix 10. 2. Notable achievements of Kerala PWD during the last four years is given in Box 10.2

Box No. 10.2
Notable achievements during the last 4 years

- Upgradation of 1610 Kms of roads under World Bank sponsored Kerala State Transport Project
- Roads improved under State Plan – 52 (Nos)
- Bridges constructed under State Plan – 55 (Nos)
- Length of Village/Other District Roads upgraded as Major District Roads - 10773 km
- Construction of Hill Highway from Kannur to Palakkad
- Construction of Erumeli-Chalakkayam Road
- Upgradation of 47 Km of city roads under Capital Region Development Programme
- Improvement of Roads and Construction of 3 bridges in Tsunami affected areas
- Construction of 53 bridges and 46 roads under NABARD Scheme
- Construction of 108 bridges and 62 roads under NABARD Scheme are in progress

10.14 As on 31.3.2005 there were 2179 bridges and 51422 culverts on the PWD Roads. Of them 148 bridges need reconstruction / renovation and 1519 culverts are not in good condition. The reforms being proposed to be introduced in PWD is given in Box 10.3

Box 10.3
Reforms being proposed in PWD

- PWD proposed to effect reforms in its functioning, which will have an impact on the problem of pending bills also.
- An Inter Departmental Empowered Committee has been constituted with the approval of Council of Ministers for bringing in institutional reforms.
- Resort will be made to higher levels of institutional funding of projects from NABARD and HUDCO.

Kerala State Transport Project (KSTP)

10.15 This is a World Bank assisted project. The project envisages upgradation of 584 Kms of road and maintenance of 1143 Km (993 Km heavy maintenance and 150 Km performance linked maintenance covering State Highways and Major District Roads. In addition the project envisages development of 77 Km of Inland Water Canals The project commenced on 6/2002 and it is expected to be completed by 12/2007. The total project cost is $ 336 Million (Rs. 1632.00 crores) and the sharing of cost between World Bank and Government of Kerala is in the ratio 70:30. The key component of KSTP is given in Table 10.3

Table 10.3
Components of KSTP

Sl.No	Components	Amount Rs. crores
1	Upgradation Components (584 KM of road and 77 KM of Inland Canals	967.97
2	Maintenance component (1143 KM)	268.64
3	Consultancy Services	90.41
4	Land acquisition and utility shifting	95.98
5	Resettlement and rehabilitation	99.76
6	Road safety Component	15.52
7	Performance based maintenance works	4.85
8	Institutional Development Study	46.64
9	Incremental Operating cost	30.46
10	Front end fee	12.37
	Total	**1632.60**

Source: KSTP

Following are the main components of KSTP

- Transport Corridor upgrading (Roads and Canals)
- Road Maintenance
- Road Safety
- Institutional strengthening

10.16 Under Transport Corridor upgrading component the existing carriageway is improved. Under the Road maintenance components 1000 km length of roads were taken up, which are spread through out the State. It is being implemented in three stages over a period of four years. First stage about 339 km completed, stage II completed 300 km only of the target of 335 km and the remaining works are nearing completion. In IIIrd stage about 326 km length of roads are being implemented as per their original programme.

10.17Under KSTP Institutional Strengthening Action Plan (ISAP) of PWD and IWT Department are taken up with following objectives

- Comprehensive road development policy
- Establishing sustainable road funding mechanism to meet the projected financial requirements for medium to long term road sector development through increased budgetary allocations and mobilized funds.
- Reforming PWD to ensure greater accountability, restructure its existing service delivery functions; introduce new functions, developing human resource capacities
- Revising outdated PWD codes and manuals
- Introducing computerized project management and financial management systems in the PWD
- Introducing environmental and social impact monitoring
- Promoting modern good practices within KSTP including feasibility studies, Engineering design etc.

10.18 Objective of the Road Safety Programme is to reduce the road accident upto 20 percent at accident blackspot sites improved under the project . The following activities are initiated under the programme

- Accident site improvement schemes
- Road safety Audit – model road
- Junction improvements
- Improvement of hazardous locations on NH
- Safety assessment of maintenance roads
- Demonstration signs and markings
- Mass Action Scheme
- Training on Safety Engineering

10.19 Road Safety Action Plan is being implemented by KSTP in association with State Traffic Police, Motor Vehicle Department, Road Safety Councils, Research and Academic Institutions and other State Government agencies responsible for Road safety. An International consultant is now coordinating the implementation part and carrying out the task. The main task are as following

- Review, update and publish the Kerala Road Safety Action Plan
- Review Funding for Road Safety and Research additional sources
- Assist the police to achieve a sustainable improvement in effective traffic law enforcement
- Review how traffic offences are dealt with, and recommend improvements
- Plan and help implement and all – year – round programme of road safety publicity campaigns
- Prepare a road safety education programme for children
- Review the vehicle testing system, and recommend improvements

10.20 Land acquisition is a major impediment in the progress of KSTP. Investigation and preparation of DPR was entrusted to an external consultant who is not fully aware of local situation. This is reflected in revision of the alignment and design. Therefore both alignment and design have to be revised in certain locations to suit local needs. Wherever such realignment was necessitated additional land acquisition process had to be initiated from preliminary notification stage onwards. Shifting of utilities particularly Kerala Water Authority (KWA's) pipeline involves heavy investment by KSTP and delays shifting other utilities such as those of BSNL, KSEB etc are less cumbersome, time consuming.

Roads and Bridges Development Corporations (RBDCK)

10.21 The Roads and Bridges Development Corporation (RBDCK) acts as the nodal agency for executing Road Over Bridges in the State apart from other Road projects. RBDCK has already completed construction of 50 railway overbridges under various projects of railways.

North South Express way

10.22 Apart from the KSTP projects the Government has recently initiated many other innovative road projects. To enhance the mobility, which is very vital for the economic development of the state, Government of Kerala decided to develop an access controlled High Speed Corridor (HSC) traversing through the State in the North-South direction from Manjeswaram (in Kasaragod district) to Parassala (in Thiruvananthapuram District) with a total length of approximately 600 Km. The High Speed Corridor is envisaged to relieve the exiting highways and boost up the economy of the region. Preliminary studies for a High Speed corridor extending over 506.5 km connecting Kasaragod and Thiruvananthapuram are over. This project is proposed to be executed with private participation.

Research and Development in Road Sector

10.23 Research and Development activities have an important role to play in meeting the challenges of modernising the road system, technology upgradation and finding cost effective solutions to infrastructure problems in general. Design, Research, Investigations and Quality control Board (DRIQ Board), Kerala Highway Research Institute (KHRI) and National Transportation Planning and Research Centre (NATPAC) are engaged in research and development of the road sector. The DRIQ Board consists of the following three Divisions

1. Design
2. Research and project preparation units
3. Quality control and computer cell

10.24 In 2004-05 the design wing of DRIQ Board has completed detailed design of 41 and general design of 68 bridges. DRIQ Board has completed design works of 27 Buildings during 2004-05. The research and project preparation unit of DRIQ Board has completed 10 project preparation works during 2004-05. The Quality Control wing and computer cell imparted training for 40 personnel in the PWD. Civil Training arranged for 2 personnel in the DRIQ Board and M.S Office training for 30 persons in PWD Office.

Kerala Highway Research Institute

10.25 The main objective of KHRI at the beginning was cater to the needs of the Roads and Buildings wing of P.W.D. in carrying out laboratory test and field-testing of samples of flexible pavements, building materials, concrete, soil, bricks, tiles, steel, etc. It carries out mix design for concrete as well as bitumen mixtures of various engineering applications. It undertakes applied research work in the Traffic and Transportation Engineering, Geo-textiles, Bitumen and Concrete structures.

10.26 How the Institute is developed into a good training centre for providing training to Engineers in service on Quality Control of works, mix design, Detailed Project Preparation, etc. Government has declared the Institute as a regular Training Centre recently. Training is being carried out as per a calendar covering the whole year. The Institute has entered into the field of detailed survey work using modern computerised equipments like Total station and Auto Level. Engineering College students and Polytechnic students both from inside and outside Kerala recently do project work in this institute and they are guided very well. Central Public Works department, Airport Authority of India, I.S.R.O., Techno Park, BHEL, Power Grid Corporation, BSNL, etc depend on Highway Research Institute to satisfy those requirements of testing and studies. The Kerala Highway Research Institute is the only Authority before Vigilance and Anti-corruption Bureau to get technical reports and opinion on alleged works.

National Transportation Planning and Research Centre (NATPAC)

10.27 National Transportation Planning and Research Centre (NATPAC) was established in 1976 as a unit of KELTRON. Subsequently, it was reconstituted as an R&D Centre and brought under the Department of Science, Technology &Environment, Government of Kerala. Since 2003, NATPAC has been functioning as a research institution of Kerala State Council for Science Technology & Environment, which is fully supported and funded by the Government of Kerala. It has completed nearly three decades of dedicated service to the State as well as National agencies in the field of traffic and transportation and allied areas. The organization is functioning as a Centre of Excellence in Scientific Research, Planning and Design and Extension activities in traffic and transportation and facilitates safe and efficient transport system.

10.28 NATPAC has taken up studies as on all modes of transportation covering road, rail, water, seaport and Airport. NATPAC under took 15 research studies under plan programme and seven sponsored projects during the year 2004-05. The thrust area of research are shown in the box. 10.4

Box 10.4
Thrust Areas of Research

- Traffic Engineering and Management
- Road safety
- Rural Road connectivity
- Water Transportation
- Public Transport Services/Fare policy
- Highway Engineering
- Traffic Education and Road Safety Training

Source: NATPAC

Road Transport Services

10.29 Road Transport is the dominant mode of transport for moving goods and passenger traffic. Road transport acts as the feeder service to the rail traffic, air traffic and ports and harbours. The vehicle density of the State during 2004-05 is very high compared to many other States in India. Road Transport industry is dominated by private service providers. The road freight services are wholly owned and operated by the private sector.

10.30 Kerala State Road Transport Corporation (KSRTC) is the largest single public sector undertaking, which carries out transport operation in the State. The passenger transport operation in Kerala is mainly carried out by private operators. Inter – State analysis shows that in respect of

the load factor, passenger lead, and passenger per bus per day, performance of KSRTC is above average

10.31 Out of 4626 buses of KSRTC 818 (17.7%) buses are having ten years age. The age wise details of KSRTC buses are given in appendix 10.15. The number of schedules operated as on 31.3.2005 has increased from 3768 to 4083 in 2004-05. The Corporation operated its bus service to a distance of 4500 lakh KM during 2004-05. About 11846.82 lakh passengers travelled in KSRTC buses during 2004-05 as against 11453.97 lakh passenger in the previous year. The average distance run by a bus in a day was 334 km during the period under review. The major indicators showing operational efficiency of KSRTC is given in appendix 10.16. The major issues and problems of KSRTC is given in box 10.5

BOX 10.5
Issues / Problems of KSRTC

- High Staff Vehicle ratio
- Aging fleet
- Operations in uneconomic routes
- Operating losses
- Fare concessions not fully reimbursed

10.32 Inter unit analysis of KSRTC reveals that about 30% of the units of the State exhibit poor performance. The unit wise details of operational statistics are given in Appendix 10.17.

10.33 The fares charged by KSRTC ranged from 35 paise per km in ordinary and city buses with effect from 16.9.2004. KSRTC enhanced the fares from 42 paise per ordinary and city services. With effect from 25.11.2005 KSRTC revised the fares by 48 paise per KM in city and ordinary services. 70 paise in super deluxe services and 90 paise in High Tech (Volvo) buses. The fare structure of KSRTC is given in Appendix 10.18

10.34 Financial performance of KSRTC is not in tune with its physical achievements due to increase in operating expenditure, hike in pension commitments, increase in interest payments operation in uneconomic routes and granting concessional travel add loss to the Corporation. Details of concessions /free travel facilities provided by KSRTC is given in the Table 10.4

Table 10.4
Concessions/ free travel facilities provided by the KS.RT.C in pursuit of Government from time to time

(Amount in Rs. lakhs)

Category	2002-03		2003-04		2004-05		2005-06	
	Nos	Amount	Nos.	Amount	Nos.	Amount	Nos	Amount
1) Students	595200	390	613264	401	618512	412	625000	425
ii) Physically Handicapped Blind, Deaf & Dumb	40518	5068	42565	5323	44800	5588	50000	8400
iii) Freedom fighters	2642	442	2500	420	2400	403	2350	394
iv) Journalists	607	102	607	102	630	105	650	109
Total	**638967**	**6002**	**658936**	**6246**	**666342**	**6508**	**678000**	**9328**

Source :KSRTC

10.35 The total number employees of the Corporation as on 1.04.2004 were 22274. As on 1.4.2005 the number of employees increased to 32144. The Corporation again reduced the number of employees. and as on 31.10.2005 KSRTC has total staff strength of 22749 of which 20374 are traffic and maintenance personnel. The availability of staff per operable bus was decreased to 5.14 The category wise details of staff structure of KSRTC are given in appendix 10. 20. Performance of KSRTC during 2004-05 is given in Box No.10. 6

Box 10.6
Initiatives of KSRTC at a glance

- Implemented electronic ticketing machines at 11 depots
- Introduced 4 A/c Airbuses
- Introduced 4 low floor Buses
- Introduced 72 Ananthapuri Fast Buses in Thiruvananthapuram City
- Introduced 51 Venad buses for Town to Town services
- Construction of new Bus station building at Adoor
- Construction of inspection ramp at Kollam
- Construction of four bay garage at Kozhikode
- Concreting Bus station yard at Attingal, Kollam and Vaikom
- Concreting garage yard at Peroorkada, Kasaragode, Kannur and concreting yard in front of the mini garage at East Fort, Thiruvananthapuram

10.36 The efficiency and productivity of KSRTC is mainly depends on the age and effective utilisation of its fleets and staff productivity. Age profile of fleets is shown in the Table 10.5

Table 10.5
Age Profile of Fleets of KSRTC

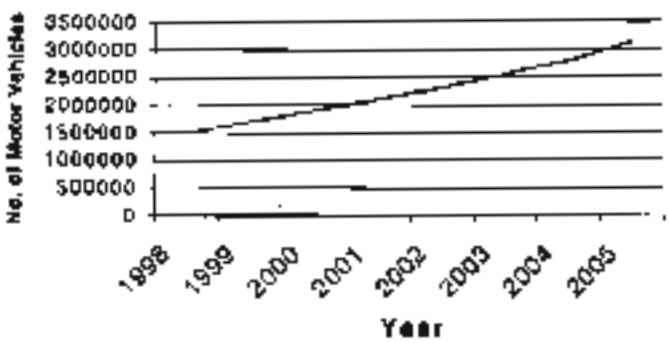
(Nos)

Age (years)	Ashok Leyland	Tata	Others	Total
0.1	174	226	100	500
1-2	441	120	74	635
2-3	110	30	26	166
3-4	26	10	2	38
4-5	332	160	0	492
5-6	310	204	0	514
6-7	210	115	0	394
7-8	207	187	0	394
8-9	271	176	0	447
9-10	319	65	0	384
10+	584	349	0	933
Total	**2984**	**1642**	**202**	**4828**

Source: KSRTC

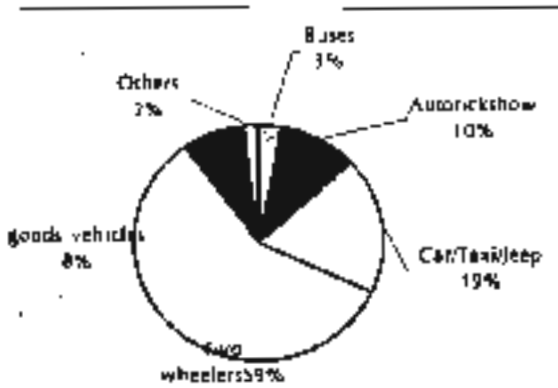
Motor Vehicle Population

10.37 The growth of vehicle population in Kerala is 11.80 percent. The growth of Motor Vehicle since 1998 - 99 is shown in figure 10.2



Growth of Motor Vehicles in Kerala since 1998-99
Fig 10.2

10.38 The number of Motor Vehicles having valid registrations as on 31.3.2005 is 31,22,082 as against 27,92,074 in the previous year. The newly registered vehicles comes to 3,29,508 (10.55%) during 2004 05. In the case of personal vehicles a faster growth rate has been recorded over the previous year. The percentage of category wise motor vehicles registered during 2004-05 is shown in figure 10.3



Motor Vehicles Registered in Kerala during 2004-05 (category wise)
fig. 10.3

10.39 The district wise details of vehicles newly registered, vehicles with valid registration and growth of vehicles in Kerala are given in appendices 10.7 and 10.8. An analysis of growth of Motor Vehicles and its impact on local development in the State during the last seven years reveals that vehicle population has increased from 1.51 lakh in 1998 to 31.22 lakh in 2005, while only marginal increase has been achieved in the augmentation of road length

10.40 About 904 vehicles are newly added to vehicle population every day. Of this 610 are two wheelers. The details of category wise growth of motor vehicles in Kerala since 1998 are given in Appendix 10.9. The highest vehicle population was recorded in the Ernakulam district with 5,25,204 vehicles (16.82%) followed by Thiruvananthapuram with 4,33,468 (13.88%). Wayanad has the lowest number of 39047 (1.25%) vehicles. The tremendous increase in the volume of road traffic in recent years has caused increase of road accidents.

Road Accidents

10.41 Eventhough several initiatives have been taken by the police to enforce road discipline and enforcement of rules by Motor Vehicle Department, road accidents are increasing. The increasing trend of traffic accidents is a matter of great concern. Kerala State ranks third position in the country, next only to Maharastra and Tamil Nadu. The accident rate of Kerala is the highest in the country with 15 accidents per 1000 vehicles ,which is twice that of all India average. Even bigger States like Uttar Pradesh, Madhya Pradesh, Gujarat, Rajastan and Andhra Pradesh reports far less number of accidents compared to Kerala. Statistics on road accidents per day in the State during 2003-04 and 2004-05 are shown in Table 10.6

Table 10.6
Statistics of Road Accidents per day

Description	Year	
	2003-04	2004-05
No. of Accidents	110	113
No. of persons killed/injured	137	140
Accidents involving Two Wheelers	36	55

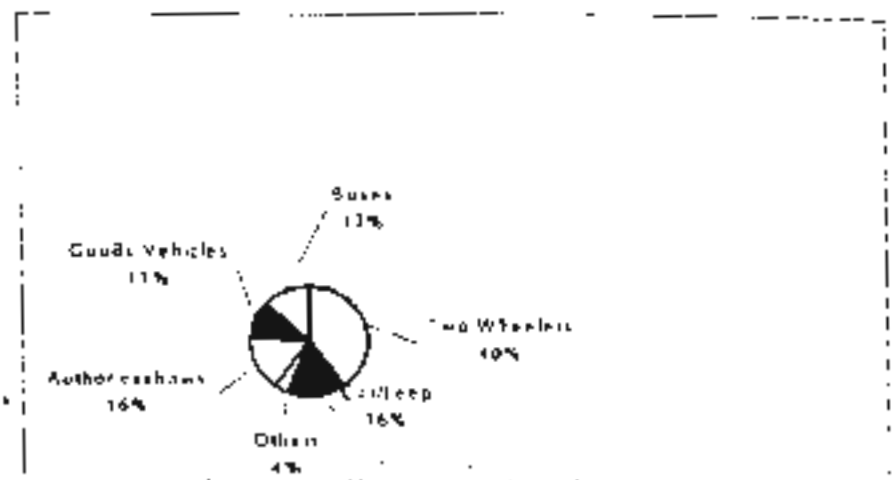
Source : NATPAC

10.42 During 2004-05, Kerala registered 41,220 accidents (113 per day) in which 3059 persons were killed and 51225 persons were injured. Accidents due to KSRTC buses were 1332 (4 per day) and private buses were 4881. The number of two wheelers has increased from 5 lakhs in 1995 to 16 lakhs in 2005, recording average annual growth rate of 22 percent. Similarly the number of traffic crashes involving two wheelers have grown from 7668 in 1999 to 14230 in 2004. Bike accidents account for nearly 30 % of the total accidents reported in the State.

10.43 According to records, almost 95 % of accidents occurred due to the fault of drivers of the motor vehicles. The rest of the accidents are caused due to various other reasons like traffic, bad weather, poor road condition, fault of pedestrian's etc. Road accidents are caused due to one or more of the following reasons.

- Rash driving and unhealthy competition of vehicles
- Defective eye sight of drivers
- Poor surface condition, badly maintained side shoulders
- Uncontrolled access streets and unmanned junctions
- Least care regard to traffic rules
- Haphazard parking on road side
- Location of bus stops close to junctions
- Lack of pedestrian crossing, walkway facilities etc
- Encroachment/dumping of materials on the road

10.44 The percentage of category wise and vehicle wise accidents in Kerala during 2004-05 is shown in figure 10.5



Vehicle wise accidents in Kerala during 2004-05

Fig 10.5

Transport Finance

10.45 Kerala State Transport Development Finance Corporation (KTDFC) render financial services for development of transport services sector. The main objective of the Corporation is to finance through hypothecation of vehicles required or used by persons, firms, companies particularly KSRTC and for building up viable infrastructural facilities of KSRTC and also to assist transport undertakings within the State of Kerala with long, medium and short term loans. The company is also granting loans to small Road Transport Operators (SRTO) for the purchase of commercial vehicles.

10.46 During 2004-05, Rs 3487.89 lakhs has been mobilised as Fixed Deposit The details of loan sanctioned to various agencies/organisation and individuals are shown in Table 10.7

Table 10.7

Details of loan sanctioned to various agencies/Institutions (as on 30.9.2005)

Sl.No	Name of Agency/Institution	Amount (Rs. lakhs)
1	KSRTC	20534.50
2	SRTO (Small Road Transport Operators)	2935.11
3	Kerala Ceramics Ltd	4.46
4	Qetcos	4.94
5	Bharath Sevak Samaj	4.68
6	Hamex	4.50
7	Captex	7.40
8	Housing Loan	1155.33
9	Personal Loan	48.30
10	Loans for purchase of vehicles	695.49
11	Loans for purchase of new vehicles under officers scheme	88.54

Source :KTDFC

Railways

10.47 The Indian Railway system is the second largest network in the World under a single management. It provides one of the cheapest means of transport in India. The net work runs

multi gauge operations extending 63,122 route Kms with passenger traffic of 515 billion and freight traffic of about 353 19 billion in 2003-04. The railway Network runs gauge operations extending over 1148 route Km in Kerala of which 111.14 Km are meter gauge. The route length has remained stagnant in the State for a number of years. Thiruvananthapuram, Palghat and Madurai divisions of Southern Railway control the railway operations in the State.

10.48 The total route length of Railways in Thriuvananthapuram Division is 494 km. Railway Electrification works between Ernakulam Junction to Trivandrum Junction via Kottayam and Alleppey is in progress The sub sections namely Ernakulam – Kottayam and Ernakulam – Alleppey – Kayamkulam have been commissioned recently Electrification works upto Trivandrum is expected to be completed by March 2006

Table 10.8
Performance of Railway Division, Trivandrum during 2004-05

Sl.No	Details	
1	Broad Gauge	493 KM
	Metre Gauge	1 KM
2	No. of stations	72
3	Passengers	
	Originating	631 lakhs
	Terminating	571 lakhs
	Goods Traffic	
	Originating	110508 in units
	Terminating	172528 in units
4	Passenger Earnings	Rs. 26153 lakhs
5	Goods Traffic Earnings	Rs. 8274 lakhs
6	Trains operated	42174 (Nos)
7	New Trains	2 (Nos)

Source: Thiruvananthapuram Railway Division

10.49 Thiruvananthapuram Division is the second highest earning Division of Southern Railway Table 10.9 shows the comparative earnings during 2002-03, 2003-04 and 2004-05

Table 10.9
Earning of Thiruvananthapuram Railway Division from 2002-03 to 2004-05

(Amount Rs crores)

Year	Passenger Earnings	Goods Traffic Earnings	Other Earnings	Total
2002-03	224.51	163.67	32 44	420.62
2003-04	245 54	126.93	28 85	401 32
2004-05	261 53	82.74	30.94	375.21

Source: Thiruvananthapuram Railway division

10.50 This Division is basically a passenger oriented Division with trains run from Terminals at Trivandrum central, Ernakulam and Nagarcoil to all parts of the country. Fifty-three numbers of Express/Mail trains and fifty-eight numbers of passenger trains are being operated by the Division and carry 2 lakh Passengers daily. An amount of Rs. 2 94 crores has been spent by the Division for passenger amenities in 2004 05. The goods traffic handled in the Division are Petroleum products, fertilizer, containers and coal. From the Cochin Refineries situated at

Irumpanam, Petroleum Products like petrol, diesel, Kerosene, naphtha etc, are despatched to destinations in Kerala, Tamilnadu and Karnataka. FACT at Ambalamugal loads fertiliser consignments to destinations in Kerala, Tamilnadu and Karnataka regularly. FACT at Kalamassery also despatches fertiliser rakes to Andhra Pardesh and Karnataka periodically. During 2004-05, the Division has transported about 1.987 million tonnes of freight.

10.51 Total route length of railways in Madurai Divisions is 1114.14 Km. Details of performance of Maduari division during 2004-05 is given in Table 10.10

Table 10.10
Performance of Railway Division, Madurai during 2004-05

Sl.No	Details	
1	Total railway route length in Kerala	111.14 km
2	Length of Broad gauge (Km)	Nil
3	Length of Meter gauge	111.14 km
4	No. of railway routes with distance of each route in Kerala under the Division a. Thenkasi - Quilion Section SI route b. Pollachi - Palaghat section S2 route	 80.25 Km 30.89 Km
5	Number of railway stations in each route (Nos) a. Tenkasi - Quilon Section: SI route: b. Pollachi Palghat Section, S2 route:	15 stations 4 station

Source: Madurai Railway Division

Kochin Metro

10.52 Government proposes to introduce a metro rail system in Kochi City and its suburbs. This scheme is identified for implementation under Fast Track Project.

WATER TRANSPORT

Port Sector

National Scenario

10.53 India has a coastline of 5600 km with 12 major and 185 minor / intermediate ports. The major ports are developed and managed by the respective Port Trust under the control of Government of India and the responsibility of minor ports rest with the respective State Governments.

10.54 Mumbai, Jawaharlal Nehru at Nhava sheva, Kandla, Mormugao, New Mangalore and Cochin on the West Coast and Kolkata/Haldia, Paradip, Visakhapatnam, Chennai, Ennore and Tuticorin in the east coast are the major ports

10.55 The cargo handling capacity of Indian ports increased from 20 million tonnes (MT) in 1951 to 390 MT in March 2004. At the beginning of the Tenth plan, the capacity of major ports was about 344 MT. It is targeted to increase by 470 MT at the end of the Tenth plan. The aggregate capacity in the major ports is in excess of the traffic handled and capacity is no longer a constraint in major ports

10.56 The number of cargo vessels handled at major ports is about 16000 per annum. The traffic handled by major ports pertains to liquid cargo (39%) followed by dry cargo (40%) and the remaining is general cargo. Container traffic at ports is increasing and around 3.90 million Twenty Foot Equivalent Units (TEUs) were handled during 2003-04 at all major ports. About 70 percent of the cargo handled at these ports is for overseas trade, which constituted 40% exports.

10.57 Sea trade accounts for 68% of the value of Indian foreign trade and 90% of its volume. At present maritime trade is growing at a rate of two to three percent annually. Containerised cargo grow at a rate of 20%.

10.58 In order to improve efficiency, productivity and quality of services as well as to bring in competitiveness in port services, the port sector has been thrown open to private sector participation in 1996. This is in accordance with the general policy of liberalisation/globalization of the economy

10.59 The strategy adopted was to lease out terminals to private operators on BOT (Build - operate for 30 years and transfer) basis or joint ventures between Indian port and foreign port. Privatization in the sector includes building and operating new ports, managing extending ports/or services in existing ports and construction contracts for upgradation of capacity at major ports. Several Indian and International players have invested nearly Rs. 12000 crores – either in privatization or in green field projects. The total amount of foreign direct investment in ports over the last four years is estimated at Euro 1 billion

10.60 The first results of these initiatives are already visible, i.e, the turn around time for ships has already dropped from 8.1 days in 1990-91 to 3.7 days in 2001-02. The turn around time at JNPT Mumbai – privately operated terminal run by P & O Australia – is just 16 hours as compared to 30 hours at the government run terminal.

10.61 Tenth plan followed a strategy to enhance capacity and improve productivity of major ports with focus on measures aimed at modernisation, rendering cost effective services, enhancement of service, quality, commercialisation through corporatisation and increased private sector participation.

10.62 So far 13 private sector projects have been operationalised with an investment of Rs. 2453 crore and having capacity addition of 45 MTPA . There are 24 other projects with investment of Rs. 5407 crore and capacity addition of 84 MTPA which are under various stages of implementation.

Future Trend

10.63 Traffic at ports is expected to rise from 390 million tonnes per year at present to 850 MT per annum by 2009-10 and 1275 MT by 2020. The projected capacity addition during the Xth plan (2002-07) is 160 MT (including 56.60 MT from the ongoing projects / schemes from previous plan). The overall investment required in the ports sector has been estimated to be Euro 15-20 million, of which nearly 70% is proposed to be attracted from the private sector

Kerala Ports Sector

10.64 Along its coastal line of 585 kms Kerala has one major port at Cochi and 17 minor/ intermediate ports.

Cochin Port

10.65 It is the only major port in Kerala. It is an ISO 9001-2000 Port. A study shows that 97% of the total volume of traffic from the Cochin Port is accounted by Kerala, though the hinter land of the port spreads to parts of Tamil Nadu and Karnataka States.

10.66 The number of container vessels called at Cochin Port decreased from 381 in 2003-04 to 314 in 2004 -05 which show a 17.6% decrease. The details of various type of vessels called in Cochin port are included in Appendix 10.21. The number of passenger vessels increased from 18 in 2003-04 to 20 in 2004-05 which showed an 11% increase. Similarly the number of other type vessels increased from 205 in 2003-04 to 285 during 2004-05.

Table No 10. 11

Details of cargo handled during 2005 through Kochi Port

Sl. No	Type of vessels	No. of ships		% variation increase (+) Decrease (-)	Net Registered Tonnage		%Variation increase (+) Decrease (-)
		2003-04	2004-05		2003-04	2004-05	
1	Container	381	314	-17.6	2040622	1750841	-14.2
2	Break Bulk	215	185	-14.0	363160	473816	30.5
3	Dry Bulk	50	48	-4.0	390937	493425	26.2
4	Liquid Bulk	264	274	3.8	4777028	5009877	4.9
5	Passenger	18	20	11.1	268146	192002	-28.4
6	Others	205	285	39.0	104016	256246	146.4
	Total	**1133**	**1126**	**-0.6**	**7943909**	**8176207**	**2.9**

Source: Cochin Port Trust

Vallarpadam International Container Transhipment Terminal

10.67 The Prime Minister laid the foundation stone for the Vallarpadam International Container Transhipment Terminal on 16.12.05. Completion of the prestigious project would make the Kochi Port as a major hub port in the Indian Ocean region. The emergence of the hub port would strategically help to bring in a check and balance in the port operations i.e. there would not be over dependence on a single commodity or specified class of service at the port. Almost 50% of the World trade today are carried in containers. Cargo that are not able to be transported in containers previously (such as Steel and Iron products or bagged goods in large quantities) are no longer so.

10.68 At present containers from the Indian sub continent are being transshipped to Colombo. The land at Vallarpadam is already found technically suitable for developing a container transhipment terminal . This has to be developed so that Mother Vessels come to Kochi and consolidate and carry the containers from other ports of India to the outside World.

10.69 As per the Asian Development Bank (ADB) projection for G.D.P growth, traffic through Kochi Port could be over two million TEUs by 2012 and by 2022 it is projected to go up to 3.3 million TEUs.

10.70 The International Container Transhipment Terminal brings India's maritime trade a tremendous savings. Besides, the project will ensure rapid development of the State that has lagged in industralisation and generate employment and facilitate investment to the tune of

Rs. 7500 crores. Such a development would have a cascading effect on the industrial, economic, commercial and social growth of the State. The development in Kochi would generate around one lakh employment opportunities directly and indirectly.

Vizhinjam Deep Water International Container Transhipment Terminal

10.71 Government have decided to develop the Vizhinjam Container Transhipment Terminal with public private partnership. This scheme has already been identified for Fast Track Implementation. Development of Infrastructure facilities like land acquisition and development of rail & road connectivity, water supply, power supply, dredging sanitation etc. for the development of Vizhinjam International Transhipment Terminal will be carried out by Government through Vizhinjam International Seaport Limited.

10.72 The proximity to International Sea routes, a natural water depth of 20 meters, (the criterion for an international port) minimum dredging and the lack of any potential ecological impact make Vizhinjam a natural choice for constructing the country's first international transhipment terminal. It is estimated that the absence of a transhipment terminal costs the nation around Rs. 1000 crores / Annum

10.73 The construction of a Terminal at Vizhinjam will increase the country's proximity to the international sea route which links Europe, Persian Gulf and the Far East. Vizhinjam Deep Water Container Transhipment Terminal when completed would be able to cater to container vessels up to 8000 TEUs in the initial phase and 10000 to 12000 TEUs sizes in the subsequent phases

Box 10.7

Strategic Advantage of Vizhinjam

- Availability of 20 m contour within a nautical mile off the cost
- Minimal Littoral drift along the cost and therefore hardly any maintenance dredging
- Proximity to national/regional road, rail net work
- Immediacy to international shipping route connecting Persian gulf, Far East and Australia
- Nestled in the tip of Thiruvananthapuram, the city that has an international airport, human resources and social infrastructure

Non Major Ports

10.74 The Non Major ports are under the direct control of State Government. The Government agencies involved in the development of ports in the State are Port Department, Harbour Engineering Department, Hydrographic Survey Wing and Kerala State Maritime Development Corporation

BOX 10.8

Ports in Kerala

Major port	- Cochin
Intermediate Ports	- Neendakara, Alappuzha, Beypore
Minor Ports	- Vizhinjam, Valiathura, Thankasseri Munambam, Ponnani, Vadakara, Thalasseri, Kannur, Azhikkal, Kasaragod
Minor ports yet to start Functioning	- Manjeswaram, Neeleswaram, Kayamkulam, Manakkodam

Kerala Port Policy

10.75 The policy on Ports and Shipping Development announced by the Government of Kerala envisages private participation in building up a wide variety of infrastructure for ports and shipping . The Government will encourage development of special ports and berths for handling petrol and oil, transhipment ports, multi purpose jetties and passenger terminal by private agencies.

10.76 The policy also promises promotion of facilities for passenger ships, roll on and roll off vessels, inland terminals and amusement parks besides port based industries including ship yards and dry docks. The tax breaks promised in the industrial policy will be extended for such ventures. Private agencies will be allowed to undertake development of state highways and bridges to minor ports and collect toll to recover their investment. Leasing of existing ports and provision of various services such as loading and pilotage and navigation will also be permitted.

10.77 The government will take steps to encourage goods transport through waterways to reduce congestion in highways and costs. A Maritime University is proposed to set up for ensuring supply of trained man power

BOX 10. 9

Objectives of the Government of Kerala Port Policy

1. Kerala shall target a place among the top three maritime States of the country in terms of cargo handled in the next ten years, that is, by the year 2014
2. Facilitate achievement of optimal multi-model transport and logistic chain outcomes by establishing an efficient and commercially viable transport system. This will be achieved by carrying out co-ordinated development of multi –purpose ports, transhipment bunks, inland waterways, coastal shipping inland terminal cargo handling and storage facilities, railways and road linkages
3. Promote port based and Maritime Industries
4. Ensure protection of environment and coastal zones
5. Promote establishment of passenger terminals and marinas

10.78 Cargo handling was mainly confined to Kozhikode & Beypore port except a small volume of cargo in Vizhinjam. Commodity wise details are shown in Appendix 10.22 . The number of steamers and sailing vessels that called at non – major ports were 373 with a registered tonnage of 130065.73. Details are furnished in Appendix 10.23.

10.79 The activities of other ports are limited to registration and licensing of harbour crafts, maintenance of local light houses, display of water warning signals for sea rescue operation and collection of revenue. The registration of harbour crafts done during 2004-05 are shown in Appendix 10.24. The earning collected through port department during the year 2004-05 was Rs. 112.04 lakh. The details are furnished in appendix 10.25

Development of Beypore Cargo Harbour

10.80 The works of 100m Wharf and Transit shed completed. All works of 60 m Wharf between old and new wharves were completed except wearing coat and Filter media at back. Work of filter media started, dredging was done for about 8500 m3 and dredging in front of 100 m wharf is completed.

Development of Azheekal Cargo Harbour

10.81 The work of break water at Azheekal side has been reached upto 996 m including head and that at Mattool side reached upto 790 m out of 1150 m and 1070m respectively. Construction of approach road, weigh bridge installation, land acquisition and water supply works were completed. The work of Vizhinjam Port and Cargo Berth at Thangassery are progressing

Inland Water Transport

10.82 Inland Water Transport is the most fuel-efficient economic and environment friendly mode of transport among all other transport systems. India has about 14500 km of Inland waterways network comprising rivers, lakes and canals.

10.83 According to a recent study conducted by National Council for Applied Economic Research (NCAER), the per tonne km cost of transportation by inland waterways is Rs. 0.55, compared to Re. 1 by road .

10.84 The Inland Waterways Authority of India (IWAI) the autonomous body responsible for regulation and development of water ways, had declared three national waterways. N.W – 1 is Ganga – Bhagirathi – Hooghly river system from Allahabad to Haldia, covering a distance of 1629 kms, and passing through three States. U.P, Bihar and West Bengal. The N.W - 2 is on the Brahmaputhra river from Dhubri Sadiya covering 891 km,. passing through Assam and linking the North East region to the main ports of Calcutta and Haldia. It is also a major link to Bangladesh. The N.W 3 is the West Coast Canal from Kottapuram to Kollam, including Chambakara and Udoygamandal in Kerala consists of natural lakes, back waters, a river section and man-made canals.

10.85 Inland Water Transport has advantages over railways and roadways both in terms of cost and energy consumption in cargo transportation.

Inland Water Transport in Kerala

10.86 The government agencies engaged in the development of Inland Water Transport in the State are Coastal Shipping and Inland Navigation Department(CSIND), State Water Transport Department (SWTD)and Kerala State Inland Navigation Corporation(KSINC).

10.87 There are 41 navigable rivers in Kerala and total length of the Inland Waterways in the State is 1687 km. The transportation is mainly done with country craft passenger vessels.

10.88 The Inland canals play an important role in the economy of the State as they inter-connect the rivers on the banks of which are situated places of commercial and Industrial importance and also give a connection from interior places to the West Cost Canal System. The West cost Canal can be divided into four sections as below

Sl.No	Section	Km
1	Hosdurg to Kottappuram	324
2	Kottapuram – Kollam	168
3	Kollam - Kovalam	68
	Total	**560**

10.89 As part of a program for developing waterways by the central Government, length of 168 km of waterway from Kollam to Kottapuram of West Coast Canal including Udyogamandal and

Champakara canal was declared as National Water Way No. III. The Canal coming under National Waterway III are shown in Table 10.12.

Table No 10. 12
The details of National Waterway No. III

Sl.No	Sector/Section	Distance (Km)
1	Kottapuram - Kochi	00 - 30
2.	Kochi - Alappuzha	30 -92
3.	Alapuzha - Kollam	92 – 168
4	Udyogamandal	23
5	Champakara	14
	Total	205

Source: Irrigation Department

10.90 Three feeder canals in Kerala are selected for improvements as pilot projects based on the preliminary reports prepared by the irrigation Department of Kerala

1. Alappuzha - Kottayam Canal (23 km)
2. Alappuzha - Changanacherry Canal (28 km)
3. Kottayam - Vaikom Canal (42 km)

President's Mission Programme

10.91 His Excellency, the President of India in his address to the Honorable members of Kerala Legislative Assembly, suggested Ten Missions for the sustainable development of Kerala and one among them is the Development of 'Smart Waterways'. It is proposed to develop a major "Smart" water way net work from Thiruvananthapuram to Kasragod (650 km Network) navigable which in turn would promote transportation, commerce and tourism. The following specific proposals are under consideration for the development of "smart" water ways.

I. Making the West Coast Canal from Kovalam to Neeleswaram navigable with a bed width of 12 m and draft 1.50 m so that the canal can be used for tourism, transportation, fisheries and allied activities. The work is divided into

a. Development of T.S Canal from Kollam to Kovalam - 77.5km
b. Development of Kottappuram – Chettuva section of West Coast Canal - 53 km
c. Chettuva – Kozhikode – Vadakara section of West Coast Canal - 163 km
d. Opening up of 3 uncut portions of 34.20 kms between Vadakara and Valapattanam and developing Vadakara – Neeleswaram section of West Coast Canal - 143 kms

The missing links are

- Kattampally bridge - Vengali bridge (7.20 km)
- Peringathu - Ponnayam (10.30 km)
- Kadambur - Kakkad (16.70 km)

II Development and maintenance of prioritized feeder canals

III. Development of prioritized backwaters

- Ashtamudi Kayal
- Kayamkulam Kayal
- Vembanadu Kayal
- Chettuva Kayal
- Ponnani - Biyam Kayal
- Elanthoor back waters
- Valapatanam back waters
- Neeleswaram back waters
- Valiaparamba - Cheruvathoor back waters

10.92 For the preparation of projects, the waterways/ canals are divided into five categories and separate strategies are formulated for each category. The proposals are sub divided into "Waterway components" and "Tourism and conservation components". The executing agency for water components will be Water Resources department and the Tourism component will be executed by department of tourism in association with various agencies.

12th Finance Commission Award

10.93 Considering the importance of Inland Water Transport, the 12th Finance Commission has awarded a grant – in – aid of Rs. 225 crores for Inland Water Transport sector for the period 2005-2010. Out of this, an amount of Rs. 5625 lakh is earmarked during 2005-06. The main works proposed to be undertaken are as shown below. The project has been divided in two phases and it is in the initial stages of implementation

Phase I Programme

1. Deepening of the existing canal to a minimum depth of 1.7 m and a minimum width of 10 metres and with a vertical clearance of 5 m
2. Side protection of the existing waterway using pile and slab in the vicinity of towns and cities and random rubble packing in other areas wherever found necessary

Phase II programme

1. Construction of Boat Jetties and aprons
2. Reconstruction of bridges
3. Formation of canals in the uncut portion

Kerala Shipping and Inland Navigation Corporation Ltd

10.94 During 2004-05 the Corporation had completed construction of 6 steel boats and 5 fibre boats for State Water Transport Department. Construction of 5 fibre boats will be completed during 2005-06. With the opening of Goshree Bridges, income from Passenger Service collection from boats has become meager. The profit of the Corporation decreased from Rs. 11.75 lakhs in 2003-04 to Rs. 1.47 lakh in 2004-05(Appendix..10.26)

10.95 The number of scheduled trips decreased by 24% that is, from 43800 in 2003-04 to 32844 in 2004-05 and the gross route distance also decreased from 55260 km to 385899 km in 2004-05. But the volume of cargo carried increased from 623 ('000 tonnes) in 2003-04 to 848 ('000 tonnes) in 2004-05.

State Water Transport Department

10.96 State Water Transport Department operates passenger boats in the water logged areas of Alappuzha, Kollam, Kottayam, Ernakulam, Kannur and Kasaragod. The total revenue receipt

decreased from Rs. 530.38 lakh in 2003-04 to Rs. 448 lakh in 2004-05 and total revenue expenditure increased from Rs. 1304.70 lakh in 2003-04 to Rs. 1431 lakh in 2004-05. The loss of the State Water Transport Department increased from Rs 774.32 lakh to Rs 983 lakh. The loss is largely due to increase in the price of diesel and the increase in the price of spare parts. The number of boats in operation and number of trips on schedule remained the same in 2003-04 and 2004-05 (Appendix 10.26.).

10.97 The number of passengers carried decreased from 214 lakh in 2003-04 to 163.6 lakh in 2004-05. The number of employees increased from 960 in 2003-04 to 963 in 2004-05.

Air Transport

10.98 Kerala has three air ports at Thiruvananthapuram, Kozhikode and Kochi. Thiruvananthapuram and Kochi (Nedumbassery) are international airports. Air Transport plays a major role in the development of tourism, both domestic and international. During 2004-05, 37617 flights (15667 domestic and 21950 international) were operated from all the three airports together There is an increase of 5.05% percent over the last year. From the three airports, a total number of 3390697 passengers (1068303 domestic and 2322394 international) were carried during 2004-05. Details of flights operated during 2003-04 and 2004-05 by the three Airports are shown in Appendix.10. 27 (A), (B),and (C).

Kannur Airport

10.99 Government proposes to set up an Airport at Kannur with private participation. This scheme has already been identified for fast track implementation and is in the initial stages of implementation.

Budget Airline (Kerala Airlines)

10.100 On the basis of the suggestions of the Pravasi Bharatiya Divas, Government propose to set up a private airline to cater to the needs of the Non Resident Keralites. This scheme has already been identified for fast track implementation.

Cargo Traffic

10.101 Kerala State Industrial Enterprises Ltd runs two Air Cargo Complexes at Thiruvananthapuram and Kozhikode Airports. The company is the official export house for the promotion of exports as recognized by Government of India. This company acts as the virtual office of Agricultural and processed Food Products Export Development Authority (APEDA), Ministry of Commerce, Govt. of India, for the State of Kerala.

10.102 The cargo complexes achieved a turnover of Rs. 681.82 lakh in 2004-05, as against the turnover of Rs.571.13 lakh in 2003-04. During 2004-05, 13482 MT of import cargo and 25550 MT of export cargo were handled by the air cargo complexes managed by the company against 123179 MT of import cargo and 25545 MT of export cargo in the previous year. Trivandrum Air Cargo Terminal (TACT) is the only ISO 9002 Cargo Terminal in India. The details of Export and Import cargo are furnished in the Table 10.13.

Table 10.13

Details of Export and Import through Air Cargo Complexes at Thiruvananthapuram and Kozhikode during 2003-04 & 2004-05

Year	Export (MT)	Import (MT)	Value (Rs. lakhs)
2003-04	25545	12177	571.13
2004-05	25550	13482	681.32

10.103 The three sales emporia at Thiruvananthapuram, Kochi and Kozhikode together achieved a turnover of Rs. 377.27 lakhs as against Rs. 189.95 lakhs achieved in 2003-04.

Passport and Emigration

10.104 The Passport issuing Offices in the State are at Thiruvananthapuram, Kochi and Kozhikode. The three passport offices altogether received 5,25,341 passport applications during 2004-05 as against 4,97,814 during 2003-04. The number of passports issued increased from 4,47,552 in 2003-04 to 5,60,192 in 2004-05, reporting an increase of 25.17%. The passport office wise details of applications received and number of passports issued are shown in Appendix 10.28

10.105 The protector of Emigrates Thiruvananthapuram under the Ministry of Overseas Indian Affairs, Government of India issued emigration clearance to 21,385 emigrants as on 31.8.2005.

COMMUNICATIONS

Postal Service

10.106 Indian postal system is the largest in the World with a net work of about 1.56 lakh Post Offices spread all over the country. On an average, a post office serves an area of 7.66 sq.km and a population of 6282. The postal network consists of four categories of post offices namely, Head Post Offices, Sub Post Offices, Extra Departmental Sub Post Offices and Extra Departmental Branch Post Offices.

10.107 Mail processing is the central activity of the entire set up of postal operations and its modernisation is very crucial for both improving efficiency of the staff and speedy delivery of postal services

Telecommunication

10.108 Telecommunication is one of the prime support services needed for rapid growth and modernisation of the economy. The Telecommunication services in India have improved significantly since independence. On Ist October 2000, a Public Sector Undertaking viz., Bharat Sanchar Nigam Limited (BSNL) was formed to take over all the service providing functions of the erstwhile Department of Telecommunication Service (DTS).

10.109 Kerala Telecom circles serves the whole of Kerala State, the Union Territory of Lakshadweep and part of Union Territory of Pondicherry (Mahe). The Circle has 11 major Secondary Switching Areas (SSAs) and one minor Secondary Switching Area (SSA) of Lakshadweep. Out of 11 major Secondary Switching Areas (SSAs), four at (Trivandrum, Ernakulam, Kottayam and Trichur) are headed by Principal General Managers and 7 are headed by General Managers. Lakshadweep minor SSA is headed by a Telecom District Manager.

10.110 In Kerala, all the telephone exchanges were made automatic for the first time in the whole country, way back in 1990. In 1992 Kerala became the first state to provide Public Telephone facilities in all Panchayats Headquarters. Kerala is also the first state to provide Public Telephone in every village, by 1995.

10.111 Kerala has a telephone density of 114.3 per thousand population as on 30.9.2005. The rural telephone density is 100 per 1000 population and urban telephone density is 153 per 1000 population. The status of telecom sector in Kerala is given in box 10.10

Box 10.10
Status of Telecom Sector in Kerala as on 30.09.2005

No. of Telephone Exchanges	:	1218
Equipped capacity	:	4319958
Telephone density (9/2005)	:	114.3/1000 people
Telephone density (Rural)	:	100/ 1000 people
Telephone density (urban)	:	153/1000 people
No. of mobile connections		
1. Prepaid	:	636159
2. Post paid	:	196901
No. of connections proposed for 2005-06	:	1400000
No. of Internet connections as on 30.09.2005	:	233319

10.112 State has a modern telecom network spanning its length and breadth and comprises of state-of-art-Digital switches interconnected by reliable Optical Fibre/Microwave/Satellite media. The state is served by 1207 automatic exchanges, all of which are Digital electronic as on 30.9.2005. The total equipped capacity including WLL is 45.16 lakh lines and the number of telephone connections working including WLL is 36.50 lakh. Kerala Circle plans to provide 6.55 lakh connections in the basic telecom network during the current financial year. The Circle has the 2nd largest net work out of 24 territorial Circles in the country. As on 30.9.2005, there are 833060 Mobile connections out of which 636159 connections are prepaid and 196901 are postpaid.

10.113 Total Internet connections in the State is approximately 2.5 lakhs. Out of the major service providers BSNL has 2,00,000 dial up Internet users and 2200 broad band connections. Asianet alone has 20,000 cable internet connections. Agency wise mobile phone connections and Landline penetrations in Kerala is given in Table 10.14

Table 10.14
Mobile Phone and Land line penetration in Kerala

Sl. No	Agency	Connections (in Nos)
1	Idea Mobile	545406
2	BPL Cellular/Hutch	3700565
3	Bharati Cellular	3321226
4	BSNL	833089
5	Reliance	720719
6	Tata	135376
7	Land Line (BSNL)	3560000

Source: IT Department, Thiruvananthapuram

10.114 Internet Nodes are at present functioning at all 14 district headquarters and at Kavarathy in Lakshadweep Island. There is a total of 233319 internet customers as on 30/9/2005 of which 98768 are Dial up Sancharnet customers & 134551 are CLT based account less customers. 58 leased line customers are also available. Broad Band service has been introduced at all SSA HQs

and is being extended to other towns also progressively. As on 30.9.2005, there are 5952 connections.

10.115 The General features of Telecom infrastructure of Kerala are given in Box 10. 11

Box 10.11
Performance of BSNL

- 35.60 lakh landlines / 1.5 lakh WLL, 8 lakh Mobile
- Total customer base is 48.5 lakhs
- 2 lakh Dial up Internet users, 2200 broad band connections
- One among the 7 people have a BSNL connection
- Total investment – Rs 2,116 lakh during the last three years, Rs. 962 lakh is planned during 2005-06.
- Plan for the year - Target to provide 20.5 lakh connections (2 lakh landlines, 4.5 lakh WLL, 14 lakh Mobile) Broad Land connections 55,000
- 10% and 15% of country's outgoing and incoming cells are from/to Kerala

Source: IT Department, Thiruvananthapuram

URBAN DEVELOPMENT

10.116 The manifestation of Urban Development can be seen in two different processes at the Urban level. The major process through development intervention essentially meant upgrading and revolutionizing the means of production for creating wealth and to respond to changing need, living and consumption patterns. The concern of the state to provide basic needs to the deprived population in urban areas, lead to localised interventions that posed new challenges to political institutions and civil society organizations. These challenges also forced re-examination and redefinition of development in general and urban development in particular.

10.117 Urban development activities are spread widely both vertically among the three levels of government – centre, state and local and horizontally among different civil society organizations. Many of the urban development programmes and schemes that have been initiated and supported during the last half century, especially under the five year plans, required the setting up of separate agency or institution at the state or at the local level or both. The initiatives taken under each Five Year Plan is illustrated briefly in Table 10.15

Table 10.15
Focus of Five Year Plans and Urban Initiatives

Five Year Plans	Focus of Plans	Urban Measures
I Plan (1951-56)	Concern for housing in metropolitan cities. Curbing land speculation	Institution building like creation of Ministry and Works and Housing, Town and Country Planning and Housing Boards
II Plan (1956-61)	Master Plan Land aquisition and development	Financial Assistance to state and local bodies
III Plan (1961-66)	Master Plan State Capitals	Preparation of master Plan for Major cities Building of state Capitals Committee on Urban Land Policy
IV Plan (1969-74)	Urban Land Policy Financing of Urban Development Projects	Creation of HUDCO and Urban Development Authorities in metropolitan cities Launching of Environmental Improvement of Urban Slums (EIUS) scheme.
V Plan (1974-79)	Problems of Metropolitan cities Urban poverty alleviation	Launching of Integrated Urban Development Programme (IUDP) for large cities. Task Force on Small and Medium Towns Urban Land (Ceiling and Regulation) Act
VI Plan (1980-85)	Development of small and medium towns Urban Poverty Alleviation	Launching of Integrated Development of Small and Medium Towns scheme. Continuation of EIUS scheme and Low Cost Sanitation scheme for weaker sections
VII Plan (1985-90)	Urban poverty alleviation Urban Basic Services in backward towns	Launching of Urban Basic Services (UBS) Scheme Setting up of National Housing Bank (NHB) National Commission on Urbanisation
VIII Plan (1992-97)	Employment generation Urban Basic Services Strengthening of Urban Local Bodies (ULBs)	Launching of Nehru Rozgar Yojana (NRY) and Urban Basic Services for the Poor schemes (UBSP) Passing of Constitution Seventy-fourth Amendment Act, 1992 Integrated Urban Poverty Eradication Programme (IUPEP)

IX Plan (1997-2002)	People-oriented participative planning Special Action Plan for social infrastructure Decentralize the responsibility to ULBs	Housing and Habitat Policy (Implementation of Agenda 21) Effective partnership of the government and non-government agencies
X Plan (2002-2007)	Strengthen ULBs. Development of cities Emphasis upon the weaker sections	External Assistance Involvement of Private Sector Institutional Market Finance to augment resources

Source: Urban Development and New Localism-Sudha Mohan

10.118 The Urbanisation process involves transformation or rural characteristics of people, their activities and their settlements to urban ones. Urbanization is a world-wide phenomena and urban population is growing at a faster rate than the average rate of growth of population. It is a continuous process. Although India is not a highly urbanized country there has been rapid growth of towns and cities during the last 40 years. The 2001 Census, reveals that urbanisation has increased to 31.13% in 2001 as compared to 26% in 1991 and 16% in 1951. Urbanisation is expected to touch the mark of more than 40% in 2021. Thirty-five cites in the country have crossed a population of over one million.

10.119 According to 2001 census, 25.96% of Kerala Population live in the urban areas, of which 62.75% live in Coporation and Municipal areas. The Urban Population of Kerala has increased from 18 lakhs in 1951 to 83 lakhs in 2001, showing an increase of 21.68%.

BOX 10.12

Urbanisation – Major Characteristics

- Urbanisation is a movement away from tradition towards the direction of modernity.
- Urbanisation is a shift of economy from agrarian to industrial.
- Urbanisation is a change of life style from informal to formal
- Urbanisation is a sign of material well-being, in terms of the physical comforts, which it promises to offer or actually offers.
- Urbanisation is a change of sociological scale from the 'little community' to the 'mass society'
- Urbanisation is a change of human relations from deeply intimate and personal to highly segmental and impersonal.
- Urbanisation is a change of use of tools of production from the manual to the mechanical.
- Urbanisation is a change of opportunities from the limited and somewhat boringly placed to almost infinite and thrillingly exotic.
- Urbanisation is a change of speed from the slow and steady pace of walking to "fast and Spurty" automobile locomotion.
- Urbanisation is what thrives on the two principles of 'pull'-attracts rural population by allurement facilities and 'push'- migration from out of the villages due to poverty, unemployment and under-employment.

Source : Urban Development and Management, S.L.Goel & S.S.Dhaliwal

10.120 The urban system in Kerala comprises of 5 Municipal Corporations, 53 Municipalities and 40 Urban agglomerations. Urbanisation trend in the state shows slow progress and it is presented in Table 10.16. The number of urban agglomerations /towns have increased from 21 in 1901 to 98 in 2001, but the change from 1991 to 2001 is only marginal.

Table No. 10. 16
Trends in Urbanization of Kerala 1901-2001

Sl.No.	Census Year	Total number of UAs/Towns	Total Population (in crores)	Total Urban Population (in crores)	Percentages of Urban Population	Decinial growth (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	1901	21	0.64	0.04	7.11	
2	1911	27	0.71	0.05	7.34	+15.44
3	1921	44	0.78	0.07	8.73	+29.78
4	1931	53	0.95	0.09	9.64	+34.58
5	1941	62	1.10	0.12	10.84	+30.47
6	1951	94	1.35	0.18	13.48	+52.72
7	1961	92	1.69	0.25	15.11	+39.89
8	1971	88	2.13	0.35	16.24	+35.72
9	1981	85	2.55	0.48	18.74	+37.64
10	1991	109	2.91	0.77	26.39	+60.97
11	2001	98	3.18	0.83	25.96	+7.64

Source: Census 2001 Government of India, New Delhi

10.121 The share of urban population in Kerala increased from 7.11% in 1901 to 26.39% in 1991, but then declined to 25.96% in 2001. Urban population growth is due to the increase in number of urban areas and urbanisation in the fringe areas.

10.122 Kerala has three regions, such as Northern, Central and Southern, and these regions have city corporaions as their hub. It is interesting to note that all the sectors of the economy are functioning in all the corporation areas. Moreover, all the corporations are linked with proper transportation network, which strengthen resource mobilisation. The three major corporations, such as, Thiruvananthapuram, Kochi, and Kozhikode have satellite towns and are functioning as nodel points for development. These satellite towns not only ease the pressure of the corporations, but also provide functional links between the rural and urban areas.

10.123 Kerala has peculiar functional characteristic features, compared to rest of the states in India. Housing and infrastructure facilities are spread across the state. Almost infrastructure facilities, which are functioning in the urban system, have spread over the rural system too. Therefore, the entire rural system of the state excluding interior hill track areas can be considered as "rurban areas" due to its functional characteristic features.

10.124 Urban infrastructure and civil amenities in cites will be a key factor behind the ultimate success and growth of any city in the next five to ten years. There are many cities which will have to devote a lot of time and energy for improving urban infrastructure and civic amenities.

Box 10.13
Comparative Advantages Urban Vs Rural

Urban

- Domestic services: piped water, electricity, telecommunication and sanitation.
- Primary or localized services: shops, dispensaries and play grounds.
- Secondary services: schools, police stations, railways, fire-fighting services and hospitals which need not be local but must be readily accessible when required.
- Tertiary services: airports, wholesale markets, referral Hospitals etc which are less frequently demanded

Rural

- Living space is much cheaper and more abundant
- The environment is much healthier
- Commuting times between work and home are much shorter

Source: Report of the Committee on India Vision 2020, Planning Commission, Government of India.

Integrated Development Plan

10.125 The integrated development approach aimed at making direct attack on urban poverty and employment by integrating the developmental efforts at spatial, functional and social levels, is indeed a very comprehensive model for promoting productivity, effective peoples participation, trade and commercial activities and improving the quality of life in the urban system.

10.126 An analysis of state wise patterns of urbanisation shows that there is a large variation in the levels of urbanisation in the different parts of the country. While in the most urbanized state, the urbanisation level was 38.7% of urban population to total population and in the least urbanized state, it was only 11.1%. Out of the 15 largest states in the country, the level of urbanisation in eight states was higher than the all India level as is evident from the Table 10.17 given below:

Table 10.17
State-wise Levels of Urbanisation, 1981-91

State	1991			1981		
	Total Population (Million)	Urban Population (Million)	% Urban to Total Population	Urban Population (Million)	% Urban to Total Population	Growth Rate 1981-91
Maharastra	78.94	30.54	38.69	21.99	35.03	03.34
Gujarat	41.31	14.25	35.50	10.60	31.12	03.00
Tamil Nadu	55.86	19.08	34.16	15.95	32.95	01.81
Karnataka	44.98	13.91	30.92	10.73	27.85	02.63
Punjab	20.28	05.99	29.54	04.65	27.70	02.56
W.Bengal	68.08	18.71	27.48	14.45	26.47	0.62
Andhra Pradesh	66.51	17.89	26.90	12.49	23.32	03.56
Kerala	29.10	07.68	26.39	04.77	18.74	04.88
All India *	846.3	217.61	25.71	159.46	23.34	03.16
Haryana	16.46	04.05	24.61	02.83	21.90	03.65
M.Pradesh	66.18	15.34	23.18	10.59	20.30	05.78
Rajastan	44.01	10.07	22.88	07.21	21.0	03.40

Uttar Pradesh	139.11	27.61	19.85	19.90	17.95	03.33
Orissa	31.66	04.23	13.36	03.11	11.79	03.12
Bihar	86.37	11.35	13.14	08.72	12.47	02.67
Assam	22.41	02.49	11.11	01.78	09.87	03.41

Source : Census 1991, GOI, New Delhi

10.127 While there has been no changes in the level of urbanisation of the states at the top and at the bottom of the scale of urbanisation, some of the states in the middle order have made significant progress. The urbanisation level of Andra Pradesh and Kerala has improved significantly. Kerala's growth rate of urban population was the highest, during 1981-91, followed by Madhya Pradesh and Andhra Pradesh.

Urban House holds

10.128 Housing and Urban Development Coporation (HUDCO) has been established to provide funds for metropolitan authorities, State Housing Boards and other urban institutions, to finance schemes for the construction of houses in urban areas by State and Central Governments. Despite, considerable private investment, remittances and efforts made over successive plan periods, the housing problem still persists. Given the growth of urban population and the unsustainable environment, the housing problem in urban areas may worsen unless concerted measures are taken. The plan allocation for urban development (clubbed with housing) is given in Table 10.18

Table 10.18
Plan Outlay in Housing and Urban Development

(Rupees in Million)

Plan	Total Outlay	Housing and urban development	Percentage share in the total
First Plan	20688	488	2.1
Second Plan	48000	1200	2.5
Third Plan	85765	1276	1.5
Fourth Plan	157788	2702	1.7
Fifth Plan	394262	11500	2.9
Sixth Plan	975000	24884	2.6
Seventh Plan	1800000	42295	2.3
Eighth Plan	4341000	105000	2.4
Ninth Plan	5412070	171190	3.2%
Tenth Plan	8931830	297190	3.3%

Source : Planning Commission, New Delhi

10.129 It is clear from the table that plan allocations for the urban sphere, despite the increased importance of the sector, have infact, declined significantly. Overall, the urban sector combined with housing sector was allotted to 3% of the total plan investment.

10.130 In Kerala 25.06% of the total house holds are in the urban system. Of the total urban housing stock, 64.90% are good, 29.40% are livable and 5.70% are dilapidated. Of the total number of houses, 78.80% are permanent, 14.48% are semi-permanent and 6.62% are temporary. Out of the total temporary houses, 52.79% are serviceable (57723) and 47.21% are non-serviceable (51624). As regards tendril status, 87.50% live in owned accommodation. The distribution of census houses accordingly to occupied, vacant, residence, residence-cum-other use, households, permanent, temporary etc. are given in Appendix 10.35 to 10.39.

10.131 The residential apartments have become a common phenomenon in the towns and cities where the spatial area is utilized to the maximum. One finds all sorts of amenities in the limited space which provide these luxuries within the reach of common man. As per the survey conducted by Department of Town and Country Planning during 2002, the residential apartments in Kerala with four stories and above are 652 spread over 11 districts. The total number of flats in these apartments is 15198, of which 57% are occupied by the direct owners, 31% are rented and 12% are vacant. Ernakulam district has the highest number of apartments (398) and flats (9597) followed by Thiruvananthapuram with 161 apartments and 3233 flats. Idukki, Wayanad and Malappuram districts do not have any apartments & flats. Details are given in Table 10.19.

Table 10.19

District wise Government and Private Apartments and Flats in Kerala (Nos)

Sl. No	District	Government	Private	Total Apartments	Total Flats	Average No of Flats per apartment
1	Thiruvananthapuram	91	70	161	3233	20
2	Kollam	0	2	2	49	25
3	Pathanamthitta	0	5	5	125	25
4	Alappuzha	0	1	1	36	36
5	Kottayam	0	15	15	366	24
6	Idukki	0	0	0	0	0
7	Ernakulam	133	265	398	9597	24
8	Thrissur	0	22	22	754	34
9	Palakkad	1	1	2	23	12
10	Malappuram	0	0	0	0	0
11	Kozhikkode	0	30	30	687	23
12	Wayanad	0	0	0	0	0
13	Kannur	9	4	13	276	21
14	Kasaragod	0	3	3	52	17
	State Total	**234**	**418**	**652**	**15198**	**23**

Source. Eco Stat News, August 2005, Dept. of Economics & Statistics, Government of Kerala.

Sewerage

10.132 Sanitation is a composite concept which involves waste disposal system, water supply, sewerage and prevention of environmental pollution. Most of our cities and towns are in insanitary conditions due to inadequate facilities of toilets and waste water disposal and solid waste management facilities. Sewerage treatment is essential to check environmental decay as well as to improve the living condition.

10.133 It is noted that the existing capacity of sewerage treatment system in all the Corporations in Kerala is inadequate and about 90% of the population does not have access to regular Municipal Sewerage. The increasing pollution in certain pockets of the cities is also a major indicator for lack of sewerage treatment.

10.134 At present, Thiruvananthapuram Corporation area alone is reasonably covered by the underground sewerage system. It is estimated that about 75000 houses have sewer connections in Thiruvananthapuram city. The parallel sewer main has already been completed and the ban on new connections is lifted. The under ground sewerage system in Kochi city covers only a very limited area. It is reported that there are about 1000 houses having sewer connections in Kochi.

10.135 The existing sewerage schemes, both in Thiruvananthapuram and Kochi cities need further expansion. Proper sewerage system is required in all other Corporations, and Class II towns and 1. The house hold type sewer connections and waste water status are presented in Appendix 10.40.

Other Facilities

10.136 A comparison of facilities of Urban Households in Kerala with All India is presented in Table 10.20 The table reveals that Kerala lags behind in providing drainage facilities but is ahead in providing a few other facilities, such as, toilet facilities, telephone connections, vehicles and banking services.

Table No. 10.20
Urban House Hold Details - Kerala and All India

Sl.No		Kerala		All India	
		Number	% to total urban households	Number	% to total urban house hold
1	2	3	4	5	6
1	House Holds	1652656	100.00	53692376	100.00
2	Conditions of Houses				
	Good	1071777	64.9	34446903	64.2
	Livable	486658	29.4	17312563	32.2
	Dilapidated	94221	5.7	1932910	3.6
3	Permanent Houses	1302681	78.8	42602219	79.3
4	Electrified Houses	1393823	84.3	47028369	87.6
5	Having bathroom facility	1304163	78.9	37802114	70.4
6	Toilet facility	1520747	92.0	39581440	73.7
7	Drainage	510564	30.9	41807664	77.9
8	Having Telephone	483606	29.3	12331107	23.0
9	Having Television	966336	58.5	34500360	64.3
10	Having Two Wheelers	294157	17.8	13262048	24.7
11	Having Four Wheelers	121394	7.3	3021406	5.6
12	Availing Banking Services	890735	53.9	26590693	49.5

Source: Census 2001, Government of India, New Delhi

Solid Waste Management

10.137 The implementation of Integrated Solid Waste Management System (ISWMS) is one of the basic responsibilities of the Local Self Government Institutions. Municipal Solid Waste is a heterogeneous mixture of organic matter, demolition and construction debris, street sweeping, garden wastes, discarded parts of vehicles and appliances, and residues from small scale industries. The rubbish includes combustibles like paper, wood, rubber, leather, plastic, cloth etc and non-combustible waste like metals, glass ceramics etc. In Kerala, the per capita generation of solid waste is estimated to be varying from 150-500 gm/day.

10.138 The solid waste management is an important obligatory function of the Urban Local Bodies. It is noted that at least half of the waste generated in most of the municipalities remained unattended. The practice of open air burning in residential areas and waste dumping yards, brings toxic emissions. The dense population and lack of available space are also severe constraints for disposal of garbage and other forms of waste.

10.139 Considering the requirement of implementing an integrated solid waste management system the following physical target are listed.

- Upgradation of existing SWM site in all the Urban Local Bodies.
- 15 to 20 Municipalities will undertake and complete remediation of existing SWM site.
- 15 to 20 Municipalities will implement SWM system with components such as segregated storage at source, prompt collection, secured transportation from storage to processing plant, installation of processing plant development and maintenance of sanitary land fill.
- Required number of micro enterprises will be set up in 15 to 20 Municipalities for segregated collection of Wastes from source and/ or maintaining the integrated SWM system in toto.
- SWM system will be established in 15 to 20 important Grama Panchayats.
- Awareness and action Research programmes will be undertaken through school eco-clubs the programme to reach about 700 schools in all the 14 districts.
- State level awareness campaign on SWM, sanitation and cleanliness through Governmental and non governmental organizations numbering about 200 .
- A number of micro enterprises will commence functioning based on waste to wealth principle

10.140 Government of Kerala has established the Clean Kerala Mission to facilitate, enable and motivate activities linked to environmental upgradation in general and solid waste management in particular. The aim is to work with a long term vision of a waste free, unpolluted, hygienic and clean Kerala, evolve a new healthy citizenship believing in zero waste concept, that a Reduction, Reuse, Recycle and Recover at least 80% of the waste generated and a society inclined to create wealth from waste Such a vision necessitates intensive campaign for a very high degree of human behavior change with a mission to develop attitudinal change among the people of Kerala, to achieve an overall hygienic environment, we need to institutionalize comprehensive scientific waste management systems, employ appropriate technology to eliminate waste disposal issues and motivate active participation of the community in waste management. Government has formulated an action plan known as 'Clean Kerala Project' in February 2003 and it is being implemented by the Clean Kerala Mission.

10.141 Government decided to extend partial financial support to those Municipalities who prepared Integrated Solid Waste Management Systems as per the directions of Clean Kerala Mission. According to the Municipal Solid Waste (Management and Handling' Rules 2000, the matter of identifying appropriate land for setting up solid waste processing plant and sanitary landfill site has been followed up. As a part of it, 49 ULBs possess land for SWM as on date and Varkala & Mavelikkara Municipalities have identified lands for solid waste management. 48 Municipalities have been oriented on various components for ISWM technologies. Further, training has been imparted to 38 Municipalities for the preparation of ISWM. The Municipalities have also been provided technical support to prepare project proposals for ISWM. The Mission support of Rs. 815.30 lakh has been given to 25 Municipalities & 4 Grama Panchayats for

implementing the projects. The Mission assisted Kollam Corporation by preparing a crisis management report for over coming the catastrophic condition of their solid waste dumping yard at Kureepuzha. The Mission helped Kottayam Municipality to speed up the finalization of SWM project report as part of Kottayam – Kumarakam Eco city programme and Kudumbashree Mission for training micro enterprise units formed under Clean Kerala Business Programme at 13 different ULBs.

10.142 A poster competition for the school, college students and the general public was conducted in order to get attention from the public with respect to SWM. A hand book on "Domestic Solid Waste Management" has been prepared with simple technologies for house hold waste management in order to make the people aware of the civic responsibility in managing the solid waste generated by them. Three exhibitions had been conducted at different regions of the state to popularize the '8R' principles of SWM and the eco-friendly technological options of treatment of solid waste. Steps had been taken to conduct intensive campaign of SWM through print and electronic media. A workshop on SWM has been conducted in October 2005 for programme coordinators of National Service Scheme in Higher Secondary Schools aiming at a habitual change of 55 lakhs school children towards waste management. During 2005-06, 10 urban local bodies and 10 grama Panchayats are being supported for implementation. The outlay earmarked to Clean Kerala Mission for undertaking various activities during 2005-06 is Rs. 500 lakh.

Involvement of Informal Sector in Waste Management

10.143 The limitations of technical and managerial solutions to waste management problems and their socio-cultural and economic aspects are now being recognized. The inextricable linkage of waste management, waste recycling and urban poverty are also being recognized. Accordingly, a positive approach was evolved towards the involvement of the urban poor as integral partners in SWM, considering the immense scope for participation based on waste to wealth concept. Women micro enterprise units have been formed and trained under Kudumbashree for house to house collection of waste in 15 Municipalities . At present, these units in selected wards of Kannur, Kozhikkode, Palakkad, Ottappalam, Thrissur, Aluva, Kochi, Thrippunithura, Alappuzha, Attingal and Thiruvananthapuram carry out source collection of waste. An experience of Kudumbashree initiatives for Door to Door collection of solid waste in five wards of Thiruvananthapuram Corporation. Each micro enterprise unit was formed by 15 women under the SJSRY programme at a total project cost of Rs. 4.5 lakh each. Each unit was provided with three tipper auto rickshaw at a total cost of Rs. 3.9 lakh and a working capital of Rs. 60,000 for items such as uniform, hand glows, etc. The project was launched in March 2003 and benefits about 75 women, who earn net income varing from Rs. 3000 – 6000 per month. Finding it as a sustainable micro enterprise venture, more urban local bodies have replicated this project.

URBAN DEVELOPMENT PROGRAMMES

10.144 The major Urban Development Programmes implemented at the state level are given below.

a. Integrated Development of Small and Medium Towns.

10.145 Integrated Development of Small and Medium Towns Programme was initiated in 1979-80 with the aim to slow down migration from rural areas and smaller towns to larger cities. The objective of this scheme is to restrict the growth of larger cites by developing small & medium towns through increased investment for the improvement of their economic and physical infrastructure, besides other essential facilities and services. The scheme has been covered in 45 urban local governments except Thiruvananthapuram and Kochi. This is a centrally sponsored scheme which is in the ratio 60:40 (Central: State).

10.146 Development of towns like Angamali, Koyilandi, Kalamasserry, Kunnamkulam, Mavelikkara and Thaliparamba has been undertaken during 2002-04 and the total amount released for this scheme including state share was Rs. 600.44 lakh (2002-03) and Rs. 680.01 lakh (2003-04). An amount of Rs. 375.02 lakh has been released during 2004-05 for the development of the towns Kanhangad, Payyannur, Chittoor, Thathamangalam, Paravoor, Kuthuparamba, Adoor, Perinthalmanna and Mattannur. The Budget allocation for the year 2005-06 including central share is Rs 1370 lakh of which Rs. 19 lakh has been released as on October 2005 and proposal to release Rs. 474.10 lakh has been forwarded to the Government. It is also proposed to consider Guruvayoor, Kottayam, Thrissur, Kayamkulam, Changanasserry, Vadakara, Malappuram, Thodupuzha, Manjeri and Palakkad towns for second assistance under the scheme, subject to the approval of Government of India.

10.147 The guidelines for implementing the Integrated Development of Small & Medium Town schemes were revised by Government of India in August 1995 and salient features of the revised scheme are:

- Schemes are implemented only in Towns with elected Local Bodies.
- Schemes are extended to towns having population up to 5 lakhs.
- State Governments are required to prepare State Urban Development Strategy Papers and identify towns for priority development along with comprehensive justification.
- The revised scheme provides for central grant for development of selected towns on a whole town development basis.
- Increase in the ceiling limits and change in the nature of budgetary support from soft loan to a grant.
- Reduction in the quantum of institutional finance loan component from 40% -70% to 20% - 40% of the project cost.

10.148 The revised financing pattern between Central, State & Financial institutions with respect to population for the development of Small & Medium Towns are shown in the Table 10. 21.

Table 10.21
Financing Pattern of the Scheme -
Integrated Development of Small & Medium Towns

Category of Town & Population	Project Cost (Rs. Lakh)	Central Assistance (Grant)	State Share (Grant)	Financial Institutions & Other sources (Loan)
A. (Less than 20000)	100	48%	32%	20%
B. (20000-50000)	100	45%	30%	25%
C. (50000-100000)	100	42%	29%	29%
D. (1 Lakh- 3 Lakh)	100	38%	26%	36%
E. (3 Lakh - 5 Lakh)	100	36%	24%	40%

Source Annual Report 2004-05, Ministry of Urban Development, Government of India

10.149 Existing schemes for infrastructure development in Mega cities & Integrated Development of Small and Medium Towns do not extend to the cities with population more than 5 lakh. The existing Accelerated Urban Water Supply Programme (AUWSP) does not cover towns with population of more than 20,000. There is a need to review and restructure the ongoing schemes to all cities / towns irrespective of population criterion. Under the proposed scheme, reform linked central assistance would be provided to all cities/Towns in the country for

infrastructural development including water supply, sewerage and setting up of desalination plants in coastal areas.

b. Modernization of Slaughter Houses

10.150 The main objectives of Modernization of Slaughter House scheme are to :

a). provide whole some and hygienic meat to consumers
b) eliminate environmental pollution around slaughter houses and meat cutters
c) eliminate avoidable sufferings of animals.

10.151 The scheme is financed between Central, State Governments and Urban Local Bodies in the ratio of 50:25:25. An amount of Rs. 19.93 lakhs has been released during 2004-05 as State Share. The budget provision for 2005-06 is Rs. 111 lakhs, of which Rs. 51.26 lakhs has been released to Kottayam Municipality.

10.152 Nine Municipalities namely Thiruvalla, Trippunithura, Irinjalakkuda, Muvattupuzha, Manjeri, Ankamali, Kannur, Malappuram and Kottayam and two Municipal Corporations; Thiruvananthapuram and Thrissur have been brought under the scheme. The schemes in Thrissur, Thiruvananthapuram, Trippunithura, Manjeri and Muvattupuzha have been completed and in Thiruvalla and Irinjalakkuda, they are nearing completion. Seven Municipalities have submitted proposal to Government of India for clearance and they are – Changanasseri, Pathanamthitta, Chalakkudi, Kottayam (revised), Perumbavoor, Malappuram (revised) and Kasaragod.

c. Capital City Development Project

10.153 The Capital City Development Project was introduced during 2003-04 to improve the quality of life in the capital city by strengthening and improving the critical infrastructure like roads, water supply augmentation, solid waste management, surface water drainage and city beautification. The major schemes under taken in the capital city development project are:

- Development of Vizhinjam Port Project for developing mother cargo transshipment terminal.
- Development of Thiruvananthapuram Airport to International standards.
- Supply of tools and equipments, purchase of tripper lorries, etc to Thiruvananthapuram Corporation for the development of ISWM.
- Restoration of Parvathy Puthanar Canal and Master Planning of Theerapatham area.
- 49 KM of city roads improvement
- A short term water supply project to provide water supply to water scarce area in Thiruvananthapuram.
- To modernize bus stand at Thampanoor and construct new terminal at Enchakkal by acquiring 5 acres of land.
- To prevent perennial floods, a surface water drainage programme to construct culverts.
- Althara Vellayambalam Road, Sanghumugham palace renovation, Puthirikandam maidan development and Kovalam area development under city beautification and parking area construction.
- To construct an aviary inside Thiruvananthapuram Zoo compound as an entertainment centre for bird lovers.
- Renovation of the existing Tagore Theatre Complex into a state of the Art Theatre Complex including additional seating capacity, land scaping etc.
- To construct a modern fish market at Pangode with all international standards like auction hall, storage space, parking space etc.

To develop an international convention centre complex at Akkulam to facilitate setting up of a state-of - art convention facility to tap business tourism including fastest growing Meeting. Incentives Conventions and Exhibitions (MICE) Tourism segment. The project is on a BOT format through Special Purpose Company with 26% State participation.

d. Development Authorities

Calicut Development Authority

10.154 Calicut Development Authority has undertaken eight schemes for implementation during 2004-05, which are included in the Master Plan/DTP scheme as approved by the State Government. The process and progress of major schemes up to November 2005 are:

- Construction of Basket-ball court at Jawahar Nagar Colony has been completed.
- Land acquisition for the construction of international convention centre has been finished.
- Project for the beautification of Kozhikkode beach is under Progress.

10.155 The Projects listed for implementation during 2005-06 are:

- construction of shopping centre and parking plaza in ward No. 3
- Construction of housing colony and shopping centre in ward No. 33
- Road widening and rehabilitation of shopping centres due to the development of Kallai road
- Construction of residential flats at Bilathikulam.
- Project for Energy Survey & Power Line Mapping.

Thiruvananthapuram Development Authority (TRIDA)

10.156 Under Capital Region Development Programme, 12 roads totaling to a distance of 42 Km have been taken up for improvements. Out of which 13.74 Km road works have been completed. Under CRDP, construction of under pass has been completed and opened for traffic on 1 Aug 2005. The construction of fly over at Bakery Junction is a component of the ongoing road project and its foundation work is in progress. The other road projects taken up by TRIDA like Vellayambalam –Thycaud & Bakery- Poojappura are under progress. Construction of "C" Block at Palayam is a project which envisages widening and improvement of roads development on the Connemera market including the rehabilitation of the existing traders. Another proposal for the development of a Mini bus station and other facilities such as banks, post offices, shopping complex etc at Kazhakuttam has also been taken up by TRIDA.

Greater Cochin Development Authority

10.157 Greater Cochin Development Authority has expended an amount of Rs. 80 lakh during 2004-05 and up to November 2005, the major programmes under taken are detailed below.

- Kalloor -Kadavanthara road work comprising 3.25 Km length and 22 meter width has been completed and opened for public transport.
- The yard development work to the eastern entry of South Railway Station is in progress.
- The roadwork starting from Panampilly Nagar to Ananthuruth road expected to be completed during 2005-06.
- Housing scheme for a total cost of Rs. 822 lakhs has been started at Gandhi Nagar. The scheme is on a BOT basis.
- Administrative sanction has been obtained from the Government for the Edathala Housing Scheme at a cost of Rs. 355 lakhs. The work has been tendered for implementation.

e. Urban Reforms Incentive Fund (URIF)

10.158 Urban Reforms Incentive Fund (URIF) is a 100% CSS created by Government of India to provide reform linked assistance to state so as to accelerate the process of urban reforms. The reforms suggested under URIF are

- Repeal of the Urban Land Ceiling and Regulation Act
- Rationalization of Stamp Duty not more than 5 per cent by the end of the Tenth Five Year Plan.
- Introduction of Computerized process of registration
- Reform of Property Tax for its effective implementation with collection efficiency of 85 per cent by the end of the Tenth Five-Year Plan.
- Leavy of reasonable user charges.
- Introduction of double entry system of accounting in Municipalities and Corporations.
- Reform of Rent Control Act.

10.159 The funds under URIF are untied and can be used for any development or housing or poverty alleviation project. The major components proposed for the scheme are:

- Housing
- Infrastructure helping the poor
- Construction of market
- Land for puramboke dwellers
- Modernization of Slaughter houses.

10 160 The state Government received Rs. 725 lakh under this scheme during 2003-04. During 2005-06, Rs. 1450 lakh has been provided in the state budget for implementing schemes under URIF.

f. Kerala Sustainable Urban Development Project (KSUDP)

10.161 The Kerala Sustainable Urban Development Project is proposed to be funded by the ADB in the sectors of (1) Water Supply, (2) Sewerage and Sanitation, (3) Urban Drainage (4) Solid Waste Management (5) Roads and Transportation and (6) Poverty Alleviation in the five Municipal Corporations of Thiruvananthapuram, Kollam, Kochi , Thrissur and Kozhikkode. The overall development goal of the project is to ensure sustainable growth and reduce poverty in the Municipal Corporations of Kerala. The development purpose of the project is to assist Local Self Governments to "Promote good urban management, develop and expand urban infrastructure to increase economic opportunities and to reduce vulnerability to environmental degradation and urban poverty". The projects are being evolved with technical assistance from ADB with the following components.

- Promote good governance in Municipal Management.
- Develop and expand urban infrastructure.
- Formulate support programmes for improving urban social services for the elderly, destitute, women and street children.

CHAPTER-11

EDUCATION

Literacy

Literacy is a basic step towards education, which is a process of life long learning and an entry point to the world of communication and information. The literacy rate of Kerala, which was 47.18% in 1951 almost doubled in 2001 census. According to 2001 census, the literacy rate for Kerala is 90.92 percent as against the all India literacy rate of 65.38 percent. Kerala's male literacy rate at 94.20 percent and female literacy rate at 87.86 percent are unique compared to the corresponding national figures of 75.85 percent and 54.16 percent respectively. Among the districts in Kerala, the highest literacy rate of 95.90 percent is in Kottayam and the lowest rate is in Palakkad at 84.31 percent. Details are given in Appendix-.11.1. A taluk-wise analysis reveals that literacy rate is the highest in Mallappally taluk (97.03%) of Pathanamthitta district and the lowest is in Nilamboor taluk (81.39%) of Malappuram district.

School Education

11.2 In Kerala, there are 12650 schools in 2005 comprising 6827 Lower Primary Schools, 3042 Upper Primary Schools and 2781 High Schools. Besides there are 483 CBSE schools, 78 ICSE schools, 26 Kendriya Vidyalaya and 13 Jawahar Navodaya Vidhyala. Relevant details are given in Appendices 11.2 to 11.4.

Table.11.1

Stage-wise Educational Infrastructure-2004& 05

Year	LP	UP	HS	Total
2004	6716	2964	2642	12322
2005	6827	3042	2781	12650

Source: Directorate of Public Instruction

11.3 It is evident from the Table-11.1 that there is a marginal growth in the number of schools from 12322 in 2004 to 12650 in 2005. Lower Primary Schools increased from 6716 to 6827, Upper Primary Schools from 2964 to 3042 and High Schools from 2642 to 2781. Thus altogether there is an increase of 328 schools compared to last year. Government schools decreased to 4497 in 2005 from 4498 in 2004, aided schools remained the same and unaided schools increased from 537 in 2004 to 866 in 2005. A detailed analysis of school education infrastructure would show that 2366 UP schools have LP sections, 813 High Schools have LP sections and 2171 High Schools have UP sections.

Box.11.1

In 2005, School Education infrastructure consisted of 6827 LP schools, 3042 UP schools and 2781 High Schools with 3179 LP sections in High schools/UP schools and 2171 UP sections in High schools.

11.4 The aided school system still keeps its strong presence in Kerala. Out of the total 12650 schools, 7287 are private aided schools (57.60 percent). Number of government schools is 4497

(35.55 percent) and that of unaided schools is 866 (6.85 percent). Again, of the total 6827 LP schools, Government sector schools constitute 37.33 percent, private aided sector 58.5 percent and the unaided sector 4.17 percent. Like this, of the total 3042 UP schools, 31.36 percent are in Government sector, 61.47 percent in private aided and rest 7.17 percent are in the private unaided sector. Of the total 2781 high schools, 35.78 percent are government, 51.17 percent are private aided and 13.05 percent are private unaided.

Facilities in Government Schools

11.5 The physical and basic facilities of schools in Kerala have improved a lot owing to the infrastructure created under Sarva Siksha Abhiyan (SSA) and the involvement of Local Governments under decentralised planning. The present status is that 97.6 percent of the schools have pucca buildings and 2.4 percent of the schools are in thatched sheds. Available statistics shows that 342 schools are functioning in rented buildings. Regarding basic facilities 94.71 percent of the government schools have drinking water facilities and 94.29 percent have Urinals/Latrines. Details are furnished in Appendices 11.5 &11.6.

Enrolment of students

11.6 Enrolment of students has been showing a declining trend for the last several years. This trend may be due to the peculiar demographic syndrom experiencing in Kerala. Kerala is becoming the land of 'ageing population'. Proportion of child population is decreasing and it has its reflection in the actual enrolment too. There is a fall in enrolment of students from 48.94 lakhs in 2004 to 48.42 lakhs in 2005 which shows a fall by 0.52 lakh students in the school education sector. Enrolment of students at Lower Primary Level increased to 18.47 lakh in 2005 from 18.28 lakh in 2004, at Upper Primary level decreased to 14.70 lakhs from 15.02 lakh and at High school level decreased to 15.25 lakh in 2005 from 15.64 lakh in 2004. Details of enrolment of students during 2005 is shown in Table 11.2

Box.11.2

There is a sharp fall in total enrolment of students from 57.17 lakhs in 1995 to 48.42 lakhs in 2005, showing a negative decadal growth rate.

Table 11.2
Enrolment of students in Schools-2004-05)

(in lakhs)

Sl. No	Category	Boys	Girls	Total	Percentage of girl students to total
1	L.P	9.32	9.15	18.47	49.54
2	U.P	7.58	7.12	14.70	48.44
3	High Schools	7.76	7.49	15.25	49.11
	Total	24.66	23.76	48.42	49.07

Source: Directorate of Public Instruction

11.7 Out of the 48.42 lakh enrolled students 38.15 percent are in Lower Primary, 30.37 percent are in Upper Primary and the remaining 31.48 percent are in High schools. Management-wise enrolment of students shows that 32.22 percent are in government sector, 60.89 percent are in private aided and 6.78 percent are in private unaided sector.

Management-wise and District wise details are given in Appendix.11.7 and Standard-wise/ Management-wise details are given in Appendix 11.8.

Box. 11.3

The Gross Enrolment Ratio (GER) at state level for 2004-05 for primary classes (I toV) is 98.11 and for middle classes(VI to VIII) it is 97.07. Whereas at national level the figure is 95.39 and 60.99 respectively.

Source: Education Division, Planning Commission.

Enrolment of girl students

11.8 Enrolment of girl students in schools constitute 49.07 percent of total enrolment. It is a clear indicator, of the position, which Kerala enjoys in the sphere of Girls Education. The percentage enrolment of girl students in LP,UP, and HS levels stood at 49.54, 48.44 and 49.11 respectively.

Box. 11.4

The girl students enrolment in schools in 2005 stood at 23.76 lakh and that of boy students is 24.56 per cent.

11.9 The number of girl students has declined by 0.65 lakh from 24.01 lakh during 2004 to 23.76 lakh during 2005. At lower primary level only, there is a nominal increase from last year ie from 9.05 lakh in 2004 to 9.15 lakh in 2005. At upper primary and at high school level, their number decreased. At UP level, from 7.26 lakh in 2004 to 7.12 lakh in 2005 and at H.S level from 7.7 lakh in 2004 to 7.49 lakh in 2005.

SC/ST Enrolment

11.10 The enrolment of SC/ST students at school level in 2005 stood at 5.79 lakh. It accounts for 11.95 per cent of the total school enrolment. The enrolment of SC students number 5.14 lakh and that of ST students 0.65 lakhs. Their percentage to total enrolled students is 10.60 and 1.34 respectively. Standard-wise strength of SC/ST students during 2004-05 is given in Appendix-11.9. The percentage of SC students to total students in LP section is 11.20, in UP section 10.37 and at HS level it is 10.13. Like this, for ST students the percentage in LP section is 1.69, in UP section 1.30 and in the HS section it is 0.95. Details are given in the Table-11.3.

Table 11.3

Enrolment of SC/ST Students at School level 2004-05

Section	General (Nos)	SC (Nos)	Percentage to Total	ST (Nos)	Percentage to Total
1	2	3	4	5	6
L.P	1847073	206880	11.20	31252	1.69
U.P	1470001	152448	10.37	19131	1.30
H.S	1524941	154492	10.13	14493	0.95
Total	**4842015**	**513820**	**10.60**	**64876**	**1.34**

Source: Directorate of Public Instruction

11.11 Management-wise data shows that, the SC/ST enrolment rate is 15.4 in Government schools, 11.11 in private aided and 3.21 in private unaided schools.

Drop-out rate

11.12 The drop-out rate is comparatively low in Kerala. During 2003-04, the drop out rate were 0.86 at LP level, 0.79 at UP level and 1.84 at HS level. District- wise analysis shows that Wayanad had the highest drop-out rate at LP and UP levels and at HS level Kasaragod had the highest dropout rate. Details are furnished in Appendix.11.10.

Sarva Shiksha Abhiyan (SSA)

11.13 SSA, the most ambitious educational project since independence, aims to provide useful and relevant elementary education for all children in the age group (6 to14) by 2010. The physical target and physical achievement of SSA during 2004-05 is given in the Table..11.4

Table-11.4
Physical Targets and Achievements 2004-05

Sl.No	Activity	Physical Target	Physical Achievements
1.	BRC	152	152
2.	CRC	1303	1303
3.	Civil Works	5762	--
4.	AIE/MGLC	13801	13801
5.	Free Text Books	1912382	1821349
6.	Innovative Activities	56	56
7.	IED	89147	41083
8.	Maintenance Grants	5254	5035
9.	Management &MIS	15	15
10	Research & Evaluation	14078	7301
1	School Grants	14078	13811
12	Teacher Grants	112562	117000
1	TLE (OBB)	823	809
1	Teacher Training	120015	100434
1	Community Mobilisation	34052	17050

Source: Annual Report 200-05, SSA

Box. 11.5
Achievement of SSA

1. The constitutional commitment on universalisation of elementary education has been fulfilled and that Kerala has enrolled all children in the age group 6-14 leaving a gap of 2077 children as out of school children.
2. The retention of all children enrolled is another objective of Sarva Shiksha Abhiyan, which has been fully achieved. Though Government of India target is 2007 for LP and 2010 for UP level, Kerala has already achieved the goal.
3. Another goal of Sarva Shiksha Abhiyan is removal of gender gaps and among social category groups in enrolment There is parity of girls enrolment compared to boys in Kerala. The enrolment of SC/ST children is almost in par with general category. There doesn't exist gender gap and enrolment among different social groups as evident from enrolment, retention and drop-out.
4. The quality education is the most important goal of Sarva Shiksha Abhiyan Mission in Kerala. One of the major indications of assessment is the improvement of learning levels of students. At the 8th standard level, the percentage of students passed out with 60 percent and above marks

increased from 40 in 2002-03 to 60 in 2004-05. The various strategies adopted to achieve learning levels are:

a Training and retraining of teachers
b Revision of curriculum
c Examination reforms
d Scholastic, Non Scholastic areas improvement
e Involvement of academic experts in planning and implementation of quality education measures.
f Grading System
g Systematic monitoring of quality improvement programmes.

5. A spirit and sense of community ownership of schools has been created. The orientation programme to community members and the involvement of School Support Group, Panchayat, Block Level, District level and LSG leaders generated more public participation. This has lead to positive results.
6. There are 450 Alternative/Innovative Education Centres organised with an enrolment of 12895 out of school children. This has contributed reduction of social deprivations and attainment equalization of opportunities to education for all in the remote and inaccessible areas.
7. The focus of girls education and SC/ST education conducted through enrichment programme/remedial education, special coaching classes leads to improving the levels of learning of deprived students. There are about 1800 centres organised in schools. The schools with pass percentage less than state average and students securing less than 40 percent marks are the focus areas.
8. The research/evaluation programme particularly action researches 1800 conducted gave interesting feed backs which led to identification of hard sports and efforts made towards to improve the learning levels There were 1800 action researches conducted by teachers, Block Programme Officers and Trainers
9. Under Computer-aided learning, computers were installed in 850 UP schools. All the DIETS are provided with 10 computers each serve as a resource centre for training. During 2003-04 and 2004-05 about 3000 teachers/trainers were given training. Moreover computers were installed in schools in convergence with MP/MLA funds and LSG funds.
10. Workbook preparation for standards IV to VII completed and eight titles prepared. This will add to improve the quality of education.
11. In quality planning and academic support, State Level Resource Groups, District Level Resource Groups and Block Level Resource Groups are constituted with persons of proven ability, experience and expertise. About 3000 experts involved in the process. The major outcomes are preparation of modules, training contents and assessment of the impact of training
12. The inclusive Education for Disabled Children identified through medical camps is yet another important activity of Sarva Shiksha Abhiyan. Every year about 1 lakh children are identified and assistive aids and appliances are distributed to about 15000 children. The participation of NGOs, LSGs and Government departments are fully enlisted at both the stages of identification and distribution of assistive aids. There are 895 disabled out of school children who are covered under home based tuition.
13. Sarva Shiksha Abhiyan implementation has given a big push in improving the school infrastructure and amenities, which led to a good environment for learning of children. There are 152 BRCs in position and on an average for every 9 schools there is one Cluster Resource Centre. During the three year period 2002-03to 2004-05, 57 BRCs and 111 CRCs were constructed. In backward areas building facility has been provided to 148 buildingless schools and 1967 additional classrooms were constructed. Drinking water facility has been extended to 2039 schools The provision of boundary walls, electrification and class room separations all led to improvement of facilities.
14. .The overall capacity building over the years at different levels-State, District and BRC has enhanced the efficiency and social commitment of personnel in Sarva Shiksha Abhiyan.

Source. Annual Report 2004-05, SSA, Kerala.

Schools which do not have minimum students and have protected teachers

11.14 As per KER, a school in which the minimum strength per standard/batch in LP/UP/HS is below 25 is called by the term 'uneconomic'. In schools where Arabic or Sanskrit is taught as part I and II of the first language, the minimum required strength per standard is 15. Based on this norm there are 2622 uneconomic schools in 2004. Of the total uneconomic schools, 1284(48.97%) are government and 1338. (51.03%) are private aided. Category wise uneconomic schools shows that 2111 (80.5 %) are LP, 428 (16.32 %) are UP and 83 (3.2%) are HS. During 2003-04, 7 uneconomic schools (4 government and 3 aided) and during 2004-05, 3 uneconomic schools (1 government and
2 aided) were closed. Details of uneconomic schools in Kerala during 2004 is given in Appendix.11. 11

Protected Teachers

11.15 The number of protected teachers both in government and aided schools stood at 3148 during 2004-05. It includes 524 High School teachers, 1904 PD teachers and 720 special teachers. Out of the 3148 protected teachers, 1630 have been deployed in Government schools, 840 have been retained in parent schools and 210 have been deployed in other aided schools. Thus undeployed teachers number turned to 468. Out of these 468, 46 are high school teachers, 339 are PD teachers and the rest 83 are special teachers. District-wise data reveals that highest number of protected teachers are in Kannur (691) and the lowest in Thrissur (18). Details are given in Appendix.11.12.

Teacher Pupil Ratio

11.16 One of the important indicators that influence class room transaction is the teacher- pupil ratio. Number of school teachers during 2004-05 is 175244 including TTI teachers as against 173807 in 2003-04. Out of 175244 teachers, 57425 (32.77%) are in government schools, 106717 (60.90%) are in private aided and 11102 (6.33%) are in unaided schools. Stage-wise distribution of teachers shows that 61490 (35.9%) are in lower primary, 53492 (30.52%) are in upper primary, 59776 (34.11%) are in high schools and 486 (0.28%) are TTI teachers. Details are given in Appendix 11.13.

11.17 Teacher Pupil ratio during 2004-05 is worked out at 1:27.71. During 2003-04, the ratio was 1:28.5. Stage-wise details shows that, the teacher pupil ratio differs at each stage. At lower primary level it is 1:30.04 at upper primary it is 1:27.48 and at high school it is 1:25.51.

SSLC Examination Results March 2005

11.18 SSLC Examination of March 2005 was unique in the sense that, it was for the first time that Grading was introduced as an evaluation tool at secondary level. 472780 students appeared in the new scheme and 58.49% students got eligibility for higher education . About 469 students got A+ grade in all subjects, 332 are girls.

Higher Secondary Education

11.19 In order to re-organise secondary level of education, in accordance with the National Education Policy, Higher Secondary Course was introduced in the state. As a first step, during 1990-91, 31 Government Schools were upgraded to the status of Higher Secondary Schools. At present, Higher Secondary Course has been conducted in 1656 schools; 702 in Government sector, 523 in Aided and 431 in unaided sector. Last year, the number of Higher Secondary Schools were 1565. This increase is solely, due to an increase in the number of unaided higher secondary schools, ie, from 340 to 431. District wise and management wise number of Higher Secondary Schools is given in Appendix. 11.14.

11.20 Batch-wise details of Higher Secondary Education shows that the number of Science, Humanities and Commerce batches are respectively 3164, 1005 and 1324. Thus altogether, there are 5493 batches with a sanctioned intake of 323445 students. During 2004-05 the number of students admitted is equal to the total number of sanctioned seats. Details regarding the batch-wise annual intake of students is given in the Table 11.5.

Table-11.5

Batch-wise Annual Intake of students-2004-05

Sl. No.	Name of Batche	No. of Batches	Sanctioned Seats (Nos.)			Total
			Govt.	Aided	Unaided	
1	2	3	4	5	6	7
1	Science	3164	57640	68680	20250	146570
2	Humanities	1005	33655	37670	2650	73975
3	Commerce	1324	51280	44020	7600	102900
	Total	5493	142575	150370	30500	323445

Source: Directorate of Higher Secondary Education.

11.21 Sanction has been accorded by the government, for three Regional Centres of Higher Secondary Education at Thiruvananthapuram, Ernakulam and Kozhikode and these have started functioning.

Box. 11.6.

Grading System of Evaluation has been introduced in the Higher Secondary level from 2005-06 academic year onwards.

11.22 In March 2005 Public Examination, 332765 students have appeared and 198979 students have passed reflecting 59.79 pass percent.

11.23 The staff position in Higher Secondary Schools shows that in the government sector 4552 senior teachers and 1785 junior teachers are in existence. In the aided sector, the number of teachers is 9593. In addition to it, 1884 lab assistants are working with permanent status.

Vocational Higher Secondary Education

11.24 Vocational Higher Secondary Education was introduced in the state with the objective of maximum achievement of employment opportunity by making more skilful and job oriented man power. As a first step, the course was introduced in 19 government high schools during 1983-84. At present there are 375 VHSS, of which 247 are government and 128 are private aided. 42 different courses are offered under VHSE. Course-wise intake of students for 2004-05 is given in Appendix.11.15. The sanctioned intake and actual enrolment of students in VHSS during 2004-05 are 26874 and 25382 respectively. Out of 27020 students appeared for the March 2005 Vocational Higher Secondary Examination, 21859 students have passed. The pass percentage is 80.9. The pass percentage for girls is 84.92 and that of boys is 76.3

Box. 11. 7

Kerala ranked the most developed state at all levels of schooling except higher secondary. At the higher secondary level, Haryana ranked the highest followed by Kerala, Punjab and Rajastan.

Source: Study by Institute of Applied Man Power and Research.

University and Higher Education

11.25 The higher education system of Kerala has increased many fold both in terms of the number of universities and in terms of the number of colleges in comparison to their number at the time of the formation of the state. Kerala's higher education system comprises of 7 universities and 2 deemed universities.

Box.11.8

There are 329 universities and 203 state universities in all at present. The Indian higher education system comprises of 18 central universities, 90 deemed universities, five institutions established under state legislative acts and 13 institutes of national importance established by Central legislation, nearly 16,885 colleges, including around 1,798 women colleges..

Source: (Annual Report 2004-05- MHRD)

New Courses started under the Universities

11.26 Universities in Kerala now shift their emphasis from conventional courses to professional and technical job oriented courses when they are giving sanction to start new courses. Most of the new courses are self financing.

11.27 University of Kerala started 2 years MFA Sculpture course with a sanctioned intake of 5 students, 2 years MPA Music course with a student capacity of 12 and 3 years MD Ayurveda courses in Panchakarma, Kaumarabrihtya and Agadathanthra with sanctioned intake of 5students each during 2004-05.

11.28 Mahatma Gandhi university has started 21 new courses during 2004-05. It include (i) M.Tech courses in computer Aided and Structural Engineering and Production and Industrial Engineering, (ii) M.Sc courses in Electronics, Bio informatics, Microbiology, Acquaculture (SF), Clinical Nutrition and Dietetics, Food Science and Quality Control, Child Development, Medical Surgical Nursing and Psychiatric Nursing (iii) BA courses in Multimedia, Animation and Graphic Design and Tamil.(iv) B.Sc course in Biotechnology (v) BEd special Education course (vi) MEd; (vii) MSW(viii) MD course in Radiodiagosis (ix)Post Basic BSc Nursing and (x) B.Com computer Application.

11.29 Calicut University has started courses like BHM (Bachelor degree in Hotel Mangement), B.Sc Psychology, M.Tech (embedded System), B.Pharm, MBA and MCA during 2004-05.

11.30 Kannur University started 16 new courses with a sanctioned intake of 1018 students. New courses started under Kannur University include BBM, B.Pharm, BDS, B.Tech, MBA, B.Sc Nursing, BA, B.Com, M.A, M.Com , BSc Geography, MA Applied Economics etc.

11.31 In Sree Sankaracharya University of Sanskrit, courses like MA in Psychology, Vedic Studies, History, English and Literature, Nyaya, Vyakarana etc and MSW were started during 2004-05.

Arts and Science Colleges

11.32 Arts and science colleges still dominate the higher education sector in Kerala irrespective of the mushrooming of new generation professional colleges. The number of arts and science

colleges in the Government sector is 39 and in the aided sector is 150. University- wise and management -wise number of arts and science colleges is given in Table-11.6

Table.11.6

University-wise and Management-wise number of Arts and Science Colleges in the Universities of Kerala-2005.

Sl.No	Name of University	No. of colleges			
		Govt.	Aided	Unaided	Total
1	Kerala	9	37	14	60
2	Calicut	17	45	50	112
3	Mahatma Gandhi	7	56	57	120
4	Kannur	6	12	46	64
	Total	39	150	167	356

Source: Universities in Kerala.

Enrolment of Students

11.33 The total number of students enrolled in the various arts and science colleges (excluding unaided colleges) under the four general universities in Kerala during 2005 is 1.77 lakhs as against 1.70 lakhs in 2004. It shows an increase of 0.07 lakhs. Out of it, 0.05 lakh increase is in BA courses. Of the 1.77 lakhs enrolled students, 158744 (89.7%) are Degree students and the rest 18226 (10.3%) are Post Graduate students. Girl students outweigh boys in 2005 too. Their percentage to the total student community is 66.53 in 2005. Thus the percentage of boys is 33.47. Relevant details are given in Table 11.7. SC students constitute 13.64 percent of the total students and the percentage distribution of ST students is 1.1.

Table- 11.7

Enrolment of Students in Arts and Science Colleges-2004&2005

Name of Course	2004			2005			Increase in enrolment
	Boys	Girls	Total	Boys	Girls	Total	
BA	21772	41874	63646	23004	45618	68622	4976
BSc	21282	44559	65841	20791	45114	65905	64
B.Com	11037	12660	23697	11143	13074	24217	520
Sub-Total	**54091**	**99093**	**153184**	**54938**	**103806**	**158744**	**5560**
M.A	1837	5327	7164	1862	5581	7443	279
MSc	1558	5395	6953	1576	6616	8192	1239
M Com	858	1643	2501	852	1739	2591	90
Sub-total	**4253**	**12365**	**16618**	**4290**	**13936**	**18226**	**1608**
Total	**58344**	**111458**	**169802**	**59228**	**117742**	**176970**	**7168**

Source: Directorate of Collegiate Education.

11.34 Out of the 1.59 lakh Degree students 34.61 percent are boys and 65.39 percent are girls. Their corresponding number is .55 lakh and 1.04 lakh respectively during 2005. 14.32 percent are SC students and 1.07 percent are ST students. Out of the total enrolled 18226 Post Graduate students, 4290 (23.54%) are boys and 13936 (76.46%) are girls. Share of SC students is 13.28 percent and that of ST students is 1.38 per cent. Their respective number is 2420 and 251 for 2005.

11.35 Out of the total students in various Degree courses, 68622 are BA students, 65905 are BSc students and 24217 are BCom students. Percentage of girls in BA course is 66.48. Sixteen subjects are offered for BA course and out of it, maximum number of students are admitted in the subject Economics(29.58%). Of the total enrolled BSc students, 68.45% are girls. A total of 15 subjects are offered for BSc course. Here maximum number of students are in the subject

Mathematics (25%). In B.Com course, the share of girls to total students is only 53.99 percent. Course wise and subject wise details of enrolment of students for Degree courses is given in Appendices 11.16 to 11.18.

11.36 The number of students enrolled for PG courses during 2005 is 18226 as against 16618 in 2004. Out of 18226 students, 7443(40.84%) are for MA courses, 8192 (44.95%) are for MSc courses and 2591 (14.21%) are for M.Com courses. Percentage of girls students, in PG courses is 76.46. 16 subjects are offered for MA course and among them, maximum students are in the subject of Economics, ie. 1817 students (25.94%). The student strength for MSc courses during 2005 is 8192. The percentage of girls to the total MSc students is 80.76. Out of the 10 different subjects offered for MSc courses, maximum number of students are admitted for Mathematics ie, 1778 students (21.7%). In the case of M.Com course, out of the 2591 students enrolled during 2005, 67.12% (1739) are girls. Details are given in appendices 11.19 to 11.21.

11.37 The numher of teachers in arts and science colleges is increased from 10347 in 2003-04 to 10468 in 2004-05. University –wise break up of teachers shows that maximum number of teachers are in Mahatma Gandhi University (3688) followed by Kerala (3167), Calicut (2833) and Kannur University (780). The percentage of women teachers is 47.63. University wise number of teachers in arts and science colleges is shown in Appendix..11.22.

Private Registration

11.38 The number of private registrants shows a fluctuating trend. It was 78734 in 2002-03 and it declined to 70902 during 2003-04. Now it increased to 72322 during 2004-05. University of Kerala has discontinued private registration in P.G. courses from 2003-04 onwards. In the University of Calicut too, there is no private registration for PG courses. Stage-wise details of private registrants show that out of 72322 students, 65805 (90.99%) are for degree courses and the rest 6517 (9.01%) are for PG courses. Further, of the total 65805 students for degree courses 27712 (42.11.%) are in BA courses and 38093 (57.89%) are in B.Com courses. Out of the 6517 students for post graduate courses, 3172 (48.67%) are in MA courses,2967 (45.53%) are in MCom and 378 (5.8%) are in M.Sc courses. University wise details of private registration at graduate and post graduate levels are given in Appendix.11.23.

Grant to Universities

11.39 The two major sources of income for the universities in Kerala are plan and non plan grants provided to them by the state government. The plan and non plan expenditure of the universities during 2003-04 was Rs 11014.6 lakhs. It increased to 12858.1 lakhs during 2004-05(R E). In the budget estimate for 2005-06, the maximum plan grant is made towards Kannur University and non plan grant to that of Kerala University. Details regarding plan and non plan grants provided to the universities from 2003-04 to 2005-06 is given in Table11.8.

Table-11.8
Grant- in- Aid given to Universities by Government of Kerala during 2003-04 to 2005-06

(Rs.lakhs)

Sl. No	Name of University	2003-04 Accounts			2004-05 R E			2005-06 B E		
		Plan	Non Plan	Total	Plan	Non Plan	Total	Plan	Non Plan	Total
1	Kerala	382.5	3695.	4077.5	382.5	4490.85	4873.35	450	4827.66	5277.60

2	Calicut	297.5	2601.5	2899.0	297.5	3142.65	3440.15	350	3378.35	3728.40
3	Mahatma Gandhi	467.5	1540.1	2007.6	440.0	1975.30	2415.30	450	2015.95	2466.00
4	Sree Sankaracharya University of Sanscrit	127.5	893.0	1020.5	127.5	975.00	1102.50	150	1048.13	1198.10
5	Kannur	680.0	330.0	1010	680.0	346.50	1026.50	700	372.49	1072.50
	Total	1955.	9059.6	11014.6	1927.5	10930.6	12858.1	2100	11642.58	13742.6

Source. Universities in Kerala.

Technical Education

11.40 The Technical Education System in the State covers courses in engineering, technology, management, architecture etc. at diploma, degree, post graduate and research levels. Further, Industrial Training Institutes, Technical High Schools, Fine Arts Colleges etc. also come under the technical education system National Institute of Technology, Kozhikode, having the Deemed University status, offers graduate and post graduate courses Cochin University of Science and Technology functions in line with the status of a technical university

Engineering Colleges

11.41 In recent years, there has been a remarkable increase, in the number of engineering colleges especially in the number of private self-financing colleges. By the end of the Ninth Plan, the number of engineering colleges was 44. At present there are 84 engineering colleges with a sanctioned intake of 23196 seats. Out of 84 engineering colleges, 9 are government colleges, 3 are private aided and 72 are self financing engineering colleges. Last year there were 83 engineering colleges with a sanctioned annual intake of 19346 University-wise analysis shows that maximum number of engineering colleges are in M.G. University (22) followed by Kerala University (19) and Calicut University (18). Details are given in the Table 11.9. IHRD also conducts engineering education. Under it 9 engineering colleges function as self financing institutions. Besides, part-time B-Tech Degree courses are being conducted in three engineering colleges in different disciplines.

Table-11.9

University-wise Number of Engineering Colleges in Kerala-2005

Sl.No	Name of University	No of Colleges
1	University of Kerala	19
2	Mahatma Gandhi University	22
3	Calicut Univeristy	18
4	Kannur University	5
5	CUSAT	18
6	Agricultural University	2
	Total	84

Source. Directorate of Technical Education

Box.11.9

The total number of approved engineering colleges in India is 1358 with an intake capacity of 450954.

Source: AICTE Report-2004.

11.42 District –wise analysis of engineering colleges in Kerala reveals that Thiruvananthapuram has the highest number of engineering colleges (13) followed by Ernakulam with 12 engineering colleges. In each districts there is one government engineering college except in 4 districts viz, Kollam, Pathanamthitta, Ernakulam and Malappuram. District-wise and Management wise number of engineering colleges and sanctioned intake are given in Appendix.11.24.

Box. 11.10

Out of 23196 sanctioned seats in engineering colleges 2583 (11.14%) are in government colleges, 1440 (6.21%) in aided colleges and 19173 (82. 65%)are in self financing colleges.

Source: AICTE Report 2004.

11.43 Branch-wise analysis shows that out of 23196 seats, 5555 are in Electronics & Communication, 4730 in Computer Science, 3450 in Electrical & Electronics, 2961 in Mechanical Engineering and the rest in other branches. Branch-wise distribution of seats is given in Appendix.11.25. The annual intake of post-graduate students in government engineering colleges stood at 188 and that of aided colleges is 15. Course-wise details are given in Appendix. 11.26

11.44 The number of teachers in government engineering colleges during 2004-05 is 2056 and that of in the aided colleges it is 1053.

Polytechnics & Technical High Schools.

11.45 There are 43 government polytechnics and 6 private aided polytechnics in the state. The annual intake in the government and aided polytechnics is 8280 and 1380 respectively for 2005-06. Thus altogether there are 9660 sanctioned intake. About 23 trades are offered for diploma courses. Among them, more seats are provided to trades like Electronics (1770), Computer Engineering (1640), Mechanical Engineering (1310) etc. Relevant details are given in Appendix.11.27

11.46 Total number of students studying in government polytechnics during 2005 is 24100 and out of it 8700 (36.09%) are girls. The number of students in the private aided polytechnics is 4170 in 2005. Here the number of girl students is 1500 (35.97%). The number of teachers in the government and aided polytechnics is 1410 and 319 respectively in 2005. Details are given in Appendix.11.28. The SC/ST student population for the period is 250 in government polytechnics and 50 in aided polytechnics. The number of SC/ST teachers is 115 in government polytechnics.

11.47 In addition, 6 model polytechnics are functioning under IHRD. The total sanctioned seats and actual intake is 655 and 631 respectively during 2005. The total number of teachers is 154.

11.48 At secondary level, there are 39 government technical high schools. The trade-wise annual intake of students remained 2085 during 2005. The total student strength during 2004-05 is 6255 and the share of girl students is only 10 percent. The number of teachers is 1015, and among them 180 are women.

Technical Education Quality

11.49 In recent years, there has been an exponential growth in the number of technical institutions, especially engineering colleges. The mushrooming has some related quality dimensions too. In order to upscale and support the ongoing efforts of the government in improving the quality of technical education, a Technical Education Quality Improvement Programme (TEQIP) has been launched with the assistance of World Bank in 2004.

11.50 The broad objectives of the Programme are:(i) selected engineering colleges can achieve their own set targets for excellence and sustain it with autonomy and accountability (ii) improve efficiency and effectiveness of the technical education management system in the institutions selected. The vision is to ensure the highest quality in technical education at state level consistent with state and national policies and requirements to produce the best world class engineering professionals so as to provide impetus to industry, business and services. The following six engineering institutions in the State are selected for the project in addition to the centrally sponsored institution, NIT Calicut.

1. College of Engineering, Thiruvananthapuram
2. College of Engineering, Chengannur
3. Model Engineering College, Kochi
4. SCT College of Engineering, Thiruvananthapuram
5. MES College of Engineering, Kuttippuram
6. LBS College of Engineering, Kasaragod

11.51 The project is scheduled to be completed by December 2007. Key components of the project are promotion of Academic Excellence, Networking of Institutions, Service to Community and Economy etc. The revised project cost approved on the basis of the proposal made by the selected institutions is Rs. 6150.90 lakh Cumulative expenditure of the project up to 31-03-2005 is Rs 201.11 lakh. During the year 2006 07, it is expected that project development activities will be in full swing due to the streamlining of the modalities.

MBA/MCA Courses

11.52 MBA Courses are offered through seven engineering colleges. Five institutions are conducting the course on self financing basis with an annual intake of 60 students each. The rest are one government college and one private aided institution. Each have an intake of 30 students. Thus the total intake is 360.

11.53 Regarding MCA course, 31 institutions are conducting the course, with an annual intake of 1520 students. Among the institutions, 3 are government, 2 are aided and 26 are self-financing.

Cochin University of Science and Technology

11.54 The University came into being in 1971 through an act of the legislation for the promotion of graduate and post graduate studies and advanced research in applied science, technology, industry, commerce, management and social science.

11.55 CUSAT is academically structured into nine faculties viz, Engineering, Environmental Studies, Humanities, Law, Marine Science, Medical science and Technology, Science, Social Science and Technology It has 28 departments of Study and Research offering post graduate programmes. The University has academic links and exchange programmes with several

institutions across the globe.Currently CUSAT has ongoing exchange programmes with partners in Africa, Canada, Europe, Japan, Korea, Malaysia, USA and Vietnam. CUSAT is the single Indian University to be chosen for long term financial assistance by the government of Netherlands. CUSAT has been short listed by the MHRD along with 7 other universities for upgrading it into an IIT. Department-wise details of courses in CUSAT is shown in Appendix.11.29.

Institute of Human Resource Development (IHRD)

11.56 IHRD was established by the state government under Travancore Cochin Literal, Scientific and Charitable Societies Registration Act of 1955 to develop manpower in the field of electronics, computer and allied areas. Under it, 9 engineering colleges, 6 model polytechnics, 18 college of applied science, 25 technical higher secondary schools, 2 regional centres and 1 extention centre are functioning. In addition to it, PGDCA and Data Entry Techniques and PC Maintenance Courses are conducted through some selected institutions mentioned above. Thus altogether there are 61 institutions with an annual intake of 10358 students. But number of students admitted during 2005 is only 7206, denoting 69.57 percent. Details are given in the Table.11.10.

Table - 11.10

Institutions and Annual intake of Students under IHRD-2005.

Sl. No	Institutions	2005 (Nos)		
		Institutions	Annual Intake	students admitted
1	Engineering Colleges	9	1405	1372
2	Polytechnics	6	655	631
3	Technical Higher Secondary Schools	25	4630	2679
4	College of Applied Science	18	1468	1130
5	Regional Centres (PGDCA)	2	--	--
6	Extension Centre (PGDCA)	1	--	--
7	In addition, PGDCA is conducted in 22 institutions mentioned above	0	1720	1086
8	Data Entry Techniques & PC Maintenance Course is conduced in 6 institutions mentioned above	0	480	308
	Total	61	10358	7206

Source: IHRD

11.57 Model Engineering College, Ernakulam and College of Engineering, Chengannur functioning under the aegis of IHRD have been selected for financial assistance under TEQIP (World Bank Aided) for achieving academic excellence Under this scheme Rs. 5.89 cores and Rs. 5.989 crores have been sanctioned for 5years for Model Engineering College, Ernakulam and College of Engineering, Chengannur respectively. Model Engineering College has received Rs. 1.17 crore and spent Rs. 1.1 crore. College of Engineering Chengannur has received Rs. 99 lakh and Rs. 80 lakh has been spent.

Expenditure on Education

11.58 Kerala expended Rs. 3034.39 crores for education (excluding Art & Culture and Sports & Youth services) during 2003-04 against Rs. 2928 crores in 2002-03 During 2004-05 it is estimated to have spent Rs. 3569.19 crore. This shows that, state's expenditure on education increased by 3.63% in 2003-04 over 2002-03 and the estimated expenditure in 2004-05 over 2003-04 shows 17.62 % increase.

Box. 11.11

An Education cess @ 2 percent on direct and indirect central taxes has been imposed through Finance Act 2004, "so as to fulfil the commitment of the government to provide and finance universalised quality basic education".

Source: Annual Report-(2004-05)MHRD.

11.59 In 2004-05, primary education accounted for 42.71% of the total expenditure on education. Secondary education 27.12%, Higher Secondary and Vocational higher secondary together 8.52%, University and higher education 14.70% and Technical education 5.39%. Expenditure on education to state's total expenditure (Revenue and Capital) is 18.31% (RE). Further out of the total expenditure of Rs. 3569.19 crore in 2004-05, Rs. 3414.35 crore (95.66%) was non plan and Rs. 60.78 crore (4.34%) was plan.

11.60 Outlay provided to higher education in 2003-04 under plan is comparatively higher. During 2003-04, out of Rs. 85.37crores spent under plan for education, amount spent for primary and secondary was Rs. 9.34 croes (10.94%). Like this, Rs 3.79 crores (4.44%) was spent for higher secondary education including vocational higher secondary education. University and higher education accounted for Rs. 26.75 crore (31.33%) and Technical education Rs. 23.58 crore (27.62%). Details are furnished in Table-11. 11.

Table-11.11

Stage-wise Expenditure on Education (2002-03 to 2004-05)

(Rs. in Cr ores)

Sl.No	Stage	2002-03			2003-04			2004-05(RE)		
		Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
1	2	3	4	5	6	7	8	9	10	11
1	Primary Education	11.37	1225.59	1236.96	7.41	1279.02	1286.43	7.53	1516.93	1524.46
2	Secondary Education	9.08	781.97	791.05	1.93	825.43	827.36	18.09	949.84	967.93
3	Higher Secondary Education	28.85	89.77	118.02	2.58	185.37	187.95	2.80	226.10	228.90
4	Vocation Higher Secondary Education	14.00	39.05	53.05	1.21	49.71	50.92	1.40	73.97	75.37
5	University and Higher Education	21.58	530.56	552.14	26.75	476.30	503.05	26.36	498.25	524.61
6	Adult Education	0.13	0.03	0.16	0.23	0.03	0.26	0.37	–	0.37
7	Language Development	1.40	11.22	12.62	1.78	12.38	14.16	1.43	12.67	14.10
8	General	27.19	4.85	32.04	19.90	5.55	25.45	36.08	5.01	41.09
	Sub Total General Education	113.00	2683.04	2796.04	61.79	2833.79	2895.58	94.06	3282.77	3376.83
9	Technical Education	32.28	99.93	132.21	23.58	115.23	138.81	60.78	131.58	192.36
	Total Education	145.28	2782.97	2928.25	85.37	2949.02	3034.39	154.84	3414.35	3569.19

Source: Detailed Budget, 2005-06, Govt. of Kerala.

Industrial Training Institutes

11.61 Industrial Training Department conducts craftsman training through Industrial Training Institutes (ITIs), Industrial Training Centres (ITCs) and Related Instruction Centres (RICs). There are 33 Government ITIs, (including one Basic Training Centre at Kollam recently converted as ITI) and 393 ITCs in the state. In addition, 41 ITCs under Scheduled Caste Development Department and one ITC under Scheduled Tribe Development Department are functioning in the state. District-wise distribution of ITIs in the state are given in the table.11.12.

Table-11.12
District-wise ITI's in the State

Sl. No.	District	No. of ITIs
1	Thiruvananthapuram	5
2	Kollam	3+1*
3	Pathanamthitta	1
4	Alappuzha	2
5	Kottayam	2
6	Idukki	1
7	Ernakulam	2
8	Thrissur	3
9	Palakkad	3
10	Malappuram	2
11	Wayanad	1
12	Kozhikode	3
13	Kannur	2
14	Kasaragod	2
	Total	33

Note:- Basic Training Centre (BTC)*

11.62 Total seat strength under Industrial Training in the state is 56394. As the ITCs out numbered ITIs, the present seat strength in ITCs against ITIs is in the ratio of 76:24. The Industrial Training Institutes are conducting one year, two year and three year courses. There are 15 trades in one year course, 18 trades in two year course and one trade in three year course. District-wise details of trainees admitted during 8/2004 in these training institutes is given in the Appendix 11.30.

11.63 Period of training of ITIs in various trades, varies from one year to three years and the entry qualification varies from 8th class to 12th class pass. The trade wise intake and outturn in government ITIs for one year and two year course is given in the Appendix.11.31 &11.32. Similarly ITI wise details of seat strength and enrolment in Govt. ITI's is given in Appendix 11.33.

11.64 In the one year course, the student's strength is highest in trades like welder (815), plumber (445) and Carpenter (430) and the total strength of the one year course come to 3735. In the two year courses fitter and MMV are the attractive ones. Out of the total strength of 5104 students in the two year courses, 682 are in fitter trade and 524 are in MMV. Out of 12 trades in the 3 year courses, 6 trades viz, MPTV, Fitter, Wireman, Electronic Mechanic, Electrician and MMV are more pleasing and more than 300 students studying in these courses. Another 7 trades viz, Draftsman Mechanic, Surveyor, Painter General, Instrument Mechanic, Electroplater, Agriculture Machinery and Medical Electronics are in the path of natural death.

Modern Trades in ITIs

11.65 One of the Tenth five year Plan objective was to upgrade the existing obsolete and unpopular trades to new trades having employment potential Up gradation of trades has been envisaged through retraining and updating the skill of teachers and modernisation of the existing equipments. During 2003, 13 units in 9 trades were introduced in 9 ITI's. Similarly during 2004, 17 units in 10 trades were introduced in 10 ITI's. During 2005, Government accorded sanction to introduce 26 units in 13 trades in 13 ITI's. The Industrial Training Department also intends to introduce 21 units of 11 trades in 9 ITIs immediately.

Apprenticeship training

11.66 Apprenticeship training is also provided through Nine RICs (Related Instruction Centres) and 5ITI's. It has been observed that the approved seat strength for apprenticeship were not utilisng fully. During 2004, only 6500 apprentices were trained against the seat strength of 7359. Similarly during 2005, only 6946 apprentices were trained against the seat strength of 7523. Of the total apprentice trainees admitted during 2004, 6079 were boys and 421 were girls. Institution wise details of apprentices under gone training are given in Appendix.11.34.

11.67 As muscle power is one the important capacity required to buildup efficiency in a good number of trades, the ratio between the boys and girls coming for the course is much wider.

Annual Intake and Out turn of ITIs students

11.68 The drop out ratio in the ITIs is much higher in comparison with college level courses. In the case of SC students, it was much more alarming. While the intake in one year course during 2004 was 3735 the out turn was only 2414 (65%). Similarly out of 5104 students joined in two year course during 2003, only 62%(3139) were completed the course. Out of 649 SC students admitted in the two year course in the year only 343 turn out. Details of intake and outturn of ITI students in 2003 & 2004 are given in Table.11.13

Table-11.13
Annual Intake and Out turn in ITIs

Year	Course	Intake	Out turn	Percentage
2003	1 year	3491	2379	68%
2004	1 year	3735	2414	65%
2003	2 year	5104	3139	62%

Source:- Industrial Training Department.

Sports and Youth Services

11.69 Sports and Youth Welfare activities in Kerala are carried out in accordance with the objectives of the National Sports Policy 2001 and National Youth Policy 2003. Kerala Sports Council and the Directorate of Sports and Youth Affairs co-ordinate sports activities in the state. The Directorate of Collegiate Education undertake sports promotional activities in Colleges as part of Educational Promotion and Kerala State Youth Welfare Board carry out youth empowerment activities..

Kerala Sports Council

11.70 The Kerala Sports Council imparts training in sports and games with residential facilities to sports talented pupils. In 2004-05, it have been benefited to 980 students. Coaching camps are also being conducted at District level and State level in various athletic and games disciplines for the players to qualify for national games. There are altogether 37 rural coaching centres under various Clubs and Panchayats. The Sports Council along with Thiruvananthapuram District Panchayat has started sports training in 78 schools scattered in different Panchayats in

Thiruvananthapuram for identifying and imparting training to sports talented pupils. Besides an amount of Rs. 4.798 lakhs was utilised through sports clubs in 2005, for conducting Local Sports tournaments and procuring sports equipments. Moreover, Rs. 59 lakhs has been granted to 38 state sports associations as Grants-in Aid. The council also released Rs. 40. 23 lakhs to Panchayat Schools and clubs for improving playing facilities. The council has been organising mini games and college games every year for selecting talented players and imparting advanced training. As part of it, the third Kerala Mini Games 2004-05, was conducted at Ernakulam for school students and the 7th College games was held at Thrissur in 2004. The council conducted women sports festival in 2005 by incurring Rs. 13.33 lakhs in disciplines like Athletics, Table Tennis, Badminton, Shuttle etc.

11.71 The establishment of Higher-Attitude training centre at Munnar at an estimated cost of Rs. 450 lakhs is one of the major construction works undertaken by the Council and the works are in progress. Indoor halls were constructed in District Training Centres by spending about Rs. 39 lakhs. The Swimming Pool Complex in the land assigned by Manickal Panchayt (TVM Dist.) at an estimated cost of Rs. 5.80 crores is also in progress.

Directorate of Sports and Youth Affairs

11.72 Maintenance and development of play fields, improving sports facilities, construction of sports complexes and stadiums, promotion of martial arts and new sports disciplines were the major activities undertaken by the Directorate of Sports and Youth Affairs in 2005. The Rajiv Gandhi Sports Medicine Centre attached to the Directorate is a pioneer centre for development of Sports medicine. The Centre conducts annual inservice training programme on Sports Medicine for physical medicine specialists of Kerala Health Services. Taek-wando a new martial arts training was introduced in the state during 2003-04 and initially training was imparted to 30 children. The training was extended to 40 more schools in 2004-05. For the development of play grounds an amount of Rs. 43.15 lakhs granted 28 schools in rural areas and Rs. 13.60 lakhs to 8 panchayats. A festival on Kalari Payattu was conducted in 2004 as part of promotion of martial arts. There were 350 participants including women. The Department also organised the All India Civil Service Power Lifting Tournament 2004-05 at Jimmy George Indoor Stadium by incurring Rs. 3.14 lakhs.

Kerala State Youth Welfare Board

11.73 The Youth Welfare Board provide self employment training, awareness training against social evils & substance abuse and counselling to youths in order to equip them to face social challenges with confidence. The inclusion of the age group 13-15, in the definition of youth recently by GOI, the target group has widened.. The major programmes conducted by the Board during 2004-05 are:-.

- provided financial assistance to local bodies for the conduct of Kerala Festival, a programme for encouraging the talents of youth;.
- organized National Youth Festival by incurring Rs 45 lakhs and a team of 75 members participated in the International Youth Festival.
- Financial assistance to Youth clubs for Civil Works and selected 23 Youth clubs on activity basis:.
- Maintenance works were carried out for youth hostels by incurring Rs. 15 lakhs expenditure;
- Camps & cultural exchange programmes were organized as part of national integration programme;
- Training in folk arts was imparted to selected artists;
- Awareness camps were organized against the use of drugs, tobacco and alcohol;

- Adventure activities were conducted by the National adventure training centre by incurring Rs.16 lakhs;
- 'Exhibition for youth' - a programme for encouraging the talents and skills of youth' was conducted by spending Rs.4 lakhs;
- The CM's self employment programme is an important activity of the Board; During 2004-05, training was imparted in the production of handicrafts, food products and household articles on a commercial basis.. Most of the beneficiaries were women.
- Rs. 5.52 lakhs was disbursed to 17 voluntary agencies for providing job oriented training;
- Boat crew training was provided to 60 youths and 30 SC/ST youths, through agencies like KSINC & Mercantile Marine Departments; and
- HIV aid awareness seminar was conducted at Ernakulam & Pathanamthitta.

CHAPTER 12

HEALTH

Health status is generally measured interms of mortality indicators like Death rate, Infant mortality rate and Expectation of life at birth among others. Mortality indicators shows that health status of Kerala is far advanced and higher than the all India average and is even comparable with developed countries. This outstanding progress of health status is achieved through widespread growth of the three systems of medicine in public, private, co-operative sectors combined with peoples health awareness. The basic health indicators of Kerala and India are given in Table-12.1. Though Kerala has attained better health care indicators, the people is now facing the problem of high morbidity both from communicable and non- communicable diseases.

Tabel-12.1
Health Development indicators- Kerala & India –2004

Health Indicators	Kerala	India
Birth rate (per '000 population)	16.70	24.80
Death rate (")	6.30	8.00
Infant mortality rate (")	11.0	60.0
Maternal mortality rate (")	0.30	4.37
Total Fertility rate (per woman)	1.99	3.30
Couple Protection rate (%)	72.10	52
Life at birth		
Male	71.67	64.10
Female	75.00	65.80
Total	71.00	64.80

Source- Directorate of Health Services

Health care Infrastructure

Government Sector

12.2 Kerala's health care system consists of allopathy, ayurveda and homoeopathy. Three systems of medicine together have 2696 institutions in the government sector and 48834 beds The present status is given in Table 12.2. Out of the total institutions, 47% are under Allopathy, 32% under Ayurveda and 21% in Homoeopathy. Out of the total beds,89% are under allopathy,8% under Ayurveda and 3% under Homoeopathy.

Table-12.2
Medical institutions, beds and patients treated under three systems of medicine in Govt. Sector during 2003 and 2004.

Sl. No	Systems of medicine	Institutions		Beds		Patients treated-2003 (Lakh)		Patients treated-2004(Lakh)	
		2003	2004	2003	2004	IP	OP	IP	OP
1	Allopathy*	1278	1278	43619	43619	18.12	401.21	17.42	431.16
2	Ayurveda	857	857	3920	3920	0.47	187.89	5.18	253.29
3	Homoeopathy	561	561	1295	1295	0.25	167.50	0.38	257.45
	Total	**2696**	**2696**	**48834**	**48834**	**18.84**	**756.6**	**22.98**	**941.90**

* *Excluding Subcentres*

12.3 Three systems together treated 22.98 lakh inpatients and 941.90 lakh outpatients during 2004 as against 18.84 lakh inpatients and 756.60 lakh outpatients during 2003. In-patients and outpatients treated increased by 21.9% and 24.5% respectively in the said period. However, inpatients treated under allopathy decreased by 3.9% in 2004.

Co-operative Sector

12.4 There are 60 co-operative hospitals/ dispensaries with 5272 beds and 639 doctors and 1593 nurses and para medical staff in Kerala. District wise details are given in Appendix 12.1

Private Sector

12.5 Details of private health care facilities in Kerala are available only for 1995. A study conducted by Department of Economics and Statistics shows that there were 4288 allopathic medical institutions with 67517 beds, 4922 ayurveda institutions with 2595 beds and 3118 homoeopathic institutions with 394 beds in the year 1995.

Insurance Medical Services

12.6 There are 12 ESI hospitals with 1123 beds and 136 dispensaries in the State. District-wise details of ESI hospitals, dispensaries, medical and para medical personnel are given in Appendix.12.2

Beds per lakh population in Kerala

12.7 Three systems together have 48834 beds in the Govt. sector. The beds per lakh population is 153 in government sector. District wise details of medical institutions and beds per lakh population are given in Appendix 12.3. Over and above the beds in government sector, there are 77411 beds in ESI, Co-operative and private sector. The combined bed population ratio is 396 beds per lakh population taking into account of private, Co-operative and insurance sectors. The relevant details are given in Table- 12.3.

Table -12.3
Total beds under different sectors

Category	No. of beds	Beds per lakh population*
Government sector (including three systems)	48834	153
ESI Hospitals	1123	4
Co-operative sector	5272	17
Autonomous sector	510	2
Private sector	70506	221
Total	**126245**	**396**

** Population based on 2001 Census*

Directorate of Health Services

12.8 There are 1273 institutions and 35607 beds under the Directorate of Health services. Institutions include 132 hospitals, 931 primary health centres, 115 community health centres , 59 dispensaries, 18 TB clinics/ centres and 18 leprosy control clinics/ units. Besides there are 5094 sub centres Out of the total beds, 22645 (63.6%) beds are in hospitals, 7716 (21.7%) are in primary health centres and 4840 (13.6%) are in community health centres and 406 (1.1%) are in dispensaries and TB clinics District wise details of institutions and beds are given in Appendix.12.4

Patients treated

12.9 During 2004-05, 413.82 lakh persons (repeated cases) were availed medical treatment in various institutions under Directorate of Health Services. Out of which, 13.85 lakh persons are treated as IP cases and 399.97 lakh are that of OP cases. Also 87155 .major operations were conducted during the same period. District wise details of IP, OP cases and major/minor operations conducted are given in Appendix- 12.5

Immunization coverage

12.10 Kerala has almost attained universalisation of immunization. During 2004-05, the coverage of BCG was 104.3 percent. Similarly the coverage of DPT, Polio, Measles and TT for pregnant women is 99.3%, 99%, 95.9% and 91.5% respectively. Target and achievements of immunization programmes in Kerala during 2003-04 and 2004-05 are given in Appendix-12.6. The comparative coverage of immunization programmes in Kerala and India during 2003-04 is given in Table.12.4.

Table-12.4
Coverage of Immunization Programme-Kerala and India(2003-04)

Sl. No.	Programme	Coverage (%)	
		Kerala	India
1	DPT	95.6	91.0
2	Polio	94.8	92.3
3	BCG	98.9	100.0
4	Measles	86.4	85.5
5	TT for Pregnant Women	89.4	77.8
6	TT for 5 years	80.7	-
7	TT for 10 years	96.8	-
8	TT for 16 years	90.8	-

Source: Directorate of Health Services

Major principal diseases and death

12.11 During 2003, 340.34 lakh persons had attack from various diseases, which declined to 326.86 lakh in 2004. An analysis would show that attack of acute diarrhoeal diseases, measles, pneumonia, pulmonary tuberculosis, dengue fever and leptospirosis are coming down while that of acute respiratory infection is increasing. Increasing pollution, increase in use of fossil fuel, tobacco use, vehicle transport, increasing sedentary habits and ageing may be the reasons of increase in respiratory infectious diseases. Death reported during 2004 was 8414 as against 9121 in 2003, which showed a decline of about 7.8%. The relevant details are given in Appendices-12.7, 12.8 and 12.9.

Prevalence rate of major public health diseases

12.12 A major achievement in health front is the eradication/ reduction of major public health diseases like small pox, filaria, malaria etc. Prevalence rate of leprosy, filaria, TB and measles is coming down while that of acute diarrhoeal diseases and respiratory infection is increasing. Table 12.5 shows that the prevalence rate of major public health diseases in Kerala during 2003 and 2004.

Table-12.5
Prevalence Rate of Public Health Diseases

Sl. No.	Disease	Prevalence Rate per 1000 population	
		2003	2004
1	Leprosy	0.05	0.05
2	Filaria	N.A	0.05
3	Malaria	0.08	0.09
4	T.B	0.67	0.64
5	Acute Diarrhoeal Diseases	15.43	16.55
6	Pneumonia	0.90	0.68
7	Enteric Fever	0.40	0.29
8	Measles	0.15	0.09
9	Respiratory Infection	247.89	262.61
10	Chicken pox	0.39	0.15

Source: Directorate of Health Services

Chronic Diseases

12.13 Among chronic diseases, Cardio vascular disease, Cancer, Hypertension and Diabetes Mellitus emerged the top. Sedentary lifestyle, lack of physical activity and obesity increases the risk of chronic diseases.

Cancer

12.14 Cancers in all forms are causing about 12 percent of deaths throughout the world. In the developed countries cancer is the second leading cause of death accounting for 21% (2.5 million) of all mortality. In the developing countries cancer ranks third as a cause of death and accounts for 9.5% (3.8 million) of all deaths. Tobacco, alcohol, infections and hormones contribute towards occurrence of common cancers all over the world.

12.15 Cancer has become one of the ten leading causes of death in India. It is estimated that there are nearly 1.5 - 2 million cancer cases at any given point of time. Over 7 lakh new cases of cancer and 3 lakh deaths occur annually due to cancer. Nearly 15 lakh patients require facilities

for diagnosis, treatment and follow up at a given time. Data from population-based registries under National Cancer Registry Programme indicate that the leading sites of cancer are oral cavity, lungs, oesophagus and stomach among men and cervix, breast and oral cavity among women. Cancers namely those of oral and lungs in males and cervix and breast in females account for over 50% of all cancer deaths in India. WHO has estimated that 91 percent of oral cancers in South - East Asia are directly attributable to the use of tobacco and this is the leading cause of oral cavity and lung cancer in India. An estimate shows that the total cancer burden in India for all sites will increase from 7 lakh new cases per year to 14 lakh by 2026.

12.16 Cancer usually occurs in the later years of life and with increase in life expectancy to more than 60 years. Data collected from RCC shows that more patients are treated in the age group of 55-64 years. Details of cancer patients treated by age group are shown in Table-12.6

Table -12.6.

Cancer patients treated by age group during 2004

Age group	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-	Total
Patients treated	478	449	758	1394	2247	2331	1915	683	10225

Source: Regional Cancer Centre, Thiruvananthapuram

12.17 Cancer of Lungs, Oral cavity and Leukemia are the leading sites among males. Among females cancer of Breast, Thyroid and Cervix are the leading sites. Details of leading sites of cancer and patients treated by sex are given in Table .12.7

Table -12.7

Leading sites of cancer and patients treated by sex

(Nos.)

Sl.No	Site	Patients treated (Male)	Sl.No	Site	Patients treated (Female)
1	Lung	671	1	Breast	1074
2	Oral cavity	519	2	Thyroid	464
3	Leukemia	436	3	Cervix	458
4	Oesophagus	254	4	Leukemia	306
5	Secondaries	231	5	Oral cavity	285
6	Larynx	216	6	Ovary	201
7	Lymphoma	196	7	Secondaries	129
8	Stomach	185	8	Brain	99
9	Brain	169	9	Lymphoma	98
10	Other sites	2462	10	Other sites	1802
	Total	**5339**		**Total**	**4916**

Source: Regional Cancer Centre, Thiruvananthapuram

HIV/AIDS

12.18 For the world as a whole now, HIV/AIDS is the leading cause of death among adults aged 15-59 years. It has already killed more than 20 million people and an estimated 34-46 million others are living with this disease. Today about one in every 12 African adults has HIV/AIDS. The American and the Caribbean have the second highest prevalence of HIV in the world after the Sub Saharan Africa. In Asia, an estimated 7.4 million people are living with HIV, around half

a million are believed to have died of AIDS in 2003 and about 1.1 million are suspected to have become newly infected with HIV.

12.19 HIV infection and AIDS cases were detected in India in 1986. With more than 5.1 million estimated HIV positives in the country, India has the largest population of HIV infected people outside South Africa. Six states in India viz. Manipur, Nagaland, Maharashtra, Andhra Pradesh, Karnataka and Tamilnadu are identified as high incidence states because the prevalence of HIV/AIDS in the general population is more than 1%. Over 32% of all reported AIDS cases in India occur among young people in the age group of 15-29 years. AIDS cases reported in India since 31st July 2005 is given below.

Table- 12.8
AIDS cases reported in India since 31st July 2005

Age group	Male	Female	Total
0-14	2860	1994	4854
15-29	21782	14405	36187
30-49	48342	14508	62850
> 50	6057	1660	7717
Total	**79041**	**32567**	**111608**

12.20 First HIV positive case was identified in Kerala in 1987. Till 2004, number of AIDS cases reported from different parts of Kerala is 2003 and out of which 619 persons died. AIDS cases reported through two Care Centres of Kerala State AIDS Control Society during 2005 is 218. Out of which 67 persons died Kerala has an estimated HIV population between 70,000 and 1,00,000. Roughly 500 children are born with HIV every year. It is likely that there are at least 3500 HIV positive children below 10 years in the State. AIDS cases reported in Kerala during 2005 is given in Table-12.9

Table 12.9
AIDS cases reported during 2005

Category	AIDS cases reported
Male	150
Female	56
Children	12
Total	**218**

Source: Aids Control Society, Thiruvananthapuram.

Mental Health

12.21 It is estimated that about 1% of the population at any given time suffers from mental illness. Similarly another 2 to 3% may suffer from mental disorders which may not be severe. Suicide is a major problem in Kerala, which is reported at 28.8 per one lakh people. According to Crime Record Bureau the suicide rate in Kerala is almost three times the national average of 11.6 per one lakh Kerala contributes 10.1% of all suicides in India while the state population is only 3% of India. Over the last decade, suicide rate in Kerala rose at a compound rate of 4.6%.

12.22 Mental Health Care in Kerala is confined to three mental hospitals at Thiruvananthapuram, Thrissur and Kozhikode. A few beds are also attached to Medical Colleges and a few district hospitals. There are 1714 beds in mental hospitals. But mental health personnel to deal with mental patients are relatively very few in Kerala. For instance, in Kerala there are only 85 psychiatrists in government service and 157 in private service. Number of psychiatrists is only

0.77 per one-lakh mental patients. Also there are no psychiatric nurses in Kerala. Details of facilities in Mental Health Centres are given below.

Table -12.10
Mental Health Services in Kerala

Sl.No.	Facilities	(Nos.)
1	Mental Hospital Beds (i) 3 Mental Hospitals (ii) Medical Colleges (iii) General Hospital	 1342 216 156
	Total	1714
2	Man Power (i) Private Service Psychiatrists (ii) Government Service Psychiatrists	 157 85
	Total	242
3	Clinical Psychologists	7
4	Psychiatric Social Worker	11

Blood units

12.23 There are 126 blood banks in Kerala registered under Central Drugs and Cosmetic Act. Out of these, 30 are in govt./autonomous sector and 96 are in private sector. During 2004, 2.68 lakh units of blood were collected and out of it 1.33 lakh units (49.6%) were from govt./ autonomous institutions and 1.35 lakh units (50.47%) were from private institutions. The five Medical Colleges together collected 81734 units of blood, which formed 30.4% of the total blood units collected. During 2005(till September) 2.05 lakh blood units were collected.

12.24 According to WHO norms, 70% of the beds are active and each such bed require 7 units of blood in a year. Therefore the demand for blood in the state is estimated at 2.13 lakh units in the Government sector. Market value of one unit of blood is around Rs. 700. Details of blood units collected during the last 3 years are given in Appendix.12.10.

Medical Education and Training

12.25 Three systems of medicine have separate education and training. Medical education, training and research under allopathy are implemented through government, Co-operative and Self financing sector. There are 5 medical colleges, 3 dental colleges, 3 nursing colleges and two Pharmacy colleges in the government sector with an annual intake of 700 for MBBS, 120 for BDS, 180 for BSc Nursing and 80 seats for B.Pharm. Also there are two medical colleges in the Co-operative sector with an annual intake of 100 each for MBBS. In the self- financing sector, six medical colleges, six Dental Colleges and eight Ayurveda colleges, 17 Pharmacy colleges and 42 Nursing colleges have been started during the last three years. Details of medical colleges and annual intake of students in Govt. and self-financing colleges are given in Table - 12.11.

Table -12.11
Details of Medical Colleges and intake of students for Degree course

Medical Colleges	Courses	Government		Cooperative aided		Self-financing		TOTAL	
		Number	Intake	Number	Intake	Number	Intake	Number	Intake
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1. Allopathy	MBBS	5	700	2	200	6	600	13	1500
2. Dental	BDS	3	120	--	--	6	340	9	470
3. Ayurveda	BAMS	3	160	2	90	8	400	13	650
4. Homoeopathy	BHMS	2	100	3	150	--	--	5	250
Total		**13**	**1080**	**7**	**440**	**20**	**1340**	**40**	**2870**
5. Nursing Colleges	BSc	3	180	--	--	42	2100	45	2280
6. Pharmacy Colleges	B Pharm	2	80	1	60	17	980	20	1120
Total		**5**	**260**	**1**	**60**	**59**	**3080**	**65**	**3400**

12.26 In addition to it 275 seats for PG Degree and 39 seats for Super specialty courses are available in these Government Medical institutions. More details of medical/paramedical courses conducted in government medical colleges are given in Appendix.12.11

12.27 Five Government Medical College Hospitals under Allopathy together have 8012 beds, which constitute 16.4% of the total beds in government sector. Inpatients treated was 4.86 lakhs during 2004 which shows an increase of 7% over 2003. Outpatients treated increased only marginally by 1% . But major operations conducted during 2004 increased by 24.9% over 2003. Details of beds, patients treated, major operations conducted delivery cases attended etc. are given in the Table-12.12 below.

Table 12.12
Beds, Patients treated and operations conducted in Government Medical College Hospitals during 2004

(No.)

Sl. No.	Medical college Hospitals	Beds (Nos.)	Inpatients	Outpatients	Major Operations conducted	Delivery cases attended
1	Thiruvananthapuram	2457	143756	793468	32140	21380
2	Alappuzha	1031	57634	362341	9544	9238
3	Kottayam	1280	69765	852654	17850	10987
4	Thrissur	987	56400	452560	14897	7658
5	Kozhikode	2257	159230	725680	30231	34678
	Total	**8012**	**486785**	**1178240**	**104662**	**83941**

Source: Directorate of Medical Education

Health Personnel

12.28 There are 25004 medical and para medical personnel attached to Directorate of Health Services. Out of which 3688 are medical officers, 77 dentists, 8687 senior/junior nurses and

12552 para medical staff. While analyzing doctor- population ratio in Kerala, for every 8633 population there is one medical officer under Directorate of Health Services. District wise analysis shows that there exists greater inter district variation. Doctor- population ratio varies from 6344 in Wayanad district to 11746 in Malappuram. Relevant details are shown in Appendix.12.12.

12.29 In the government medical colleges, there are 39 category of specialty departments and in each department there are four category of posts viz. Tutor/ Lecturer, Assistant Professor, Associate Professor and Professor. The total number of clinical/ non-clinical doctors in the five government medical colleges and attached institutions comes to 1706 doctors. Details are given in Appendix-12.13. The doctor- population ratio counting only doctors working in government system (allopathy) stood at 1.5903. In addition there are 33969 registered medical practitioners in allopathy system, 7388 under homoeopathy and 8436 in ayurveda/unani system. Data relating to the registered medical and para medical practitioners are shown in Appendices-12.14 and 12.15

Nursing Education

12.30 Nursing education is imparted by DHS run institutions, approved private institutions, medical colleges and nursing colleges in the self-financing sector. There are 15 government nursing schools under Directorate of Health Services which conduct General Nursing cum Midwives course(3 year) Out of the 15 schools, 4 schools conduct Junior Public Health Nurse course(18 months). Also there are three nursing colleges attached to medical colleges at Thiruvanathapuram, Kottayam, Kozhikode which conduct General Nursing, BSc Nursing and MSc Nursing courses with a total annual intake of 80,180 and 16 students respectively. Besides, there are 42 nursing colleges under self- financing sector with an annual intake of 50 students each. The relevant details are given in Appendix-12.16

Ayurveda

12.31 There are 115 Ayurveda Hospitals with 2744 beds and 747 Ayurveda dispensaries. Out of the dispensaries, 4 are visha chikilsa kendras, six siddha and one unani. Hospitals include 14 district hospitals, one Nature cure hospital, one Marma hospital, one Siddha hospital, one Panchakarma hospital, one Ayurveda Mental Hospital and 96 government hospitals. Details are given in Table-12.13. During 2004, 44.74 lakh patients were treated in ayurveda institutions and out of them 44.34 lakhs were outpatients and 0.40 lakh inpatients. District-wise details of Ayurveda hospitals, beds, dispensaries and patients treated are given in Appendix.12.17

Table 12.13
Distribution of beds in Ayurveda hospitals

(No.)

Sl. No.	Category	Number	Beds
1	District hospitals	14	950
2	Govt.hospitals	96	1664
3	Nature cure hospital	1	30
4	Siddha hospital	1	20
5	Panchakarma hospital	1	20
6	Marma hospital	1	10
7	Mental hospital	1	50
	Total	**115**	**2744**

Source: Directorate of Ayurveda

Ayurveda Medical Education

12.32 There are now 14 Ayurveda colleges in Kerala. Of which 3 are in Government sector, 2 are in private sector and 8 are in self-financing sector. These colleges have an annual intake of 650 students for BAMS/BSMS courses and 77 students for postgraduate courses. The details of annual intake capacity in Ayurveda Colleges are given in Appendix-12.18. Medical college hospitals attached to the medical colleges under government and private aided have a bed strength of 1176. During 2004, these hospitals together treated 5 lakh patients, and out of them 4.88 lakh were out patients. The details of beds and patients treated are given in Table 12.14

Table -12.14

Beds and patients treated in Ayurveda Colleges (2004)

(Nos)

Sl. No.	College Hospital	Beds	Out patients	In patients	Total
1	2	3	4	5	6
A.	Government				
1	Ayurveda College Hospital, Thiruvananthapuram.	634	114956	7094	122050
2	Ayurveda College Hospital, Thrippunithura.	139	165160	1040	166200
3	Ayurveda College Hospital, Kannur	100	30228	1300	31528
	Sub Total	**873**	**310344**	**9434**	**319778**
B	Private Aided				
1	Vaidyaratnam Ayurveda College, Ollur	153	67745	1433	69178
2	Vaidyaratnam P.S. Varrier Ayurveda College Hospital, Kottakkal.	150	109902	1487	111389
	Sub Total	**303**	**177647**	**2920**	**180567**
	TOTAL	**1176**	**487991**	**12354**	**500345**

Source: Directorate of Ayurveda Medical Education

Homoeopathy

12.33 There are 31 hospitals and 525 dispensaries under Directorate of Homoeopathy. Hospitals include 14 district and 17 other hospitals. Total bed strength of these hospitals is 970. Out of the 525 dispensaries, 494 are rural and 30 are urban. During 2004, 253.47 lakhs patients sought homoeopathy treatment and out of them, 0.30 lakhs were inpatients and 253.17 lakhs were out patients. District-wise details of institutions, beds and patients treated in homoeopathy hospitals are given in Appendix-12.19.

Homoeo Education

12.34 There are 5 homoeopathy medical colleges in the State. Out of which 2 are under government sector and 3 are in private aided sector. Total annual intake for BHMS course is 250 and for PG course is 60. Besides, the two government colleges conduct one year Nurse cum Pharmacist course with an annual intake of 60 students each. Details of courses and annual intake of students are given in Appendix-12.20. The hospitals attached to these colleges have 325 beds. During 2004-05, these hospitals together treated 4.36 lakh patients. Out of them 4.28

lakhs were out patients. Details of beds and patients treated under homoeopathy medical colleges are given in Table 12.15

Table -12.15
Medical College hospital wise distribution of beds and Patients treated in 2004-05

Sl.No.	Name of Hospital	Beds (Nos.)	Patients Treated		Total
			IP	OP	
1	2	3	4	5	6
	Government				
1	Govt. Homoeopathic Medical College Hospital, Tvpm	100	1546	133854	135400
2	Govt. Homoeopathic Medical College Hospital, Kozhikode.	100	1506	134103	135609
	Government Aided				
1	Dr. Padiar memorial Homoeopathic Medical College	100	3195	101646	104841
2	A N S.S.Homoeopathic Medical College	Nil*	260	26937	27197
3	Sree Vidhyadhiraja Homoeopathic Medical College	25	1480	31570	33050
	Total	**325**	**7987**	**428110**	**436097**

Source. Govt. Homoeopathy College, Thiruvananthapuram

**ANSS Homoeo Medical College is not having an independent teaching hospital. The Collegiate hospital is under the control of the Director of Homoeopathy.*

Family Welfare

12.35 Family welfare programmes in Kerala is implemented through a network of Government hospitals and Community Health centres in urban area and Primary Health centres in rural area. Family welfare programmes is also implemented by private hospitals and clinics as well as non-governmental organizations. Kerala's achievement in family welfare front has been impressive interms of major indicators viz. birth rate, death rate, maternal mortality rate, infant mortality rate, couple protection rate etc. State has achieved couple protection level of 72.13% in 2004. District wise details of family welfare programmes and couples protected by effective family planning methods are given in Appendices-12.21 and 12.22.

Expenditure on Medical and Public Health

12.36 Kerala spends fairly substantial amount on Medical and public health compared to other Indian States, which is evident from per capita government health expenditure. In Kerala it was Rs.238 in 2001-02 as against the all India average of Rs.191. Including the investment of Local Governments, per capita expenditure on health increased to Rs.267 in 2002-03 and to Rs.312 in 2003-04. Similarly expenditure on health to total State expenditure (Revenue & Capital only) was 5.4% in 2003-04 as against the national average of 4.6%. The expenditure on Health including family welfare during 2001-02 to 2004-05 is given in Table-12.16

Table – 12.16
Plan and non-plan expenditure on Medical and Public Health including Family Welfare.

(Rs. in Lakhs)

Year	Expenditure on Medical and Public Health (excluding FW)			Expenditure on Family Welfare	Total	% to GSDP
	Plan	Non-Plan	Total			
1	2	3	4	5	6	7
2001-02	6466.88	59120.91	65587.79	10270.57	75858.36	1.05
2002-03	8950.08	62264.16	71214.24	9459.40	84974.02	1.04
2003-04	7148.08	67424.31	74572.39	11324.98	85897.37	0.96
2004-05 (RE)	9182.33	82751.00	919833.33	9270.00	101203.33	1.01

Source: Detailed Budget Estimates 2005-06

CHAPTER - 13

HOUSING

Housing Status

The NSS 59th round survey (January-December 2003) on consumer expenditure & employment – unemployment situation in India gives comparative details on housing status in various states and all India. The survey results say that Kerala State has gone much ahead in solving the problems of housing in comparison with other States and Union Territories. While 75% of the households in Kerala were living in pucca houses, the all India level of it was only 63% in the year 2003. As regards the rural households, the percentage of people living in pucca houses in Kerala was 66% while it was only 44% at the all India level. On the other hand, not much increase had been registered in Kerala as against all India level on urban households living in pucca houses. The comparative statement of house holds living in kucha, semi pucca and pucca houses in Kerala and all India during 2003 is given in Table-13.1.

Table -13.1
Type of dwelling unit and structure per 1000 distribution

Category		Kerala		India	
		Urban	Rural	Urban	Rural
Katcha	Independent	46	92	37	197
	Flat	0	0	3	4
	Others	0	0	8	10
	All	47	92	48	211
Semi Pucca	Independent	91	248	99	315
	Flat	19	1	9	7
	Others	3	2	26	26
	All	113	251	134	349
Pucca	Independent	723	627	497	379
	Flat	71	5	195	26
	Others	47	16	125	34
	All	840	657	817	439

Source:- NSS Report No 490,Households Consumer Expenditure and Employment-Unemployment situation in India 2003.

13.2 In the case of ownership of land, 86 percentage of the households in Kerala are staying in their own houses, it was only 78 percentage at the all India level. Though there was not much gap on ownership of living houses in rural Kerala and rural India, the gap is much wider in urban areas. While 80 percentage of households in urban Kerala were living in their own houses, the position of it at the all India level was only 62 percent.The details are given in Table 13.2.

Table -13.2

Occupancy status of dwelling units –per 1000 distribution of households

Category	Kerala		All India	
	Rural	Urban	Rural	Urban
Owned	935	795	939	621
Hired	39	165	38	325
Others	26	40	23	54

Source:- NSS Report No. 490, Household Consumer Expenditure and Employment - Unemployment situation in India 2003.

Living Conditions – Use of energy for cooking

13.3 Though much development had taken place as part of technological improvement in the country, the primary source of energy for cooking was wood and chips in Kerala during the year 2003 (NSS 59th round survey January-December 2003 on consumer expenditure & employment – unemployment situation in India). In Kerala, 60 percentage of the households depended on wood as the primary source of energy while it was only 47 percentage at the all India level. In urban India, nearly half of the families were using LPG for cooking. The same trend was followed in Kerala also. The availability of LPG in rural Kerala was much higher in comparison with the villages in other states. In the case of rural Kerala, the LPG users were 20 percentage. But at the all India level, it was much less. The details on use of various sources of energy for cooking are giving in Table-13.3.

Table – 13.3

Primary Source of energy for cooking per 1000 distribution of households

(Nos.)

Item	Kerala		India	
	Rural	Urban	Rural	Urban
Coke	2	0	8	32
Fire Wood and Chips	788	416	749	200
LPG	198	501	91	554
Gober Gas	1	6	3	2
Dung Cake	2	0	93	18
Kerosene	1	10	19	130

Source:- NSS Report No 490, Households consumer expenditure and employment - unemployment situation in India 2003.

Governmental Agencies

13.4 The governmental agencies are mainly funding the house construction of the poor and drowntrodden Kerala State Housing Board, Kerala State Co-operative Housing Federation, Kerala State Co-operative Agricultural and Rural Development Bank, Kerala Police Housing and Construction Corporation Limited, Nationalised Banks. Rural Development Department, Fisheries Department, SC/ST Departments, Sainik Welfare Department and Kudumbasree are the major governmental agencies undertaking housing directly to the people. Besides, Local Bodies are also executing housing projects for the poor. The Kerala State Housing Board is the premium institution engaged in housing activities for the poor as well as others.

13.5 During 2002-06 these agencies/departments have provided assistance to construct 504541 houses. Out of it 1.30 lakhs were assisted during 2003-04, 1.55 lakhs during 2004-05 and 0.86 lakh during 2005-06 (upto 30.9.05) Nationalised Banks assisted house construction on a large scale during 2004-05. As much as 48% of the houses were assisted by them. Similarly 43291

(28%) houses were assisted by Rural Development Department under Indira Awaz Yojana. Houses constructed with assistance from different agencies during 2002-06 are given in Table 13.4. Agencywise assistance granted for the house construction is given in Appendix-13.1.

Table – 13.4
Houses Constructed by various agencies 2002-06

Year	Houses Constructed
2002-03	133228
2003-04	129564
2004-05	155349
2005-06 (up to 30.9.05)	86400
Total	**504541**

Kerala State Housing Board

13.6 Kerala State Housing Board (KSHB) is constructing houses for the economically weaker sections, low income groups, middle income groups and high income groups by considering their financial capability and selling houses to them at an affordable rate. In addition, commercial complex constructions are also undertaken by KSHB. Since its inception, Kerala State Housing Board constructed 91557 houses, other than Mythri, under various schemes till October 2005. Details of various housing schemes undertaken by the Kerala State Housing Board are given in Table 13.5

Table 13.5
Housing Schemes implemented by KSHB other than Maithri Housing Scheme

Sl.No	Scheme	Upto 2002	2002-03	2003-04	2004-05	2005-06 upto (31.10.05)
1	LIG cash loan scheme	1125035	167	150	34	-
2	MIG ,,	16506	72	59	12	1
3	HIG ,,	3009	-	2	-	-
4	EWS (1.4.88 to 31.3.96)	15608	-	-	-	-
5	MLA/MP	99	1	1	2	-
6	Flood Loan Scheme (1992)	15235	-	-	-	-
7	WJHS (Subsidy)	427	8	16	15	22
8	Jubilee	237	8	-	-	-
9	Central Govt. Employees HS	7	-	-	-	-
10	Public Housing Scheme	8271	143	95	-	-
11	Rental Housing Scheme	1875	-	-	-	-
12	Housing Complex	3609	-	-	-	-
13	Developed Plots	131	-	45	31	-
14	Chengalchoola Slum Clearance	616	-	-	-	-
	Total	90673	399	368	94	23

Source:- Kerala State Housing Board

13.7 Under Mythri – "a scheme for the construction of houses to poor" construction of 2,82,267 houses were undertaken of which 2,64,840 houses were completed and handed over to the beneficiaries. District-wise breakdown of house constructions undertaken under Mythri housing schemes by KSHB is given in Appendix 13.2. As regards financial assistance, Central

and State Government are extending their support to a certain extent. In the case of loan component, HUDCO is the main financer. During 2005-06 (up to 31.10.05), KSHB received Rs. 4552.69 lakhs as assistance, of which, Rs. 15.22 lakhs was from Central Government and Rs. 1611.95 lakhs as loan recovery. Board disbursed Rs. 4515.22 lakhs in 2005-06 up to October 2005. Agency-wise flow of funds to the Kerala State Housing Board from 2002-03 to 31.10.2005 is given in Table 13.6

Table 13.6
Fund raised by Kerala State Housing Board

(Rs. in lakhs)

Year	Fund flow		Others
	State Government	HUDCO	
2002-03	5120	-	2570
2003-04	4100	1480.79*	-
2004-05	5770	175	22.82
2005-06 Up to 31.10.2005	4500	-	4552.69

** This amount is after deducting Rs.628.56 lakhs refunded to Hudco.*
Source :- Kerala State Housing Board.

Kerala State Co-operative Housing Federation

13.8 Kerala State Co-operative Housing Federation is an apex body with 207 primary Co-operative housing societies affiliated to it. The main sources of fund to the Federation are the Share Capital contribution from member societies and State Government and borrowing from LIC,HUDCO and National Housing Bank. The main objective of the Federation is to finance the affiliated primary co-operative housing societies for the construction of houses. Federation assists low income, middle income and high income families for construction of houses through the primary societies. Though Federation mobilized only Rs. 1500 lakhs during 2003-04 as loan, that has been raised to Rs. 11,000 lakhs in the year 2004-05 (up to 30-9-2005) to strengthen the housing activities of the state. Fund flow to Kerala State Co-operative Housing Federation from 2002-03 to 2004-05 is given in the Table.13.7.

Table -13.7
Fund Flow to Kerala State Co-operative Housing Federation from 2002-03 to 2004-05

(Rs. in lakhs)

Year	Funding Agencies	Fund raised
2002-03	LIC	4000
	NHB	2500
2003-04	NHB	1500
2004-05 up to 30.9.05	NHB	4500.00
	Canara Bank	4000.00
	Federal Bank	2500.00

Source:- Kerala State Co-operative Housing Federation

13.9 During 2003-04 Federation assisted construction of 7612 houses. Of which 2574 were under EWS. Similarly during 2004-05 (upto 30.9.05) 10425 houses were assisted by the Federation, including 2489 (24%) houses under EWS. The details on assistance granted for house construction and amount disbursed by the federation are given in the Appendix.- 13.3.

Financial Institutions.

13.10 It was estimated that 1,20,000 houses are being constructed in Kerala in an year. A good number of financing institutions are also playing a better role for the house constructions along with the governmental agencies in the state. Institutions involved in housing finances in Kerala are Nationalised banks, HUDCO, HDFC, LIC Housing Finance Ltd., Sundaram Home Finance, GIC Housing Finance, HOUSEFED, Dewan Housing Finance, Canfin homes, BOB Housing Finance, Kerala State Co-operative Bank, Kerala State Co-operative Agricultural & Rural Development Bank Ltd., HSBC & KSHB. Consequent to the competitiveness taken place recently in bank deposit rate and lending rates, the rates of housing loans of the financing institutions are changing with in short spell of time. The prevailing housing loan rates (floating rates & fixed rates) of various financial institutions are given in Appendix 13.4.

HUDCO

13.11 HUDCO, since its inception in 1970, has made steady and significant strides in the field of housing in the country. Within a period of three decades HUDCO assisted construction of more than 143 lakh dwelling units in the country. HUDCO is granting assistance to institutions as well as to individuals. As on 28.11.05, HUDCO released Rs. 48305 lakhs for the Individual Housing in Kerala under their project.

13.12 Besides housing finance, HUDCO is funding the construction of sanitation units, development of plots and urban infrastructure projects. In Kerala, HUDCO granted funds to all local bodies who approached them. Besides, a good number of government and semi-government organizations received much financial assistance from HUDCO. Development Authorities, Police Housing & Construction Corporation, Kerala State Backward Classes Development Corporation, Kerala State Co-operative Bank, Kerala State Development Corporation for SC/ST, Kerala State Handicraft Apex Co-operative Society Ltd., Kerala State Housing Board, Kerala School Teachers & Non-teaching Staff Welfare Corporation, Kerala Urban & Rural Development Finance Corporation, Kerala State Co-operative Federation for Fisheries Development Ltd., and Kudumbasree were among the institutions which received assistance from HUDCO . When some of the local bodies have undertaken the total housing project for the poor, HUDCO extended maximum help to the local bodies for the successful execution of the project.

13.13 Similarly HUDCO provided assistance of Rs. 1.91 crores to different institutions during 2004-05 against Rs. 51.51 crores during 2003-04. Amount provided by HUDCO to individuals and institutions are given in the Tale 13.8.

Table 13.8

Assistance provided by HUDCO to individuals & Institutions

(Rs. Crores)

Year	Institutions		Individuals	
	Units Sanctioned	Amount Released	Nos.	Amount Released
Upto 2002	1212527	2014.60	1513	36.03
2002-03	24080	2.37	758	14.10
2003-04	6931	51.51	501	9.01
2004-05	6138	1.90	355	10.01
2005-06 (upto 28.11.05)	28222	-	115	3.22

Source : HUDCO

LIC Housing Finance Ltd.

13.14 LIC Housing Finance Ltd., is one of the housing financing institutions sanctioning loan in appreciable speed. Out of the 2531 sanctioned applications during the period 2002-03 to 30.9.05, in Thiruvananthapuram area loans were released to 2524 applicants and the gross amount released was Rs. 9240.49 lakhs. The beneficiaries were classified into various groups such as low income, middle income and high income, for the efficient processing of the files and easy disposal of the financial assistance to individuals. The details of amount sanctioned and disbursed in Thiruvananthapuram area office from 2002-03 to 2005-06 are given in Table 13.9.

Table 13.9

Loan Sanctioned and disbursed from the Thiruvananthapuram Area Office of LIC Housing Finance Ltd.,

(Rs. lakhs)

Individuals	Amount Sanctioned				Amount Released			
	2002-03	2003-04	2004-05	2005-06	2002-03	2003-04	2004-05	2005-06
LIG	1165.92	934.49	761.18	317.8	1072.74	887.99	715.39	294.23
MIG	1763.47	1871.36	1374.03	709.23	1646.73	1647.2	1287.97	710.25
HIG	310.25	364.12	279.74	182.2	281.25	342.87	231.49	122.38
Total	3239.54	3169.97	2414.95	1209.23	3000.72	2878.06	2234.85	1126.86

Source:- LIC Housing Finance, Thiruvananthapuram area.

CHAPTER 14

POVERTY AND SPECIAL PROGRAMMES FOR WEAKER SECTIONS

The Community Development Projects and the National Extension Service Schemes of 1950's and the Intensive Agricultural District Programme and the Intensive Area Development Programmes of 1960's were directed towards the uplift of the poor and the marginalised segments of the society. In the 1970's programmes such as Small Farmers Development Agency, Marginal Farmers and Agricultural Labourers Programme, Drought Prone Area Programme, Desert Development Programme and Food for work Programme were launched for further in the direct attack on poverty. The Minimum Needs Programme launched during the 5th Plan and the Integrated Rural Development Programmes started in 1978 were other land marks in alleviating Poverty and deprivation of the weaker segments. Programmes like TRYSEM, NREP, RLEGP were also targeted exclusively towards the poor and weaker sections. Despite all these national programmes, poverty still remain.

14.2 India's first Prime Minister Pandit Jawaharlal Nehru had said "after the attainment of independence, our urgent task has been to devote ourselves to the economic betterment of our people, to raise their standard of living, to remove the curse of poverty and to promote equality and social justice. Th extent to which we succeed or fail in this great task will be the measure of our achievement..." The 189 countries of the world leaders at the United Nations Millennium Summit in September 2000 adopted the Millennium Declaration, committing themselves to do their utmost to achieve key objectives of humanity in the 21st Century, including eradication of poverty, promoting human dignity and achieving peace, democracy and environmental sustainability. Customarily, poverty stands as a culprit at the back for all socio-economic evils like illiteracy, ill-health, malnutrition, insanitation and environmental sustainability. The Poverty is more in rural areas as compared to urban areas and more pervasive among Scheduled Castes and Scheduled Tribes.

14.3 Poverty Profile of the country is given below:

Poverty Profile in India

Indicators	Performance
Poverty trends	Faster decline in rural Head Count Index than Urban leading to a decline in rural – urban Poverty Gap Index ratio
Growth Performance	Whereas the Green Revolution resulted in growth of agricultural output, manufacturing output suffered a bottleneck in the 70s and 80s.
Redistribution	Little change in rural-urban inequality; small rise in urban inequality; small decline in rural inequality.
Poverty Profile	Poverty is mainly rural. Gender, literacy, land ownership, employment status, caste and location closely associated with poverty.

Source -International Fund for Agricultural Development, Rural Poverty Report 2001.

14.4 Though Kerala has achieved remarkable progress in the quality of life of its people. Poverty persist in certain pockets and among certain outlier groups. Kerala has had the sharpest

reduction in poverty in the last 30 years in India. Land Reforms, basic minimum services and universal public distribution system with reasonable food security, a wide net of social security schemes benefing about 38 lakh people and remittances from emigrants have helped Kerala to achieve high levels of human development and low levels of human poverty.

14.5 Poverty alleviation programmes have been designed to address poverty. Micro credit-linked programmes provide a package of services including credit and subsidy to set up micro enterprises. Wage employment programmes address the issue of transient poverty. Infrastructure development and basic services contribute to the well-being of the rural people. For the successful implementation of these programmes we require an appropriate policy frame work, adequate funds, and an effective delivery mechanism. Past experience shows that neither the availability of funds, nor the design of the rural development programmes, is likely to eradicate rural poverty. The success of these programmes ultimately depends on the capability of the delivery system to absorb and utilise the funds in a cost-effective manner. An effective and responsive field level machinery with a high degrees of commitment, motivation, professional competence and, above all, integrity has been recognized as one of the prerequisites for the successful implementation of the anti-poverty programmes.

14.6 An effective delivery system has to ensure people's participation at various stages of the formulation and implementation of the programmes, transparency in the operation of the schemes and adequate monitoring. International experience shows that greater functional and financial devolution to local governments results in higher allocation of resources for social sectors and more efficient use of resources. Such trends in social spending have been witnessed in many Indian states as well.

14.7 Kerala is seeking to achieve a breakthrough in participatory poverty reduction through Local Governments and Kudumbasree programmes implemented by the State Poverty Eradication Mission through the Local Governments. (See Box 14.1)

14.8 As per the NSSO 55th round (1999-2000) Kerala's poverty is 9.35% in rural areas and 20.27% in urban areas. The 1999-2000 data show Kerala's Poverty at 12.72% against the All India rate of 26.30%.

14.9 The All India Poverty ratio is estimated (Appendix 14.1) to decline to 19.3 per cent in 2006-07 from to 35 per cent in 1993-94, if the targeted macro-economic and sectoral projections of the rate of growth during the Tenth Plan are achieved, However, most of the poor would be concentrated in a few states-Bihar, Madhya Pradesh, Orissa, Uttar Pradesh, West Bengal and the North-Eastern. Poverty will also remain in some pockets of Kerala, Andhra Pradesh, Karnataka, Maharashtra and Rajasthan. With the overall growth target of around 8 per cent accompanied by high growth rate in agriculture the states like Haryana, Himachal Pradesh, Goa, Gujarat, Punjab, Chandigarh, Delhi are likely to have negligible levels of poverty ratio. Taking into account the migration factor from the relatively poorer states to the better-off states, the poverty level in some states has been kept at 2 per cent.

14.10 Recognising that the poverty alleviation lies much beyond the realms of providing basic amenities to the poor, the Kudumbasree Mission has evolved a model of self-sufficient, self-reliant and sustainable panchayats, which would, in addition, try to tackle the problems related to child development, geriatric care, education of mentally and physically challenged, adolescent care, women empowerment, enterprise development and employment promotion. The idea is to secure total local development both in the economic and social spheres.

Bala Sabha

14.16 During 2005-05, The Balasabha, which intends to prevent intergenerational transmission of poverty, has been extended to the rural areas also. So far 26280 balasabhas have been formed with 470504 children.

Destitute Identification, Rehabilitation & Monitoring

14.17 Kudumbashree has formulated a specific project with the assistance of the Central Government to reach out the downtrodden and neglected destitutes scattered through out the state. 389 Village Panchayats and 4 Municipalities have taken up the project and are in various stages of implementation.

IT Enabled services to the Poor

14.18 An innovative component in the Destitute Identification, Rehabilitation and Monitoring project is the online monitoring system built in the project. As per the project, the CDS Office will be computerized in these panchayats where the destitute rehabilitation project is taken up and the system provided would be best utilized for the benefit of the poor.

Kerashree &Vidhyashree

14.19 In the micro enterprise sector Kudumbashree has always been creating new models for the rest. Kudumbashree has brought out a new branded coconut oil in the brand name of Kerashree. Sixty Seven Kerashree units started functioning in the State. Similarly in the IT education sector also a revolutionary experiment was made by the Kudumbashree by setting up 148 Vidyashree units in schools to impart computer education to the students studying in 8th, 9th and 10th standards as per the curriculum prepared by the education department on a micro enterprise mode. The educated women entrepreneur groups set up the computer laboratories by availing bank loan.

Micro Enterprises in Rural areas

14.20 The State budget provide support to set up micro enterprises in the rural areas in the pattern of the SGSY. So far 200 group micro enterprises of women have been set up in the rural areas. The activities are diverse and innovative in nature. Apart from this, about 30,000 individual enterprises are also functioning in the rural areas.

Coconut tree climbers training

14.21 Recently an innovative equipment has been invented for facilitating to climb the coconut tree at Chemberi, Kannur. 44 youths were trained from different Grama Panchayats. The training is for 7 days. A trained youth can climb a 30 feet tall coconut tree in 2 to 3 minutes.

Self sufficient, Self reliant and sustainable CDS

14.22 The scaling up of Kudumbashree programme to rural areas has been completed and the CDS system is in vogue in all the Grama Panchayats. But still there is a lot to go to achieve the end goal of Kudumbashree. Therefore it has been decided to develop a few panchayats, at least one from each district as a model in poverty allcviation. With the objective of total eradication of poverty by 2005, the novel programme 'Self sufficient, Self reliant and sustainable CDS' has been launched. The Venganur Grama Panchayat in Trivandrum district, Kodakara Grama Panchayat in Thrissur District and Munniyur Grama Panchayat in Malappuram district have voluntarily come forward to take this venture representing three regions of the State. (See Box 14.2)

14.11 Kudumbashree has been identified as one among 15 best practices in governance in India by the Planning Commission and the UNDP. NABARD, various government departments and commercial banks have been making contributions in no small measure towards the realisation of the mission objectives. The success so far achieved in the implementation of various schemes also proves what a committed, efficient, empathetic and forward-looking bureaucracy could accomplish with regard to development schemes. Perhaps other states, in particular in the north-eastern and central regions where the poverty ratio exceeds 30 per cent, can draw a lesson from the Kerala experiment and replicate Kudumbasree for comprehensive community development.

Box –14.1

Poverty – Need for a New set of Norms

In the changing economic scenario, a new set of norms have to be evolved to determine poverty, moving away from the food-centred approaches to a set of broader entitlements which are essential for a decent quality of life. Even among the poor, the profile differs widely with at least three broad categories – destitute, very poor and poor, each group requiring a different set of strategies for the uplift. What is required is to evolve an appropriate measure focusing on relative poverty even while retaining the whole measure of absolute poverty.

What is called for is the development of a meaningful process of participatory planning for poverty reduction through empowered groups of the poor developing sub plans for poverty reduction as in the context of Panchayati Raj.

The Kerala experience in operationalising this idea through the "Kudumbashree" programme could probably be adopted in different parts of the country.

The Key elements of Kudubashree are:

1. community-based identification of the poor on the basis of transparent criteria.
2. all inclusive organization of the poor through women
3. linkages with panchayats;
4. confidence building to access entitlements;
5. capacity building to access economic opportunities;
6. social security through mutual thrift and mutual help;
7. social capital building through regular meetings and interactions;
8. participatory planning for poverty reduction;
9. tackling multiple dimensions of poverty;
10. demand-based convergence for services;
11. excellent out reach and feed back mechanism; and
12. potential for expansion to cover children, youth and old.

Kudumbashree system facilitates micro level interventions to reduce poverty and accurately monitor poverty reduction initiatives where it happens.

An innovative extension of this programme called "ASRAYA" has been implemented in about one-third of Kerala to provide community based social security to the poorest of the poor.

Although Kerala has made great strides in alleviating poverty to a significant extent, the social, human and political dimensions of poverty, 30% to 40% of our people still struggle under the burden of economic poverty. It is mainly due to dearth of adequately remunerative employement.

Source : 51st Meeting of the National Development Council-Midterm Appraisal of the 10th Five Year Plan - 27th and 28th June 2005, New Delhi . Speech by Chief Minister of Kerala.

Kudumbashree Programmes

14.12 The State Poverty Eradication Mission implements this programme by organizing the poor by creating community based structures of women below poverty line with focus on self help, demand-led convergence of available services and resources under the leadership of the Local Governments. The key components of the programmes are.

- Enabling certain minimum needs infrastructure, setting up of micro enterprises and capacity building of the poor.
- Providing high quality support services for the design and implementation of self employment ventures.
- Setting up of Challenge Fund to support pro-poor policies of the Local Governments, a Technology Fund to support transfer of technology relevant for poverty reduction, an Innovation Fund to support path breaking innovations in poverty reduction and a common Revolving Fund to provide seed capital for micro enterprises.
- Expansion of Asraya. – The Destitute Identification, Rehabilitation & Monitoring Project which was launched during 2002-03 in 101 Village Panchayats and later expanded to another 78 Village Panchayats during 2003-04. The programme is targetted to be universalized in the next two years.
- Generating jobs for educated youth.
- Hiring young professionals to work in the District Missions for one or two years on payment of honorarium.
- Special schools for physically and mentally challenged.
- Conduct an evaluation study on Kudumbashree.

Community Based Organizations of the Poor

14.13 The Kudumbashree programme which covered the entire rural area in three phases formed 147989 NHGs, 13262 ADS and 991 CDS. The Community Based Organizations, which has coverage of 2923425 families, mobilized a sum of Rs 537.01 crores as thrift fund and disbursed credit to the tune of Rs 1259.91 crores to its members. The Panchayat functionaries and CDS /ADS Office bearers were trained utilizing the Plan funds for strengthening the CBOs. A massive training programme for the NHG volunteers @ 5 person per NHG is being planned for the current year. The total number of persons for the training may come to more than 5,55,000. (See Appendix 14.2)

Linkage Banking

14.14 The linkage-banking programme was launched during 2002-03 after proper grading the NHGs as per NABARD norms. During 2002-03, and up to November 30th 2005, 93979 NHGs were graded and 66362 NHGs were linked with banks. A sum of Rs 285.43 crores has been made available to the NHGs as loan. (See Appendix 14.3)

Lease Land Farming

14.15 The lease land-farming programme, initiated in the rural areas during year 2002-03, has been successfully extended to 895 Grama Panchayats. In these panchayats 33519 NHGs consisting of 327063 families have participated in the programme. Through this programme 53237.36 hectares of land has been brought under cultivation. The programme is successfully continuing during 2005-06 year also. (See Appendix 14.4)

Box 14.2

Kudumbasree – The Journey so far

The significant achievements of Kudumbashree are listed below:

- Kudumbashree Programme has been extended through out the State
- Formed 16712 NHGs of BPL women
- Thrift Fund collection crossed Rs 533.01 crores
- Internal lending to the tune of Rs 1307.87 crores.
- Under Linkage Banking scheme, 9979 NHGs were graded and 66362 NHGs linked with banks.
- Credit flow Rs 285.43 crores through Linkage banking
- Formed 20280 balasabhas with 470504 children
- Bhavanashree - 18981 houses constructed using credit amounting to Rs 6571.78 lakh from banks
- Encouraged the NHG members to involve in leased land farming and 53237.36 acres of land brought under cultivation with the involvement of 327063 families in 895 Grama Panchayats
- Started 115 Kerashree units in Thrissur, Malappuram, Kozhikkode, Kannur and Kasaragode Districts
- Asraya - Destitute Identification, Rehabilitation and Monitoring (DIRM) Programme launched in 389 Grama Panchayats and 4 Municipalities
- Started 148 Vidya shree Units under IT @ Schools Programme
- 342 Social Forestry Nurseries set up in 227 Grama Panchayats with the training support of Forest department.
- Performance Improvement Programme (PIP) for Micro enterprises. As on 31/08/2005, 42 batches of training completed with participation of 2604 entrepreneurs.
- Cluster Development Programme with the support of Industries department
- Multi purpose Job clubs formed with the financial support of SC development department
- Loan linked Micro Housing scheme launched with the support of Banks
- Launched Self sufficient, Self-reliant and Sustainable CDS Programme (S³ CDS) for model building in 227 grama panchayats
- Yuvashree - Employment opportunities to 50000 educated youth launched in the State and 8500 youths covered
- SJSRY – under USEP (Urban Self Employment Programme), 1615 individuals and 139 group enterprises were set up benefiting 3005 people. 4736 entrepreneurs were trained for enterprise development
- The special SJSRY programme for Mattanchery (PAM) was started with an outlay of Rs 466 lakhs. 451 individuals and 70 group enterprises have been started benefiting 1151 families
- PAM - under UWEP component, additional building infrastructure is being created in three government hospitals. The total cost of the work is Rs. 146.67 lakh.
- Completed an intensive training programme for all the CDS presidents / Vice presidents of the 59 ULBs
- SJSRY – 74 Clean Kerala Business units were set up covering all the wards of Kozhikkode Corporation
- NSDP the basic amenities for people living in slums were upgraded by supporting upgradation of 561 houses, construction of 15852 latrines and wiring of 1635 houses.
- NSDP- Community Infrastructure was developed by constructing of 37 PHCs, 38 Community Halls and 5 Anganwadis
- VAMBAY – 12791 houses were completed in 51 ULBs across the state

Source : Kudumbashree, Government of Kerala

ASRAYA

A Programme for community based rehabilitation of destitute families.

14.23 Asraya is the first integrated programme for tackling the problems of the poorest of the poor who live at the margins of the economy, society and polity without a voice or the power of choice, with no capabilities to access entitlements – the really 'excluded'. It originated from the realization that even in a State like Kerala, the benefits of Anti-Poverty policies and programmes do not reach the absolutely poor, who constitute only about two percent of the population.

Box 14.3

The key features of the programme are:

1. It is a sub-programme of Kudumbashree, the highly successful anti-poverty mission-mode programme implemented through community based organizations of Kudumbashree; 159739 Neighbourhood Groups (NHGs) at the local level, 14103 Area Development Societies (ADSs) at the Village Panchayat/Municipal Ward level and 1050 Community Development Societies (CDSs) at the level of the Village Panchayat/Municipality. This three-tier network organization include every poor family in the State and each family being represented by a women Total membership of 32.02 lakhs.
2. These CBOs identify the poorest of the poor using socially accepted objective indicators of poverty.
3. The Village Panchayats and Municipalities are the real planners and implementers of this project with Government playing the role of an activist facilitator.
4. After transparent identification participatory plans are prepared for each destitute family on the basis of close interaction with the family members and on-site verification of details.
5. The plans are implemented by converging services and resources from different sources including PDS, Special Nutrition, Health, Remedial Education, Pensions, Basic Minimum Services, Skill Development, etc. Gaps are filled up with funds from Panchayats and Municipalities with the State share being limited to 25% of the project cost or Rs.10 lakhs which ever is lower.
6. The entire programme is monitored regularly. The destitute families would be taken care of till they achieve a minimum standard of life. Thus Asraya is not one-time assistance but is a promise of continuous support till the objective is realized.

Source : Kudumbashree, Government of Kerala

14.24 The programme now under implementation in 389 Village Panchayats and 4 Municipalities is proposed to be extended to all the 999 Village Panchayats, 53 Municipalities and 5 Corporations. Investment requirements from the running projects is calculated at Rs. 402.63 crore that for the scaling up of the project. Government of India contribution is expected at least 50% of the cost.

14.25 As of now, there is no scheme akin to Asraya in India targeting the poorest of the poor. Thus, Asraya is a pioneer, developing a model, which can be adapted by the rest of the country. Hence, special support from Government of India is expected.

14.26 The destitute identification, rehabilitation and monitoring programme is an extension of the poverty eradication Mission of Kudumbashree through the Community based organizations of poor women. The Mission has rekindled their hope and sensitised the Local Self Government institutions about their new roles in focussed poverty eradication and community development. The concept of Asraya was developed through a process. The Mission identified three families each from 14 districts and prepared detailed case studies highlighting their problems. During

2002-03, 101 Village panchayats identified 8239 families and in 2003-04, 78 Village Panchayats identified 6551 families for rehabilitation. The total project cost of 179 village panchayats was Rs 74.18 crores. During 2004-05, another 185 Village panchayats and 4 Municipalities have taken up the project. As of date 389 village panchayats and 4 Municipalities have taken up the project and are in various stages of implementation.

The Destitutes

14.27 The destitutes are the poorest of the poor. They are the outliers of the development scenario in the negative extreme. They live at the margins of the economy, society and polity. They do not have a "voice" or the power of "choice". They face the worst forms of deprivation and lack of access to the basic minimum services. They are exposed to all forms of vulnerability and do not have any safety net against risks. Their income is below subsistence and they are dependent. These faceless powerless people lack capabilities and are not aware of their entitlements nor can they access them. They neither compete nor bargain. They drift pushed by circumstances. Severity of destitution is by unfavourable physical, gender or caste status. That is, disability being a woman, being a widow, belonging to a Scheduled Caste or Tribe can singly or in combination aggravate the suffering. The collapse of the traditional social support systems has orphaned the destitutes. They are sometimes objects of charity. But they are never subjects of development. They have to be invested with identity, personality and empowered to stand on their own. Only an Antyodaya approach can reach them. Only care and handholding can lift them. They can develop only after a period of well-targeted well-designed welfare.

Identification of Destitute Families

14.28 The destitute families are identified following the 9 point risk indices developed by the State Poverty Eradication Mission.

14.29 In the case of destitute family, all the risk factors or at least eight out of the nine are to be positive. To have a more proper identification the presence of any of the following factors can also be taken in to account in addition to the nine point risk indicators.

(i) Those family who have no landed property to create their dwelling place (living in *puramboke* land, forest land, side bunds of canal and paddy fields etc)
(ii) Those who are spending the night time in public places, streets or in the verandas of shops for sleeping.
(iii) Families led by unwed mothers, single parent or those separated women living in distress
(iv) Families led by young widows who are economically poor or having women who had passed the age of marriage and remains unmarried.
(v) Families having members who are subjected to severe, chronic and incurable diseases or physically and mentally challenged
(vi) Families having no healthy member to win bread for the family
(vii) Beggars who resort beggary as a vocation.
(viii) Women subjected to atrocities

14.30 The identification is done very transparently through the Neighbourhood Groups (NHG) network of Kudumbashree. The members of Neighbourhood Groups belong to poor families but need not be destitutes. At the same time, since the members of Neighbourhood Groups belong to a specific geographical area, they know who are all the specified destitute families within their Neighbourhood better than anyone else. The preparation of Micro Plan using the Risk Indices and problem identification mechanism also enable them to identify the destitute families in their vicinity.

Special Parameters for identifying destitute families in Urban area.

In Urban areas to suit the requirements of the Urban situation different parameters have been designed to identify the destitute families. They are given below.

1. **Spending the night-time in Public places, streets or in Verandahs of Shops for sleeping.**
2. **Young widows who are economically poor or women who have the passed the age of marriage and remain unmarried.**
3. **Beggars who resort beggary as vocation**
4. **No healthy member to win bread for the family below the age of 60.**
5. **Women subjected to atrocities**
6. **Families having street children / children in Juvenile Home or Poor Home**
7. **Families having children below the age of 14 who work to earn money for the family.**
8. **Families having Commercial Sex Workers**
9. **Families having women members who live in Abala Mandiram.**
10. **Family living in Slums**

14.31 After the initial identification of destitutes at NHG level the list is consolidated at Area Development Society (ADS) for the ward and further at Community Development Society (CDS) for the Panchayat / Municipality level.

Expansion of project to the entire State

14.32 Out of the 661 Local Self Governments to be covered 340 Village Panchayats and 10 Urban Local Bodies could be covered during 2005-06. The remaining 270 Village Panchayats and 41 Urban Local Bodies including 5 Corporations could be covered during 2006-07.

Bench Marking & Project Report Preparation

14.33 After identification of destitute families, a participatory need assessment of each destitute family will be conducted by a team consisting of members of CBOs, elected representatives of people and officials. In the participatory need assessment, the present situation of the family will be analysed in detail and their multiple deprivations identified. For the rehabilitation of each family detailed project consisting of different components will be prepared. This project report also becomes a detailed narrative report on their present status. At LSGI level all individual projects are consolidated and the Asraya project of the LSGI prepared. In addition to this, a set of photographs will be taken and digitized so that in the implementation of the project each stage of progress could be monitored effectively in comparison to the original photographs. Based on the past experience, preparation of the project report, photographs and documentations approximately costs Rs 75 lakhs.

Components of the Project

14.34 The past experience in implementing Asraya Project revealed that each destitute family face multiple deprivations and needs a holistic approach for their rehabilitation. Taking this into account the Government of Kerala has passed orders formulating package of care services to address the various problems faced by them. The multiple problems identified among the destitute families in the earlier phase of implementation are listed below.

1. Food
2. Health
3. Pension

4. Education
5. Land for Shelter
6. Shelter
7. Shelter upgradation
8. Drinking water
9. Safe sanitation
10. Skill development
11. Employment Opportunity
12. Counselling & Awarencss creation
13. Household articles & utensils
14. Assistance for marriage

14.35 The per family investment on an average comes to Rs. 53,000/- and the average destitute family per panchayat is 83. In the Urban Local Bodies and especially in Corporations, the number of destitute families is likely to be 1500. While expanding the project to the remaining 610 Village Panchayats and 51 Urban Local Bodies it is envisaged that approximately 70000 destitute families would be benefited. From the past experience the per-capita requirement for the total rehabilitation of a family is Rs 55000 and therefore the total rehabilitation of 70000 families in the 661 LSGIs, the cost for different components in the package of care services would be Rs. 385 crore.

Other Major Poverty Alleviation programmes

14.36 Other major poverty alleviation programmes implemented in the state through Panchayat Raj Institutions are Swarnajayanthi Gram Swarozgar Yojana (SGSY), Indira Awaz Yojana (IAY) and Sampoorna Gramin Rozgar Yojana (SGRY)

Swarnajayanthi Gram Swarozgar Yojana (SGSY) (25% State Share)

14.37 The objective of this programme is to provide self-employment to the poor. It has the following activities.

- Establishing viable micro enterprises by the poor in the rural areas, by utilising the local economic potential. Emphasis is given to group approach.
- Covering all aspects of self employment viz. formation of self help groups, capacity building, planning activity clusters, infrastructure build up and arranging technology, credit and marketing. This programme adopts a project approach for each key activity.
- The objective is to cover 30% of the rural poor in each Block Panchayat during the Tenth Plan . Subsidy under SGSY is uniform at 30% of the project cost subject to a maximum of Rs. 7500. In respect of SC/STs subsidy is 50% subject to a maximum of Rs. 10,000. Group Swarozgaris are eligible for 50% of the project cost or subsidy subject to a maximum of Rs. 1.25 lakh. At least 50% of the beneficiaries must be from Scheduled Castes and Scheduled Tribes, 40% from women and 3% from disabled.
- Assistance will be provided to the ongoing three special projects at Alappuzha, Kozhikkode and Malappuram and any special project that may be sanctioned in the ensuing financial year for implementation through any agency or department.

14.38 During 2004-05 and 2005-06 (October), 1503 self Help Groups started economic activities and out of the total members 31% are Scheduled Castes and Scheduled Tribes. In the case of individual sworgaris, total number of families is 7121 of which SC represents 74%. The physical achievement under the programme is given in Table. 14.1

Table 14.1
Achievement of Swarnajayanthi Gram Swarozgar Yojana (SGSY) during 2004-05 & 2005-06

Sl. No	Year	Self Help Group (members covered) (Nos)				Individuals (Members Covered) (Nos)			
		SC	ST	Others	Total	SC	ST	Others	Total
1	2	3	4	5	6	7	8	9	10
1	2004-05	4734	608	12656	17998	3983	312	1013	5308
2	2005-06 (Oct 2005)	2554	187	5033	7774	1307	73	433	1813
	Total	**7288**	**795**	**17689**	**25772**	**5290**	**385**	**1446**	**7121**

Source - Commissionarate of Rural Development

Indira Awas Yojana (IAY) (25% State Share)

14.39 The programme provide dwelling units to the homeless Scheduled Castes and Tribes, freed bonded labourers and other rural poor below poverty line by providing grant at the rate of Rs. 27,500 per house. The beneficiaries should have at least two cents of land for house construction. The house constructed under this scheme should have not less than 20 sq.mts of plinth area, but no plan or design is prescribed

14.40 Of the total allocation for Indira Awas Yojana, 20% is earmarked for upgradation of existing kutcha houses into pucca houses. The houses constructed under various earlier schemes like NREP, RLEGP and JRY before 12 years and not fit for occupation at present will also be supported . The maximum assistance under upgradation is Rs. 10,000 as grant.

14.41 Total number of new houses constructed during 2004-05 and 2005-06 (October) are 38,792. Houses constructed for SC,ST and others are 21204 (55%) 2005 (50%) and 15583 (40%) respectively.

14.42 Total number of houses upgraded is 15210. Of which the number of houses upgraded for SC,ST & Other groups is 8375 (55%), 943 (6%), 5892 (39%) respectively. Total fund available for this scheme 2004-05 was Rs. 8212.78 lakh and the expenditure incurred was Rs. 7839.16 lakh (95%). The physical and financial achievement is shown in Table 14.2 and it shows that higher benefits have flown for SC/ST groups.

Table 14.2
Physical Achievement of Indira Awaz Yojana during 2004-05 & 2005-06

Sl. No	Year	New Houses constructed				Houses Upgraded			
		SC	ST	Others	Total	SC	ST	Others	Total
1	2	3	4	5	6	7	8	9	10
1	2004-05	15900	1383	11547	28830	6171	619	4211	11001
2	2005-06 (Oct 2005)	5304	622	4036	9962	2204	324	1681	4209
	Total	**21204**	**2005**	**15583**	**38792**	**8375**	**943**	**5892**	**15210**

Sampoorna Gramin Rozgar Yojana (SGRY) (25% State Share)

14.43 This is a Centrally Sponsored Scheme introduced in August 2001, by merging Employment Assurance Scheme and Jawahar Gram Samridhi Yojana. The scheme is to provide wage employment in rural areas through creation of durable public assets. The Central Government provides food grains of value equivalent to the cash component, free of cost, under

the scheme at 5 kg per manday @ Rs. 6.20/kg. The balance wage is to be paid in cash as per the notified minimum wages. Employment generated under this programme during 2004-05 and 2005-06 is given in Table 14.3.

Table 14.3
Employment Generated under Sampoorna Gramin Rozgar Yojana during 2004-05 & 2005-06

(Lakh Man days)

Sl.No	Year	SC	ST	Others	Total
1	2	3	4	5	6
1	2004-05	42.77	4.29	71.85	118.91
2	2005-06 (Oct 2005)	17.31	2.34	32.35	52.00
Total		**60.08**	**6.63**	**104.20**	**170.91**

Table shows that 60.97% of the beneficiaries are from general population.

14.44 The scheme provides the following:

- additional wage employment in rural areas, and food security along with creation of durable social, economic and community assets and infrastructure development for the benefit of the poor.
- Priority is given to protection of traditional water resources, water harvesting and creation of infrastructure like markets, anganwadis, schools, dispensaries, veterinary hospitals etc.

14.45 The programme is implemented in two streams; one at the district and block panchayat level and the other at the grama panchayat level. Of the total fund available, 50% is earmarked to District and Block Panchayats at the ratio of 40:60. In this stream, 22.5% of the funds is earmarked for individual beneficiary schemes for Scheduled Castes and Tribes for providing economic and social assets and also for undertaking developmental works in their individual land. The balance 50% of the funds is earmarked for the Grama Panchayats. The Financial achievement under SGSY, IAY and SGRY are shown in Appendix 14.5.

14.46 Major Findings in the Concurrent Evaluation study on Sampoorna Gramin Rozgar Yojana by Centre for Rural Management, Kottayam. Beneficiaries covered under the Survey were 2585; 2056 men and 529 women.

- The percentage of female beneficiaries is found to be comparatively higher in Kozhikkode (23.37%) Palakkad (26.42%) and Thrissur (25.35%). It is much less in Pathanamthitta (12.32%), Kollam (13.64%) and Wayanad (13.73%). The selection procedure of the SGRY beneficiaries is not in favour of women.
- Scheduled Castes accounted for 39 per cent of the beneficiaries and Scheduled Tribes accounted 6% .
- Three fourth of the beneficiaries were non-agricultural unskilled wage earners. A little more than one tenth of the beneficiaries were agriculture workers. Kasaragod has the highest percentage (26.97%) of agricultural workers where as it is lowest (5%) in Pathanamthitta District.
- Nearly four fifths of beneficiaries lived in nuclear families.
- Four in every hundred beneficiaries had a physically challenged parent.
- Families living below poverty line accounted for 87 per cent of all families in the sample

- 94 per cent of the families had some land
- 2 per cent had no house
- 69% of the beneficiaries lived in semi – pucca houses 13% lived in Kutcha houses.
- 96% of the respondents benefited through wage employment, 2 percent received material benefit and a small minority managed to receive both benefits.
- 84 per cent of the beneficiaries had no difficulty in accessing the benefit from the scheme.
- 68 per cent of man-days were generated.
- The average wage received per day of work by a worker was Rs. 132.45.
- A total of 69537 tonnes of food grains (83%) were distributed out of the total of 83934 tonnes.

National Rural Employment Guarantee Act , 2005

14.47 The National Rural Employment Guarantee Act, 2005 is a revolutionary step in the direction of eradicating poverty and unemployment in rural areas. The Act seeks to enhance the livelihood security of the households in Rural areas of the country by providing at least one hundred days of guaranteed wage employment to every housc hold whose adult members volunteer to do unskilled manual work. Every household whose adult members volunteer to do unskilled manual work would be entitled to get registered with the Grama Panchayat and get a job card. They may submit their names, age and the address of the household to the Grama Panchayat at the village level for issuance of a job card. It shall be the duty of the Grama Panchayat to register the household, after making such enquiry as it deems fit and issue a job card containing such details of adult members of the household affixing their photographs. Every registered household would be entitled to at least 100 days guaranteed employment at the wage rate. The Act provides that the wage rate specified from time to time under any such notification shall not be at a rate less than sixty rupees per day. Every eligible applicant, subject to the household entitlement, is entitled to get work within 15 days for as many as he/she applies. Applications for work must be for at least fourteen days of continuous work. A period of employment shall ordinarily be at least fourteen days continuously with not more than six days in a week.

14.48 If the eligible applicant is not provided employment within 15 days of receipt of application or from the date from which the applicant seeks employment (in the advance applications), he or she shall be entitled to a daily unemployment allowance, in cash.

14.49 The Central Government will provide 90% of funds and State Government will provide for 10% of the total funds.

14.50 The Central Government shall meet the cost of the following:

- Amount required for payment of wages for unskilled manual work.
- Upto 3/4th of the materials cost of the scheme including payment of wages to skilled and semi-skilled workers subject to the provision of Scheduled II of the NREG Act.

The State Government shall meet the cost of the following:

- The cost of unemployment allowance payable under the scheme.
- 1/4th of the material cost of the scheme including payment of wages to skilled and semi-skilled workers subject to the provisions of Schedule II of the NREG Act.

14.51 The Central Government by notification shall establish a fund called National Employment Guarantee Fund for the purpose of this Act and after due appropriation made by Parliament, credit by way of grants or loans such sums of money as the Central Government may consider necessary to the Fund. The State Government shall also establish a fund called the State Employment Guarantee Fund. Government of India has selected 200 districts from the country to implement the Act in the first phase in which two districts from Kerala viz, Wayanad and Palakkad are included. The scheme will be extended to all the districts of the country with in five years benefiting about 5 crore households. The salient features of the National Rural Employment Guarantee Act 2005 is given in the following Box 14.4

Box 14.4

Salient Features of the National Rural Employment Guarantee Act - 2005

- Every rural house hold will have right to livelihood through guaranteed 100 days of employment in a financial year at their own place.
- This scheme is a demand driven scheme as every household will have right to demand 100 days of employment from the government.
- If State Government failed to provide 100 days employment on demand to any household then compensation will be paid by the State Government to the eligible applicants subject to household entitlement in terms of unemployment allowance as per rates prescribed. The rate of unemployment allowance will be 1/4th of the wage rate for the first 30 days and ½ of the wage rate after that during the financial year subject to the house hold entitlements.
- Villagers themselves will decide through Gram/Ward Sabha the priority works to be taken up to develop the village.
- Panchayati Raj Institutions have pivotal role in the scheme. The village, intermediate and district panchayat shall be the principal authorities for planning and implementation of the scheme made under the NREG Act.
- Women will have priority in the scheme for allocation of employment and 1/3rd of the employment will be provided to them. Same wages shall be given to women and man. There is no discrimination against women labourers.
- Shades will be provided at work site for the children below the age of six years accompanying the women labourers. If there are five or more such children accompanying the women labourers at work site one women labour shall be deputed to look after the children and she shall be paid full wages
- There will be complete transparency in the scheme and wages will be paid in full public view.
- Minimum wages fixed for agricultural labourers by the respective State Governments will be paid as wages under the schemes till such times that the central government specifies wage rates which will not be less than Rs. 60 per day per person. Wages will be paid fully in cash or partly in cash and partly in kind. However, minimum 255 of wages shall be paid in cash. Wages are to be paid on weekly basis and in any case not later than 15 days.
- Contractors will not be permitted under the scheme.
- Free medical treatment will be provided in case of injury at work site and compensation in case of death or permanent disability of labourers.
- First phase scheme will be implemented in 200 districts all over the country including two districts from Kerala namely Palakkad and Wayanad.

Land Reforms

14.52 The major objectives of Land Reforms are re-ordering of agrarian relations in order to achieve an egalitarian social structure, reduction of poverty among the rural poor, realising the age old goal of land to the tiller, strengthening the asset base of the rural poor, increasing agricultural productivity. Kerala is acknowledged to be ahead of most other States in land reforms.

14.53 Distribution of surplus land is the important activity under Land Reforms. Land were distributed to 2346 families from 1.4.2004 to 31.10.2005. 623 SC and 357 ST females were benefited under this scheme, and they received 120 and 186 acres of land respectively. The distribution of surplus land to SC/ST and others from 1.4.2004 to 31.10.2005 is shown in Appendix 14.6 Apart from the surplus land, an area of 4.57 lakh acres of Government wasteland has also been distributed to the landless rural poor.

Attappady Environmental Conservation and Wastcland Development Projcct

14.54 The objectives of the project are "Ecological restoration of degraded wasteland in Attappady and development of replicable models of participative eco-restoration, so as to prevent further degradation and promote sustainable method of livelihood to the local people (with special emphasis on tribal population) in harmony with resource base".

14.55 This is an eco-restoration project for reclamation of 507 Sq. km. degraded wasteland of Attappady and to provide sustainable livelihood to the local people particularly the Tribal Population. The Japan Bank for International Co-operation (JBIC) is assisting this project. The total cost of this Project is Rs.219 crore, of which the external assistance Rs.177 crore. The project period is from 1996-97 to 2004-05. This project was officially inaugurated in 2000 April. The project which was expected to be completed by the end of March 2005 has been extended up to March 2008. Since it had a delayed start it could not be completed as envisaged. As on 30th November 2005 an amount of Rs. 78 crore has been expended.

14.56 Attappady Hills Area Development Society (AHADS) is implementing theProject. This project is being implemented in 146 micro watersheds divided into 15 Development Units. User Associations are constituted for every micro watershed for implementing the project activities.

Physical Achievements

14.57 The physical achievement of the project include forming of 92 user associations and 160 habitat development committees (ooruvikasana Samithies), Survey of 15,000 families, demarcation of 146 micro watersheds, conducting 438 awareness camps for 20000 beneficiary people.

14.58 The woks so far completed consist of Private Land Development (10,921 ha.), Private Drainage Line Treatment (418 K.m), Planting activities, Treated Area (3811.02 ha.) number of plants (14,44,264), total seedlings produced (25.39 lakh), Organic farming (7.1 ha), medicinal plant gardens (11.6 ha), production and use of vermi compost (24.35 tone), Mushroom production (550 kg harvested), Acne Roads (24.50 KM), construction of pits & trenches (11 lakh nos), Check dams (5067), contour bunds (7.4 km), drainage canals (3.9km) and retaining walls (10227 m) . A total of 329 kg of vegetable seeds distributed in 4666 nos of vegetable mixed kits of 25 gr/50 grm to beneficiaries.

14.59 137 Income Generation Activity Groups were formed comprising of 13 to 15 members. A total savings of Rs. 9,85,900 has been utilized. A joint venture with Central Silk Board to promote sericulture in a major way has been started. The total project cost is Rs. 99.96 lakh of

which AHADS contribution is Rs. 30.44 lakh. 49 beneficiaries started sericulture. – 2,42,000 saplings planted in 20 ha. in association with Central Silk Board. In addition to this under total Hamlet Development Programme. 69 houses were constructed and 427 house constructions are in progress.

Urban Poverty Reduction Programmes

14.60 Poverty alleviation has been one of the major goals of Indian Urban Policy. The initiative, "is to raise living standards and promote enterprise among the disadvantaged classes". Initially, poverty reduction focused on social and economic equity and later on distortions in income distribution.

14.61 Urban poverty alleviation is an important goal of the policy of Government of India. Urban growth is the result of:

- Natural increase in population,
- Net migration from rural to urban areas; and
- Reclassification of towns

14.62 Urban poor live a life of want, exploitation and deprivation. The present resources and efforts of local bodies fail to cope with the magnitude of the problem.

Box 14.5
Impact of Urban Poverty

- Proliferation of slums
- Fast growth of informal sector
- Increasing casualisation and under development of labour
- Crushing pressure on civil services
- High rates of education deprivation and health contingencies.
- Retarded growth of physical and mental capacities

Source : Report of National Commission on Urbanisation, 1988

14.63 It is accepted that poverty is multi-dimensional and cannot be defined in terms of any single measure. Just who "the poor" can depend as much on where they live as to what they earn and, therefore, Government of India has adopted a number of multifacetted strategies to alleviate urban poverty. New schemes have been introduced to provide assistance to the unemployed/underemployed through self employment ventures or through wage employment. Urban poverty reduction strategies are delivered through National Slum Development Programme which include shelter and infrastructure up-gradation.

14.64 Poverty grows along with the process of urbanisation in Kerala. As per the NSSO 55th round (1999-2000), 20.27% of the urban population in Kerala live under poverty stricken condition, where as it is 23.62% at all India.

14.65 In Kerala, the role of State Urban Development Agency (SUDA) is taken up by Kudumbashree. Kudumbashree has set up Community Based Organizations (CBOs) of the poor under the Urban Local Bodies. The major centrally sponsored Urban Poverty Reduction Programmes are Swarna Jayanthi Shahari Rozgar Yojana (SJSRY), National Slum Development Programme (NSDP) and Valmiki Ambedkar Awas Yojana (VAMBAY)

and they are implemented by Kudumbashree. The physical and social development as well as direct assistance to employment generation are the schemes taken up under these programmes.

14.66 Earlier urban poverty alleviation programmes have adopted area approach under Environmental Improvement of Urban Schemes (EIUS), beneficiary approach under Nehru Rozgar Yojana (NRY) and Community approach under Urban Basic Services for the Poor (UBSP). An integrated approach is now being promoted under SJSRY and the community-based approach used under UBSP has been integrated with SJSRY. National Slum Development Programme (NSDP) was launched in August 1996 for slum development and convergence of different social sector programmes. The VAMBAY provides shelter for the urban poor 'and a healthy and enabling urban environment, to help them to come out of poverty. Thus, SJSRY, NSDP&VAMBAY aim to provide gainful employment to the urban poor through encouraging the setting up of self-employment ventures or through wage employment.

14.67 Kudumbashree has organized Community Based Organizations (CBOs) of the poor in all the 53 Municipalities and 5 Corporations in the State. There are 10687 Neighbourhood Groups (NHGs) covering 292207 Below Poverty Line families, 894 Area Development Societies (ADSs) and 59 Community Development Societies (CDSs). CDS system acts as delivery system for various centrally sponsored Urban Poverty Reduction Programmes.

14.68 The CDSs has evolved and crafted an innovative methodology for assessing the urban poor. Every two year, a survey is conducted by using the poverty index following non-economic criteria with nine risk factors reflecting the poverty situations of families. The neighbourhood community verifies these factors with the identified families.

BOX – 14.6

The nine risk factors of the poverty index

- Thatched or sub-standard house/hut.
- Houses having no latrine.
- Only one person employed in the family.
- Only one uneducated or illiterate person in the family.
- At least one child in the age group of 0-5.
- Non-availability of drinking water with in a radius of 500 ft or 150 m.
- Atleast one person in the habit of taking intoxicating substances.
- Family belonging to SC/ST.
- Family consuming two or less meals per day.

If a family faces 4 or more risk factors, it is deemed to be poor, ie, below the poverty line.

Source : Kudumbashree, Thiruvananthapuram

14.69 Poverty index act as a closed loop system preventing the infiltration of non-poor into the list of poor people. The reduction of cumulative risk factors of poor families is measured and compared with the base line data to measure the result and impact of interventions.

14.70 The CBOs in the urban areas act also as Thrift and Credit Societies and facilitate savings and credit of the poor. As on 30th November, 2005 the CBOs in urban areas mobilised thrift fund to the tune of Rs. 3357 lakhs and disbursed loan worth Rs.3720 lakhs. District wise details of NHGs and thrift fund mobilized are given in appendix 14.7.

a. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY)

14.71 All the three Urban Poverty Alleviation Schemes, namely, Urban Basic Services for the Poor (UBSP), Nehru Rozgar Yogana (NRY) & Prime Ministers Integrated Urban Poverty Eradication Programme (PMIUPEP) stand subsumed to Swarna Jayanthi Shahari Rozgar Yojana (SJSRY) with effect from 1.12.1997. SJSRY aims to eradicate absolute poverty from urban areas by providing gainful employment to the urban unemployed or under employed through encouraging the setting up of self employment ventures or through wage employment. The CBOs of the poor are the delivery system for the scheme. Identification of beneficiaries, selection of micro enterprises, monitoring of implementation, social audit etc are done by CBOs. The SJSRY is funded on a 75:25 basis between Centre & State. The SJSRY has two special schemes, the 'Urban Self Employment Programme' (USEP) and 'Development of Women and Children in Urban Areas' (DWCUA).

14.72 Community organizations like Neighbourhood Groups (NHGs), Neighbourhood Communities (NHCs) and Community Development Societies (CDSs) are set up in the target areas based on the UBSP pattern. The CDSs are the focal point for purposes of identification of beneficiaries, preparation of application, monitoring of recovery and generally providing what ever other support is necessary for the programme. The Community Development Societies, identify viable projects suitable for that particular area. The CDSs, being a federation of different community based organizations, are the nodal agencies for this programme.

14.73 Urban Self Employment Programme (USEP) assist individual urban poor for setting up gainful self employment ventures. Ordinarily the project cost is Rs.50,000 per individual, but if two or more eligible persons join together in a partnership, higher project cost is allowed, provided individual share does not exceed Rupees fifty thousand. Subsidy is provided at the rate of 15% of the project cost subject to a maximum of Rs.7,500 per beneficiary. Beneficiary share is 5% of the project cost either as cash or in kind or as both. Out of the total project cost, 80% is sanctioned as loan by financial institutions including Banks and Thrift and Credit Societies. A house-to-house survey for identification of genuine beneficiaries is being done. Non economic parameters are to be applied to identify the urban poor. Women beneficiaries belonging to widows, divorcees, single women where women are the sole earners is to be ranked higher in priority. Not less than 30% of the beneficiaries should be women, 3% is to be reserved for disabled and SC/ST beneficiaries are given special attention in proportion of their strength in the local population.

14.74 Development of Women and Children in Urban Areas (DWCUA) assist the urban poor women for starting gainful employment through group activity. The scheme is extended to the poor women of urban areas who decide to setup self-employment enterprise as a group. Groups of urban poor women identify an economic activity suited to their skill, training, aptitude and local condition. Besides generating income, the synergy of the group helps the women to empower themselves for combating poverty. Minimum number for a group is fixed as 10. Generally the project cost is Rs. 2.5 lakhs or less. The DWCUA group is given a subsidy of Rs. 1.25 lakhs or 50% of the project cost whichever is less. To ensure the contribution of members, 5% of the project cost is brought as their share, either in cash or in kind or as both and 45% of the project cost is as bank loan.

purchase of raw materials and marketing, infrastructure support, one time expenses on child care activity, expenses upto Rs. 500 on travel cost of group members as allowed by the state in group's interest. The Revolving Fund can be availed by a group only after one year of its formation.

14.76 Kudumbashree has so far promoted 17,376 micro enterprises of which 1418 are group micro enterprises of poor women in urban area (see Appendix 14.8). A wide target of about 106 activities are being under taken through these units. The highest number of 104 units are involved in direct marketing while 62 units undertake IT related activities. Other major areas include canteen, catering, soap making, ethenic delicacies, paper cover & paper bag, provision store, umbrella manufacturing, solid waste processing unit, clean Kerala business etc.. Altogether 30,150 families are benefited through self employment under SJSRY and out of these 1231 families are benefited during 2005-06. The physical achievement under SJSRY is given in Table 14.4.

Table No. 14.4
Physical Achievement of SJSRY from 2002-03 to 2005-06

Sl. No	Component	Unit	Achievement				
			2002-03	2003-04	2004-05	2005-06*	Cumulative
1	2	3	4	5	6	7	8
	USEP – Individual Self employment enterprises	Number	803	432	1615	576	15958
	DWCUA – Women Group Enterprises	Number	181	176	119	73	1418
	UWEP – Mandays created	Lakh Mandays	0.10	0.02	0.16	0.50	2.59
	Skill Development Training	Number of persons	1829		5573	1623	34535

Source: Kudumbashree, Thiruvananthapuram
**As on 30-11-2005*

14.77 The year wise central-state fund received under SJSRY are given in Table 14.5. The cumulative expenditure under SJSRY as on 30-11-2005 is Rs. 4512.65 lakhs, which is 83.59% of the funds availed.

Table No. 14.5
Year wise release of funds and Expenditure under SJSRY 1997-98 to 2005-06

(Rs. lakhs)

Year	Funds released			Funds available including previous year's balance	Expenditure	% of expenditure
	Centre	State	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1997-98	556.74	560.73	1117.47	1117.47	1070.93	95.84
1998-99	377.09	125.70	502.79	549.33	549.33	100
1999-00	448.32	149.44	597.76	597.76	472.74	79.09
2000-01	256.50	129.82	386.32	511.34	459.36	89.83
2001-02	266.23	88.74	354.97	406.95	239.12	58.76
2002-03	301.99	150.00	451.99	619.82	453.04	73.09
2003-04	610.50	400.00	1010.50	1177.28	452.06	38.40

2004-05	554.95	175.00	729.95	1455.17	225.44	15.49
2005-06	funds not yet received			1229.73+	590.63*	48.03*
Total	*372.32*	*1779.43*	*5151.75*		*4512.65*	*87.59*

Source. Kudumbashree, Thiruvananthapuram

** As on 30.11.2005*

+ previous balance as on 30.11.2005

b. National Slum Development Programme (NSDP) :

14.78 National Slum Development Programme was launched in August 1996 as a 100% central assistance to tackle the problems of urban slum dwellers. The objective of the programme is the up-gradation of urban slums by providing physical amenities like water, storm water drains, community bath, widening and paving of existing lanes, community latrines, street lights etc. Funds can also be used for provision of community infrastructure and social amenities like pre-school education, non-formal education, adult education, primary health care etc. The programme also has a component for shelter upgradation and construction of new houses. In Kerala, the scheme is implemented through the Community Development Society under the Urban Local Bodies. An amount of Rs 8841.68 lakhs has been received for this programme and Rs 6,972.69 lakhs has been expended upto 30th November 2005. The year wise financial and physical achievements of NSDP are shown below in Table 14.6 and Table 14.7

Table 14.6

Financial Achievement of NSDP, 1996-97 to 2005-06

(Rs. Lakhs)

Year	ACA Released by the Govt. of India	ACA Released by the State Government	Expenditure
1996-97	727.00	0	0
1997-98	847.00	160.00	51.41
1998-99	929.00	800.00	651.54
1999-2000	1028.00	1300.00	560.55
2000-2001	258.68	1000	1996.5
2001-2002	1025.00	529.68	504.76
2002-2003	972.00	1997.00	725.55
2003-2004	972.00	972.00	825.49
2004-2005	2083.00	1850.00	884.98
2005-2006	0	0	771.91
Total	**8841.68**	**8608.68**	**6972.69**

Source : Kudumbashree, Thiruvananthapuram

Table 14.7
Cumulative Physical Achievement of NSDP as on 30.11.2005

Sl. No.	Components	Achievement
1.	Construction of New Houses & Shelter Upgradation (Nos)	61685
2.	Construction of Latrines (Nos.)	38133
3.	Construction of wells (Nos.)	4796
4.	Construction of Community Bathrooms (Nos)	19409
5.	Construction of Roads and Foot path	4782
6.	Wiring of houses (Nos.)	14068
7.	Water Connection (Nos.)	2056
8.	Street Light (Nos.)	2194
9.	Construction of Community Halls	56
10.	Sewerage (Nos)	174
11.	Strom Water Drain. (Nos)	101

Source : Kudumbashree, , Thiruvananthapuram

C. Valmiki Ambedkar Awas Yojana(VAMBAY)

14.79 Valmiki Ambedkar Awas Yojana (VAMBAY) is a centrally sponsored scheme launched during 2001-02 for the benefit of slum dwellers. It mainly aims at ameliorating the housing problems of the slum dwellers, who are living below the poverty line in towns and cities. The cost of the scheme is shared on 50:50 basis by Central and State Governments. In Kerala, the 50% state share is equally shared by State Government and Urban Local Bodies. Kudumbashree- the State Poverty Eradication Mission- is the nodal agency for the implementation of VAMBAY.

14.80 VAMBAY provides new shelter or upgrade the existing shelter for people living below poverty line in urban slums, with a view to achieving the goal of "Shelter for All". The target group under the VAMBAY are slum dwellers below the poverty line including members o' the EWS who do not posses adequate shelter.

14.81 The beneficiaries are identified through Neighbourhood Groups, Area Development Societies and Community Development Societies. The Urban Local Bodies have to formulate projects, prepare estimates in consultation with CDSs and submit to Kudumbashree- the State Nodal Agency for VAMBAY, which will in turn send the projects to the Government of India for release of funds. The identification of beneficiaries will be on the basis of the base line survey under SJSRY.

14.82 The financial limit for construction of a housing unit under the scheme will be Rs 40000 including provision for sanitary latrine for an area of not less than 15 sq. mt. The amount is released in four installments; Rs 5000 after executing the agreement, Rs 20000 after completing basement level, Rs 10000 after completing the lintel level and Rs 5000 will be released after fully completing the house.

14.83 The Year wise financial and physical achievements under VAMBAY is given in Tables 14.8 and 14.9.

Table 14.8
Financial Status of VAMBAY 2001-02 to 2004-05 Release of Fund

(Rs. Lakhs)

Year	Central Share	State Share	ULB Share	Total
2001-02	266.00	266.00	--	532.000
2002-03	2305.65	1000.00	1152.825	4458.475
2003-04	1385.20	1000.00	692.600	3077.800
2004-05	1227.40	1000.00	613.700	2841.100
Total	**5184.25**	**3266.00**	**2459.125**	**10909.375**

Source : Kudumbashree, Thiruvananthapuram

Table 14.9
Physical Achievement of VAMBAY 2001-02 to 2004-05 (Nos)

Year	Houses Targeted	Houses Completed Basement Level	Houses Completed Lintel Level	Houses Completed
2001-02	1330	1220	1220	1220
2002-03	11528	11438	11315	11260
2003-04	6926	6604	6218	5817
2004-05	4406	620	400	200
Total	**24190**	**19882**	**19153**	**18497**

Source : Kudumbashree, Thiruvananthapuram

14.84 Out of 24190 houses targeted during the last 4 years, 18497 houses have been completed. 656 houses are at lintel level and 729 houses are at basement level.

SOCIAL SECURITY AND WELFARE

14.85 The Social Security Programmes in Kerala are part of the State Government's public policy on economic development in general and poverty alleviation in particular. Social security measures aim at the removal of social injustice, inequality and insecurity of deprived people.

14.86 There are two types of Government interventions to strengthen social security. First is promoting the poor to come out of poverty by enhancing the basic human capabilities through education and employment. The second intervention is through social security measures. The social security measures in Kerala can be broadly divided into (i) institutional care and (ii) pension schemes. These measures are implemented by Government departments directly and also through Welfare Fund Boards.

Institutional care and protection

14.87 There are 51 Welfare Institutions in Kerala. They are 12 Mahila Mandirs, 10 Old Age Homes, 3 Homes for physically handicapped,4 Asha Bhavans, 14 Observation Homes, 3 Centres for the care of the disabled, 2 Rescue homes and three After care homes. There are also 612 orphanages in the state run by NGO's with more than 43280 orphans in 2005 as against 34005 in 2004.

14.88 In all the welfare institutions, the number of inmates are below the sanctioned strength. For instance, the total sanctioned strength of inmates in all the 51 welfare institutions together are 2550. As against it there are only 1318 inmates which constitute 51.68% of the sanctioned strength. (Table 14.10). Revamping and restructuring of the working of the institutions have become necessary to avoid waste and to improve facilities. The sanctioned strength and actual inmates are given in Appendix.14.9

Table 14.10

Welfare Institutions, Sanctioned strength and Inmates – 2005

Sl.No.	Institutions	Numbers	Inmates(Nos)	Sanctioned Strength (Nos)
1	2	3	4	5
1	Mahilamandir	12	216	300
2	Home for Physically Handicapped	3	58	75
3	After Care Home	3	85	250
4	Old Age Homes	10	334	1000
5	Rescue Homes	2	23	200
6	Observation Homes	14	408	450
7	Care of Disabled	3	30	75
8	Home for mentally cured patients (Asha Bhavan)	4	164	200
	Total	**51**	**1318**	**2550**

Source: Social Welfare Department

14.89 Social Welfare Department run Old Age Homes and Day Care Centre for the aged. There are 352 inmates in these institutions as against the sanctioned strength of 1050 persons (Table 14.11)

Table 14.11

Old Age Homes and Day care Centre for Aged during 2005

Sl.No	Institution	Total Inmates (Nos)	Sanctioned Strength (Nos)
1	Old Age Home	334	1000
2	Day care Centre & Old Age Home	18	50
	Total	**352**	**1050**

14.90 Available data show that there are 702 Non-Governmental Organizations. These Institutions have an intake capacity of 67574 inmates. As against it, there are 54289 inmates (Table 14.12).

Table 14.12
Non-Governmental Welfare Organizations and Inmates – 2005.

Sl.No	Category	Institutions (Nos)	Inmates (Nos)	Sanctioned strength (Nos)
1	Orphanages	612	43280	52000
2	Fondling Homes	5	417	320
3	Beggar Homes	3	392	419
4	Old Age Homes	82	10200	14835
	Total	**702**	**54289**	**67574**

Disability – Situation Analysis

14.91 As per 2001 Census there are 8.61 lakh disabled persons in Kerala which form 2.7% of the total population. National Sample Survey 2002, estimate the disabled persons in India at 18.49 million who constitute1.8 percent of the total population. The survey reveals that for every one lakh people in India, 1755 were either mentally or physically disabled. The survey also observed that 10.63 percent of them suffered from more than one type of physical disabilities. In Kerala, it is observed that, approximately 5 lakh children have one form of disability or other. (SPAC, Kerala, 2004). These five lakh challenged children need rehabilitation to bring them in to the main stream population. State supports 1078 mentally challenged children through 46 institutions run by NGOs and each student is given an assistance of Rs 900 per year. Details of disability in Kerala and India are given in Appendix. 14.10 & 14.11.

Box.14.7
National Sample Survey Estimate (2002) on Disability – High lights

- Estimated disabled persons in India are 18.49 Million
- Disabled person constitute 1.8 percent of the total estimated population.
- For every one lakh people in India, 1755 were either mentally or physically disabled.
- In Kerala 2235 persons are disabled out of every one lakh persons.
- About 13% of the physically disabled were observed to be severally disabled.
- About 55% of the disabled persons in India were illiterate and about 9% completed secondary and above level of education.
- About 11% of disabled persons of age 5-18 years were enrolled in the special schools in urban areas as compared to even less than 1% in rural.
- About 26% of the disabled person were employed.
- The proportion of employed among the mentally retarded was the lowest at 6%.

Source: ReportNo.485. Disabled persons in India-July-December 2002.

National Sample Survey Estimate on Disability – Kerala

14.92 In Kerala, according to NSS estimate, 2235 persons are disabled out of every one lakh persons. It is against 1755 persons per one lakh at all India. Disability-wise data in Kerala compared to India show that prevalence rate of disability per one lakh person are highest in Kerala except blindness. For instance, the blindness per one lakh persons is 176 in Kerala against 192 in India. In the case of mental illness, it is almost three times higher in Kerala as compared to India. Similarly speech disability is almost 1 1/2 times higher than the all India rate. Table 14.13 shows disability wise persons per one lakh people in Kerala and India

Table 14.13
Disability – wise persons per one lakh in Kerala and India (2002)

Sl.No	Category of disability	Kerala			India		
		Rural	Urban	Total	Rural	Urban	Total
1	Disabled Person	2215	2475	2235	1846	2000	1755
2	Mentally retarded	180	241	194	92	100	94
3	Mental illness	278	250	272	110	89	105
4	Blindness	179	166	176	210	140	192
5	Low vision	127	151	132	86	54	77
6	Hearing Disability	467	405	453	310	236	291
7	Speech Disability	334	336	335	210	187	204
8	Loco motor Disability	1069	1195	1099	1046	901	1008

Source: Disabled persons in India NSS 58th Round, GOI. 2003

14.93 There are 6 institutions for the care of physically and mentally retarded children in the state with facilities for 650 children. Details are given in Table 14.14

Table 14.14
Institutions for Physically & Mentally retarded persons – 2005

Sl.No	Institutions	Total Inmates (Nos)	Sanctioned Strength (Nos)
1	Home for Mentally Deficient children	24	50
2	Home for physically Handicapped	98	175
3	Home for cured Mental patients	164	200
4	Care Home for Disabled Children	30	50
5	Home for Physically Handicapped (Aged)	88	125
6	Pratheeksha Bhavan (Home for Mentally Retarded above 16 years)	29	50
	Total	**433**	**650**

National Institute of Speech and Hearing (NISH)

14.94 The National Institute of Speech and Hearing established in 1997 aim at the education, training, treatment and rehabilitation of hearing impaired persons. The major activities of the Institute are (i) Audiology and speech division. (ii) Pre-school parent Guidance centre, (iii) Vocational Training Centre (iv) Academic programmes. (v) Medical Division including psychology.

14.95 NISH has set up a state of the art diagnostic centre and about 7976 cases have undergone evaluation till March 2005. Steps have been taken to commence Master Degree in Audiology and Speech Language Pathology from the academic year 2006-07.

Kerala State Handicapped persons Welfare Corporation

14.96 Kerala State Handicapped Person's Welfare Corporation implements self employment programmes and distributes aids and applicances for disabled persons. During 2004-05, 9246 aids and appliances were distributed costing Rs 177.14 lakh. It is against 1165 aids and applicance costing Rs. 27.29 lakhs during 2003-04. Table 14.15 gives details of self employment assistance provided to physically handicapped persons. More details are given in Appendix 14.12.

Table 14.15
Self Employment Assistance to Disabled Persons.

Year	Applications Received (Nos)	Applications sanctioned and forwarded to Banks	Applications sanctioned by the Bank(Nos)	Amount released by the Corporation (Rs)
1	2	3	4	5
2001-02	1348	1348	242	4,81,00
2002-03	1303	1303	281	5,62,500
2003-04	1256	1256	344	7,56,535
2004-05	1417	1417	314	7,73,475

Social Security and Pension

14.97 Several pension schemes are being implemented by Government as a safety net for vulnerable sections of the society. There are more than 40 pension schemes of which 20 are financed by the State itself. These pension schemes are implemented directly by the Government or through different Welfare Fund Boards. More than 37 lakh people are benefited through different pension schemes

14.98 The National Old Age Pension Scheme is part of National Social Assistance Programme of Government Of India and was implemented from 1995 for persons above 65 years of age. Under this scheme central share is Rs.75 and state share is Rs.35 per month. During 2005, 131346 persons were benefited by this scheme. District wise beneficiaries are given in Appendix 14.13 The details of social security /pension schemes in the State including all Welfare Fund Boards are given is Appendix14.14. Salient features of pension reforms in India is given in Box 14.8.

Box No:14.8
Pension Reforms in India

- Retirement benefits are currently available to only about 11 percent of the workers population.
- This leaves 89 percent of the workers population in the unorganized sector uncovered by any formal pension provision
- During 2003-04, Government of India introduced a new restructured contribution pension system,applicable in the first stage, to new entrants to Government service, except armed forces. The **New Pension System (NPS)** was introduced from 1st January,2004 for Central Government Employees recruited on or after that date The NPS will be available,on a voluntary basis, to all persons including self employed professionals and others in the unorganized sector.
- Established a statutory regulatory body called the **Pension Fund Regulatory and Development Authority (PFRDA)** to undertake promotional,developmental and regulatory functions in respect of the pension sector introduced in 29th December,2004 for this purpose.

Source: Economic Survey 2004-05

Social Protection Measures Exclusively for Women

14.99 Women constitute 51.42%(2001 census) of the total population of the state. Several schemes for the social security of women are under implementation. Destitute /widow pension is a major scheme. This scheme benefits 251698 women and the monthly rate of pension is Rs.110. Of the total number of beneficiaries , Kollam has the largest number with 31160 women

and the lowest number is in Idukki District with 2963 beneficiaries. Unmarried women above 50 years are also paid a monthly pension @ Rs.110 and the scheme benefits 27625 women. Further details are given in Appendix 14.14. Finanacial assistance is also given to poor widows for the marriage of their daughters. The rate of assistance is Rs.5000. An amount of Rs165 lakh is provided for the scheme during 2005.

Welfare of Ex-Servicemen

14.100 Department of Sainik Welfare implements the welfare activities of Ex-Servicemen and War Widows mainly through funds from non-plan provision of state budget and interest accrued from two Welfare Funds viz (i)State Military Benevolent Fund & Flag Day Fund and (ii) Amalgamated Fund for Reconstruction and Rehabilitation of Ex-Servicemen.

14.101 Re-employment opportunities of Ex-Servicemen and employment to Widows are limited in State service and Quasi Government Institutions. Hence new ventures and policies are required. The present status of Ex-Servicemen and widows in Kerala holding identity cards issued by Zila Sainik Welfare Officers for the last two years are given inTable 14.16.

Table 14.16
Ex-Servicemen and War Widows in Kerala – 2004 and 2005

Year	Ex-Servicemen(nos)	War Widows (nos)
2004	140000	30000
2005(upto 9/05)	147304	31891

Source:Department of Sainik Welfare

14.102 Major activities implemented through the Sainik Welfare Department and its achievements during 2005 are shown in Table 14.17.

Table 14.17
Major Welfare schemes/ achievements of Ex-Servicemen/War Widows during 2005

Sl.No.	Name of Scheme	Beneficiaries (Nos)	Amount spent during 2005(upto 11/05) (Rs)
1	Financial assistance to Second World War Veterans who are in indigent circumstances	4215	96,61,035
2	Construction of houses to disabled Ex-Servicemen	27	6,28,500
3	Cash awards to recipients of Gallantry Decorations in the Defence Service and dependents of defence personnel	31	86,80,760
4	Cash awards to recipients of Territorial Army medal/decorations and to dependents	28	56,000

Source:Department of Sainik Welfare

Welfare of Prisoners

14.103 The Jail infrastructure in the state consists of 3 Central Prisons, 2 Open Prisons, 3 District Jails, 5 Special Sub Jails, 26 Sub Jails,1 Women prison and one Borstal School. In 2005, there were 7127 prisoners out of which 218 were women. The details of district wise jail prisoners are furnished in Table:14.18.

Table – 14.18
Jails in Kerala and District-wise Prisoners - 2005

Sl. No	District	Central Jail		District Jail		Sub Jail		Open Jail		Women Jail		Special Sub Jail		Grand Total	
		Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Trivandrum	1744	30	340		101	5	266	0	55	55			2496	90
2	Kollam			160	10	116	6							296	16
3	Pathanamthitta					84	6							84	6
4	Alappuzha					119	.					112	11	231	11
5	Kottayam					35						100	4	135	4
6	Idukki					92	1							92	1
7	Ernakulam					323	17						.	323	17
8	Thrissur	484	15			104	.					182	..	770	15
9	Palakkad					49	.					185	5	234	5
10	Malappuram					159	2							159	2
11	Kozhikode			496	15	64	.							560	15
12	Wayanad					86						.		86	
13	Kannur	1465	31			46	.					81	..	1592	31
14	Kasargod					69	5						.	69	5
15	Total	3693	76	1006	25	4443	42	266	0	55	55	660	20	7127	218

Source: Department of Prisons

14.104 Prisons are modernised with central assistance . The modernization of prisons mainly consists of construction of new jails and new blocks,repair and renovation of existing jails,sanitary and hygienic arrangements in jails and construction of residential quarters for jail staff. Under the scheme ' welfare of prisoners' various schemes to improve the living conditions of prisoners are being implemented Re-orientation programmes are regularly conducted for prison officials to equip them and to educate them. A womens' prison has been established at Neyyattinkara to accommodate women offenders. Construction of a new womens' prison at Kannur is in progress.

Juvenile Homes

14.105 In Kerala, there are 6 Juvenile Homes, 14 Observation Homes and one Balasadanam (Certified as Juvenile home) More than 1500 children in the age group of 5 to 18 years are accomodated in these homes. The Government of India gives maintenance grant @ Rs. 150 per month per inmate and bedding grants @ Rs 50 per annum per inmate. The percapita maintenance charge per inmate is about Rs.750 per month for food, clothing , bedding and for contingency charges During 2004-05, Rs 30 lakhs were allocated and Rs. 27.69 lakhs were expended

Adoption

14.106 The state government have approved and declared the state policy, ie, State Plan of Action for the Child in Kerala 2004 and reiterated its commitment to children. The major activities proposed are; (i)to establish cradle baby centres (Amma Thottils) in four district hospitals ie, Kollam, Pathanamthitta, Idukki and Kottayam (2) strengthen/organize adoptive parents organization in all districts and organize district level and state level get-together conferences of adoptive parents, adoptive children and other stakeholders (iii) adoption awareness programme in each district by involving state departments such as Local Self Governments, Revenue, Police, Social Welfare, Health , NGOs and other stakeholders (iv) minimum standards of services and procedures for adoption placement agencies and minimum standards of services for all functionaries will be developed with the help of expert academic institutions. Details on adoption of children as in-country and inter-country adoption under Juvenile Justice law from 1990 to 2004 are given in Table 14.19 shown below:

Table No:14.19

Adoption of Children in Kerala – 1990-2004

Year	In-country adoption			Inter-country adoption		
	Male	Female	Total	Male	Female	Total
1990 1991	52	7	59	--	--	--
1995-1996	49	72	121	16	27	43
2000-2001	75	105	180	13	13	26
2003-2004	117	137	254	103	10	113

Source:Annual Report on Juvenile Justice Administration 2003-04.

Welfare Fund Boards

14.107 In Kerala, there are 23 Welfare Fund Boards providing welfare assistance and income security and employment to workers in the unorganized sector. Details available for 22 Welfare Fund Boards show that total the number of members enrolled in these Boards are 50.96lakh which constitute 64% of the total number of estimated workers. Out of them, 18.61 lakhs are in agriculture sector and 15 lakhs are in construction sector Female workers out number males in cashew, tailoring, coir,and beedi industries In Cashew Workers Welfare Fund Board, 96.60% enrolled workers are female. Similarly in coir,80% workers are female. In Boards like Toddy Workers, Head Load Workers and Abkari Workers above 99% of the workers are male Details regarding estimated workers, enrolled workers and male-female workers are shown in Table 14.20

Table – 14.20

Workers in the sector and workers enrolled as members in the Welfare Fund Boards – 2005

Sl-No	Name of the Board	Total workers in the sector(Nos)	Members enrolled in the Board (Nos)			Percentage of Members to total workers		
			Male	Female	Total	Male	Female	Total
1	Kerala Coir Workers Welfare Fund Board	400000	40744	162978	203722	20	80	100
2	Kerala Cashew Workers WFB	220000	7800	187200	195000	4	96	100
3	Kerala Toddy Workers WFB	40688	40499	190	40688	99.53	0.47	100
4	Kerala Building and Other Construction Workers WFB	1500000	NA	NA	1158040			100

5	Kerala Tailoring Workers WFB	500000	91655	184311	275966	33.21	66.79	100
6	Kerala Bamboo, Kattuvalli and Pandanus Leaf Workers WFB	200000	3200	10067	13267	24.12	75.88	100
7	Kerala Agriculture Workers WFB	1861197	NA	NA	1861197	..	..	100
8	Kerala Head Load Workers WFB	300000	83466	389	83855	99.54	0.46	100
9	Kerala Artisans and Skilled Workers WFB	274996	NA	NA	224996			100
10	Kerala Hand Loom Workers WFB	100000	23179	25700	48879	47.42	52.58	100
11	Kerala Beedi and Cigar Workers WFB	150000	12813	26014	38827	33.00	67.00	100
12	Kerala Abkari Workers WFB	2057	NA	NA.	2057	--	..	100
13	Labour Welfare Fund Board	508454	NA	NA	489808	.	..	100
14	Kerala State Lottery WFB	32296	3838	164	4002	95.90	4.10.	100
15	Traders Welfare FB	61375	NA	NA	23818	99.9	0.10	100
16	Kerala Motor Transport Workers Welfare Boarad	1024198	53225	.	53225	100		100
17	Kerala Anganwadi Workers & Helpers WF(2004)	48582	NA	40608	40608	..	100	100
18	Kerala Autoickshaw Workers W.F Board	294939	18914	.	18914	100	.	100
19	Kerala Khadi Workers Welfare Fund Board	16000	NA	NA	11743			100
20	Kerala Fishermen's WFB	446726	220886	53480	274366	80.51	19.49	100
21	Kerala Ration Dealers Welfare Fund Board	13441	10568	2168	12736	82.98	17.02	100
22	Kerala Co-operative Employees Board (2004)	20610	NA	NA	20610			100
	Total	7965559			5096324			100

Expenditure

14.108 During 2004-05, 20 Welfare Fund Boards together spent Rs.179.68 crore as against Rs 165.84 crores during 2003-04. Out of the total expenditure during 2004-05, Rs 22.91crores was on administration and Rs 156.76 crores was on welfare measures. It shows that 87.24% were spent for welfare measures and 12.76% were for administrative cost. The Board -- wise expenditure for administration and welfare measures varies. For example, in Toddy Workers Welfare Fund Board, out of the total expenditure of Rs.73 crores during 2004-05, 93%was for welfare measures and 6.99% was for administration whereas in Headload Workers Welfare Fund Board it was 82% and 17.97% respectively. It is also revealed that Kerala State Lottery Welfare Fund Board spent only 10.05% for welfare measures during 2004-05 and lion's share(89.95%) has been diverted for meeting administrative expenses. . Further details are given in Table 14.21

Table 14.21
Expenditure on Administration and Welfare Measures in Welfare Fund Boards – 2005 (Rs. Lakhs)

Sl. No	Name of the Board	Administrative Expenditure		Expenditure on Welfare Measures		Total Expenditure	
		2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6	7	8
1	Kerala Coir Workers Welfare fund Board	72.00	61.00	529.00	499.00	601.00	560.00
2	Kerala Cashew Workers WFB	68.84	67.12	598.60	585.18	667.44	652.30
3	Kerala Toddy Workers WFB	426.45	510.63	6398.34	6794.85	6824.79	7305.48
4	Kerala Building and other construction W WFB	198.77	198.53	2050.72	2620.98	2249.49	2819.51
5	Kerala Tailoring Workers WFB	74.15	79.62	184.54	193.03	258.69	272.65
6	Kerala Bamboo, Kattuvalli and Pandanus Leaf W WFB	4.84	5.15	NA	6.91	4.84	12.06
7	Kerala Agriculture W WFB	124.83	130.06	456.79	475.20	581.62	605.26
8	Kerala Head Load Workers WFB	682.03	666.72	2903.61	3042.55	3585.64	3709.27
9	Kerala Artisans and Skilled W WFB	38.36	39.89	54.87	79.21	93.23	119.10
10	Kerala Hand Loom Workers WFB	24.49	23.24	29.67	207.13	54.16	230.37
11	Keala Beedi and Cigar WWFB	11.34	16.30	4.16	11.15	15.50	27.45
12	Kerala Akbari WFB	41.95	41.54	73.91	109.36	115.86	150.90
13	Labour Welfare Fund Board	62.82	72.56	85.90	78.30	148.72	150.86
14	Kerala State Lottery WFB	18.60	18.98	2.13	2.12	20.73	21.10
15	Traders Welfare FB	9.24	9.39	19.29	13.31	28.53	22.70
16	Kerala Motor Transport Workers Welfare Board	148.49	157.79	114.48	149.32	262.97	307.11
17	Kerala Anganwadi Workers & Helpers WF	NA	NA	--	--	--	--
18	Kerala Autorickshaw Workers W F Board	0.93	0.32	7.36	9.49	8.29	9.81
19	Kerala Khadi Workers Welfare Fund Board	34.59	23.47	46.70	19.99	81.29	43.46

20	Kerala Fishermen's WFB	169.07	160.25	773.72	740.15	942.79	900.40
21.	Kerala Ration Dealers Welfare Fund Board	11.47	9.20	26.96	39.56	38.43	48.76
22	Kerala Co-operative Employees Board	NA	NA	--	--	--	--
	Total	**2223.26**	**2291.76**	**14360.75**	**15676.79**	**16584.01**	**17968.55**

Note WF - Welfare Fund FB-Fund Board. WFB- Welfare fund Board. WWFB-Workers Welfare Fund Board

Welfare Measures of the Workers of Welfare Fund Board

14.109 General Welfare Measures implemented by the Workers Welfare Fund Boards are the following:

1. Pension benefits to the workers on their retirement or invalidity or family pension after their death
2. Ex-gratia financial assistance to workers on prolonged illness/ permanent disability and death relief to the dependents for funeral and related functions.
3. Medical reimbursement for medical treatment of the workers or dependents.
4. Marriage assistance for daughters marriage.
5. Educational assistance to members children like scholarships,cash awards and lumpsum grants.
6. Long term housing loans at low interest rate
7. Maternity benefits. The Major Welfare Measures implemented by the Workers Welfare Fund Boards are given in Appendix.14.15.

Unemployment Assistance

14.110 Unemployment assistance scheme was introduced in the state in 1982 under non-plan and is being implemented through Local Governments The present rate of assistance is Rs.120 per month During 2005, there were 344698 beneficiaries under unemployment assistance and an amount of Rs.10243.38 lakh was disbursed. The details of unemployment assistance from 2002 to 2005 is given in Table 14.22

Table 14.22

Beneficiaries of Unemployment Assistance and Expenditure (2002-2005)

Year	Beneficiaries (Nos)	Amount disbursed (Rs. in lakhs)
2002	332287	2,516.40
2003	348027	1423.10
2004	387370	7398.43
2005	344698	10243.38

Source: Directorate of Employment and Training

Budget Support for Social Security

14.111 Funds are earmarked in the state budget for social security schemes. For instance, during 2005-06 Rs 14216.32 lakhs is set apart for the various social security schemes in kerala. Out of the total amount earmarked during 2005-06, agricultural workers pension share Rs.4461.00 lakhs (31.40%) followed by freedom fighters pension Rs.3896.64 lakh(27.41%), destitute pension Rs2966.54lakh (20.88%) and Rs2095.64lakh (14.74%) for physically handicapped (see Table 14.23)

Table 14.23

Financial Assistance from State Budget for Social Security Schemes in 2005-06

Sl.No.	Name of Scheme	Name of implementing Department	Amount (Rs lakh)
1	Destitute pension	Revenue department	2966.54
2	Agricultural workers pension	Revenue department	4464.00
3	Welfare fund for journalists	Public Relation Department	12.14
4	Relief to TB patients	Revenue Department	20.00
5	Pension scheme for physically handicapped	Social welfare Department	2095.64
6	Freedom fighters pension	Revenue Department	3896.64
7	Financial assistance to leprosy and cancer patients	Revenue Department	85.80
8	Marriage assistance to the daughters of widows	Revenue Department	165.00
9	Journalists pension scheme	Public Relation Department	24.00
10	Welfare scheme for eminent journalists	Public Relation Department	7.86
11	Kerala Non-journalists pension scheme	Public Relation Department	10.00
12	Unemployment assistance	Revenue department	179.22
13	Assistance to artists in indigent circumstances	--	75.60
14	Assistance to orphanages,homes for aged and infirm and beggar homes	Social Welfare Department	199.88
15	Assistance to men of art and letters in Indigent circumstances	--	24.00
	Total		**14216.32**

SAFETY OF FACTORY WORKERS

14.112 Factories and Boilers Department ensures safety, health and welfare of factory workers and the general public living in the vicinity of factories. In Kerala there are 16243 establishments which come under Factories and Boilers Act in 2005 as against 18207 in 2004. Details are given in the Table14.24.

Table:14.24

Factory and workers coming under the purview of Factories and Boilers Act

Year	Establishments(Nos)	Workers(Nos)
2002	17942	655034
2003	18274	665500
2004	18207	660687
2005	16243	442460

Source:Factories and Boilers Department

14.113 In order to ensure the safety of workers, department inspects major accident hazard prone unit and hazardous factorirs. During 2004-05, Department inspected 314 hazardous factories and 100 factories during 2005-06, until September 2005. Air monitoring studies were also conducted in 21 factories during 2004-05. Training to workers and medical examination in factories conducted during 2004-05 and 2005-06 are shown in Table 14.25

Table:14.25
Inspection and Training of Factories and Boilers Department during 2004-05 and 2005-06(Nos)

Sl.No.	Inspection/Training	2004-05(Nos)	2005-06(upto 31-10-2005)(Nos)
1	Priority Inspection of Major Accident Hazard (MAH) units	14	5
2	Air Monitoring Studies in Hazardous Factories	21	7
3	Workshop/Training Programme for Workers/Managers	9	6
4	Inspection of Hazardous Factories by Specialists Inspectors	314	100
5	Medical Examination of Factory Workers	59	60

Source:Factories and Boilers Department

NUTRITION

Integrated Child Development Services

14.114 Integrated Child Development Services (ICDS) scheme was launched in 1975 with the following objectives:

1. To improve the nutritional and health status of children below 6 years and pregnant and lactating mothers,
2. To lay the foundation for the proper psychological , physical and social development of the child;
3. To reduce the incidence of mortality,morbidity,malnutrition and school drop-outs;
4. To achieve effective co-ordination of policy and implementation among various departments to promote child development;
5. To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper health and nutrition education.

14.115 scheme provides a package of services as indicated below to children below six years and pregnant women and nursing mothers,

1. Supplementary nutrition ,
2. Immunization,
3. Health check-up,
4. Referral services,
5. Pre-school non-formal education,
6. Nutrition and health education

14.116 The Integrated Child Development Services is a Centrally Sponsored Scheme wherein the State Government is responsible for programme implementation. The scheme is implemented allover Kerala through 163 projects(151 Rural,11 Urbanand 1 Tribal). There is one Anganwadi Centre for every 1000 population in rural and urban projects and one for every 700 population in Tribal area There are 25393 sanctioned Anganwadi Centres and out of it 25373are functioning. Anganwadis provide services to 3.59lakh children below 3 years; 4.43lakh children in 3 to 6 years and 1.51 lakh pregnant and lactating women.(see Table 14.26). District wise ICDS beneficiaries in Kerala is shown in Appendix14.16. Project wise details of ICDS is given in Appendix 14.17.

Table 14.26
Total Beneficiaries under the Nutrition Programme

Sl.No.	Category	Beneficiaries 2005 (Nos)
1	0-3 years group	358849
2	3-6 years group	442732
3	Pregnant and Lactating women	151152
	Total	**952733**

SOCIAL JUSTICE

Population

14.117 The Scheduled Caste population of Kerala is 31.24 lakh, as per Census 2001, constituting 9.81 per cent of the total population. The Scheduled Tribe population is 3.64 lakh accounting for 1.14 per cent of the total population. In India, the Scheduled Caste and Scheduled Tribe population to total population accounts for 16.23 per cent and 8.15 per cent respectively. Details are given in Table.14.27

Table 14.27
SC/ST Population of India & Kerala 1971 – 2001

(Population in lakh)

Sl. No	Census Year	Population of India			Population of Kerala		
		Total	SC	ST	Total	SC	ST
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	1971	5481	800	380	213.47	17.22	2.69
2	1981	6834	1047	516	254.50	25.49	2.61
3	1991	8463	1382	678	290.32	28.87	3.20
4	2001	10264	1666	836	318.40	31.24	3.64

Source Census

14.118 The growth rates of Scheduled Caste and Scheduled Tribe population in the State are 8.14 per cent and 13.75 per cent respectively as against 20.55 per cent and 23.30 per cent respectively in India during the decade 1991-2001. The decadal growth rate of Scheduled Caste population is slightly lower than the decadal growth rate of the total population in Kerala. But the growth rate of Scheduled Tribe population is more than that of the state's total population growth. The decadal growth rate of Scheduled Caste and Scheduled Tribe is given in Table 14.28

Table 14.28
Decadal growth rates of SC/ST Population in Kerala (1971-2001)

Sl. No.	Year	Decadal Growth Rate (%)		
		Scheduled Caste	Scheduled Tribe	Total Population
1	2	3	4	5
1	1971	20.00	26.29	26.33
2	1981	48.02	2.97	19.2
3	1991	13.26	22.61	14.3
4	2001	8.14	13.75	9.45

Note: *The drop in the decadal growth rate for Scheduled Tribe during 1971-1981 was due to declassification of Tribal communities.*

14.119 The Scheduled Caste people live along with the rest of the people across the state. Their distribution ranges from 1.07 per cent in Wayand district to 13.85 per cent in Palakkad district

The Scheduled Tribes in Kerala are not only geographically concentrated, but are overwhelmingly rural. Their distribution ranges from 0.86 per cent in Alappuzha district to 37.36 percent in Wayanad district. Details are given in Table 14.29. Details of district wise Scheduled Caste/Scheduled Tribe population is given in Appendix.

Table 14.29
District-wise percentage distribution of SC/ST Population in Kerala

Sl. No	District	Percentage Distribution		Percentage to Total Population	
		SC	ST	SC	ST
1	2	3	4	5	6
1	Kasargod	2.88	8.33	7.49	2.52
2	Kannur	3.17	5.48	4.11	0.83
3	Wayanad	1.07	37.36	4.27	17.43
4	Kozhikkode	6.43	1.63	6.98	0.21
5	Malappuram	9.14	3.36	7.87	0.34
6	Palakkad	13.85	10.89	16.53	1.52
7	Thrissur	11.34	1.33	11.91	0.16
8	Ernakulam	8.44	2.76	8.48	0.32
9	Idukki	5.1	14	14.11	4.51
10	Kottayam	4.81	5.04	7.69	0.94
11	Alappuzha	6.37	0.86	9.45	0.15
12	Pathanamthitta	5.19	1.8	13.13	0.53
13	Kollam	10.34	1.43	12.49	0.20
14	Thiruvananthapuram	11.87	5.74	11.47	0.65
	Total	100	100	9.81	1.14

Source: Census 2001

14.120 Adiya, Paniya and Kattunaikan are the three tribal communities in Wayanad district who are still in a very under developed stage. The Paniyans were bonded labourers by tradition. With the abolition of bonded labour in Kerala, they are now regarded as agricultural labourers.

14.121 There are five primitive tribal groups in the state, namely; Kattunaikan, Cholanaikan, Kurumpas, Kadars and Koragas. According to a Survey conducted by the Scheduled Tribe Development Department in 1996-97, their population was 16978 comprising of 4406 families in 398 settlements, largely in Wayanad, Kasargod, Palakkad and Malappuram districts.

Sex Ratio

14.122 As compared to State's overall sex ratio (1058 females per 1000 male), the sex ratio among Scheduled Castes and Scheduled Tribes are 1048 and 1027 respectively.

14.123 Kerala has registered an increasing trend in the sex ratio of Scheduled Castes and Scheduled Tribes during the last 3 decades. While the sex ratio of Scheduled Caste increased from 1012 in 1971 to 1048 in 2001, the sex ratio of the Scheduled Tribes increased from 995 to 1027. In India as a whole, the sex ratio of Scheduled Caste only marginally increased from 935 to 936, while the sex ratio of Scheduled Tribe decreased from 982 to 978. Details are given in the Table 14.30

Table 14.30

Sex Ratio of SC/ST in Kerala/India 1971 to 2001(Females per 1000 males)

Sl. No	Census Year	India			Kerala		
		Total	SC	ST	Total	SC	ST
1	2	3	4	5	6	7	8
1	1971	930	935	982	1016	1012	995
2	1981	934	932	984	1032	1023	992
3	1991	927	922	972	1036	1029	996
4	2001	933	936	978	1058	1048	1027

Source: Census

Poverty

14.124 Kerala has registered a remarkable improvement in poverty reduction over the years among all the social sections, including Scheduled Caste and Scheduled Tribe population. Poverty level among the Scheduled Castes was reduced to 14.6 per cent in 1999-2000 from 62.3 per cent in 1983. The share of BPL population among Scheduled Tribes was decreased to 24.2 per cent in 1999 - 2000 from 37.3 per cent in 1993-94. Details are given in Table 14.31.

Table 14.31

Percentage of population below poverty line

(Rural in 38th, 50th and 55th NSSO Rounds)

Sl No.	NSSO Rounds	India			Kerala		
		Country Total	SC	ST	State Total	SC	ST
1	2	3	4	5	6	7	8
1	38th Round(1983)	45.6	58.1	63.8	39.1	62.3	NA
2	50th Round (1993-94)	37.1	48.1	52.2	25.5	36.3	37.3
3	55th Round (1999-2000)	27.1	36.2	45.8	9.4	14.6	24.2

14.125 The incidence of poverty among Scheduled Castes and Scheduled Tribes is only half that of the all India level. The decline in the incidence of poverty in the state may be broadly attributed to the land reform measures and the large number of anti-poverty programmes undertaken by both the Central and State Governments and also due to the growth of the economy which in turn raises the level of income.

14.126 Scheduled Castes constitute 19 per cent of the BPL population in Kerala, though they are only 9.81 per cent of the total population of the State. It shows that the incidence of poverty among the Scheduled Caste people is about double that of the population of the state. Scheduled Tribes constitute 3 per cent of the total BPL population while the proportion of Scheduled Tribe population is only 1.14 per cent. It implies that the incidence of poverty among the Scheduled Tribes is about three times that of the total population of the state.

Table 14.32
Category-wise percentage of families Below Poverty Line

Sl. No	Category	Share of BPL	Percentage of Total Population
1	2	3	4
1	Scheduled Castes	19	9.81
2	Scheduled Tribes	3	1.14
3	Others	78	89.05

Literacy

14.127 Kerala ranks first in India not only in the literacy of total population but also in the literacy of Scheduled Caste population. The literacy rate of Scheduled Castes in Kerala was 79.66 per cent as against 89.81 per cent for the state as a whole according to 1991 census. At the national level the literacy rates are 37.41 per cent and 52.21 percent respectively. Among the districts highest literacy was in Kottayam (90.26 %) and the lowest literacy was in Kasaragod district (63.61%). The Literacy rate of Scheduled Caste increased from 40.21 percent during 1971 to 79.66 per cent during 1991

Box 14.9

The literacy rate was highest for Scheduled Castes in Kerala (79.66%) and lowest in Bihar (19.44%) and for Scheduled Tribes it was highest in Mizoram (82.73%) and lowest in Andhra Pradesh (17.16%), as per Census 1991.

14.128 The literacy rate among the Scheduled Tribes in the state was 57.22 per cent as against 29.60 per cent at national level in 1991. Within the state, the highest literacy rate was in Kottayam district (88.69 percent) and the lowest in Palakkad disurict (34.87 per cent).

Table 14.33
Literacy Rates of SCs and STs in India and Kerala –1971-1991

Census	India			*Kerala*		
	Country Total	SCs	STs	State Total	SCs	STs
1	2	3	4	5	6	7
1971	29.45	14.67	11.30	60.42	40.21	25.72
1981	36.03	21.38	16.35	70.42	55.96	31.79
1991	52.21	37.41	29.60	89.81	79.66	57.22

Source . Census Reports

14.129 The female literacy rate of Scheduled Castes in Kerala increased to 74.31 percent in 1991 from 17.40 percent in 1961. During the same period, the all India female literacy rate of Scheduled Castes increased to 23.80 per cent from 3.30 per cent. The female literacy rate of Scheduled Tribes increased to 51.07 per cent in 1991 from 11.90 per cent in 1961. In India as a whole, the female literacy rate increased to 18.20 per cent from 3.20 per cent during the same period.

Enrolment

14.130 The proportion of Scheduled Caste and Scheduled Tribe students in Lower Primary and Upper Primary Schools are relatively higher than their population share. In High School sections the share of Scheduled Tribe students is a little less than their population share. It is a matter of serious concern that the proportion of Scheduled Tribe Students in Higher Secondary section is just half (0.58%) of their population share (1.14%). It can be seen that while drop out ratio beyond class VIII is relatively considerable in the case of Scheduled Caste, the same is overwhelmingly serious for Scheduled Tribes. The details of the enrolment of SC/ST students in various educational institutions are given in Table 14.34. Among college students, 14.20 per cent belong to Scheduled Castes and 1.10 percent belong to Scheduled Tribes.

Table 14.34
Enrolment of Scheduled Caste/Scheduled Tribe Students in Schools and Colleges 2004-05

Sl.No	Section	No of Total Students	Scheduled Caste		Scheduled Tribe	
			No. of Students	% to Total	No. of Students	% to total
1	2	3	4	5	6	7
1	Lower Primary Section	1847073	206880	11.20	31252	1.69
2	Upper Primary Section	1470001	152448	10.37	19131	1.30
3	High School Section	1524941	154492	10.13	14493	0.95
4	Higher Secondary Section	229201	20108	8.77	1337	0.58
5	Degree Courses	158744	22725	14.32	1693	1.06
6	Post Graduate Courses	18226	2420	13.28	251	1.37

Source : Various Educational Departments

Employment Seekers

14.131 There were 5.45 lakh Scheduled Caste in the live registers of Employment Exchanges during 2005 accounting for 14.25 percent of the total. The number of Scheduled Tribe persons in the live register of Employment Exchange was 0.31 lakh which is 0.82 per cent of the total.

14.132 District wise number of unemployed persons in the live register is given in Appendix

Development Programmes for Scheduled Caste and Scheduled Tribes

14.133 In the state ten percent and two percent of the total plan budget provision is earmarked for the development of Scheduled Castes and Scheduled Tribes population respectively.

14.134 Two third of the Special Component Plan budget and one half of Tribal Sub Plan budget are earmarked to Local Self Government Institutions. The balance amount is set apart to Scheduled Caste/Scheduled Tribe Development Departments and other Development Departments.

14.135 The total plan provision set apart for the development of Scheduled Caste and Scheduled Tribes during 2005-06 was Rs. 501.72 crore and Rs. 106.35 crore respectively.

14.136 A two pronged strategy is followed for development of Scheduled Castes and Scheduled Tribes in the state. Infrastructure facilities like roads, electricity and water supply are provided in habitats having more than 50 per cent of SC/ST families. For implementing minor irrigation work, more than 50 per cent of the area should be owned by Scheduled Castes or Scheduled

Tribes. Whereas, for projects benefiting individuals and families, 100 per cent of the beneficiaries should belong to SCs and STs.

Special Component Plan and Tribal Sub Plan through Local Governments

14.137 During the year 2004-05 a total of Rs 245.56 crore was given to Local Governments as plan grant under Special Component Plan and Rs. 40.12 crore as Tribal Sub Plan. Local Government wise budget provision (revised) and expenditure during the year 2004-05 is given in Table 14.35. Percentage distribution of plan grant to Local Governments is represented in Fig. 14.1 & 14.2.

Table 14.35
Budget provision (revised) and Expenditure of SCP/TSP through Local Self Government Institutions – 2004-05

(Rs. lakh)

Sl. No	Local Self Government Institutions	Special Component Plan			Tribal Sub Plan		
		Budget Provision	Expenditure	Percentage	Budget Provision	Expenditure	Percentage
1	2	3	4	5	6	7	8
1	Grama Panchayat	12967.59	10017.31	77.25	1974.63	1542.46	78.11
2	Block Panchayat	4321.78	3757.56	86.94	794.35	662.64	83.42
3	District Panchayat	4321.78	1696.38	39.25	1202.77	614.9	51.12
4	Municipality	1590.74	1100.43	69.18	40.5	35.01	86.44
5	Corporation	1354.48	610.25	45.05	0	0	
	Total	**24556.37**	**17181.93**	**69.97**	**4012.25**	**2855.01**	**71.16**

Source : Information Kerala Mission

14.138 Physical achievements of Local Self Government Institutions during the year 2004-05 is given in Appendix

Fig 14.1

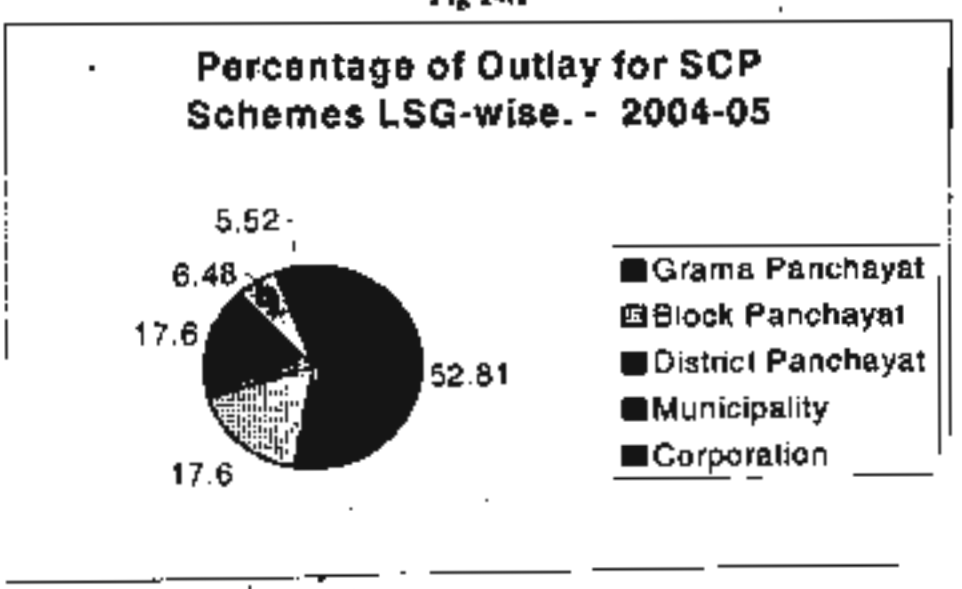
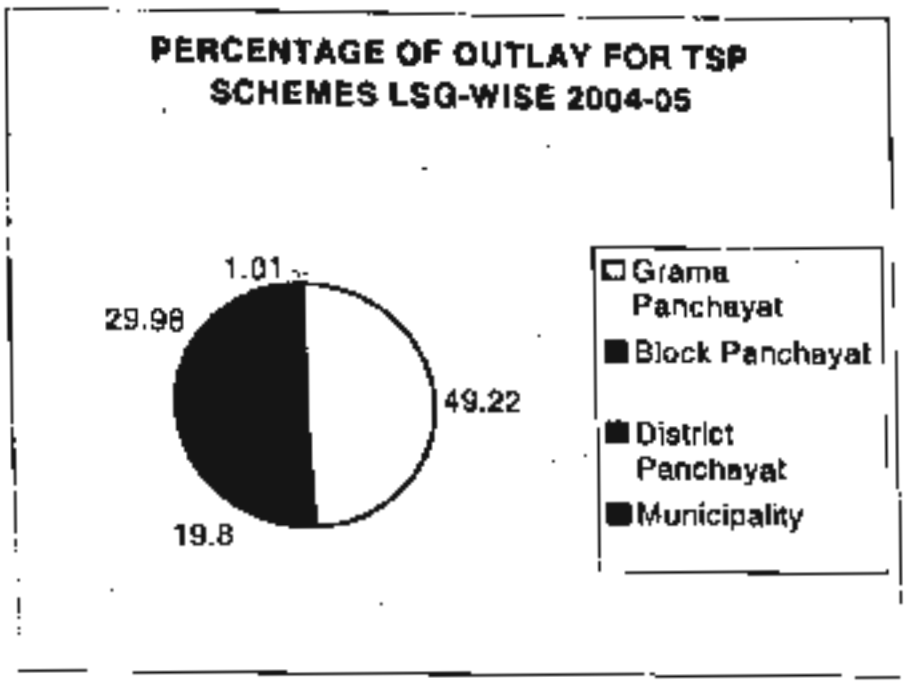


Fig. 14.2



Programmes of Scheduled Caste Development Department

14.139 State schemes and Centrally Sponsored Schemes as well as the projects taken up under Corpus Fund are the programmes implemented by the Scheduled Caste Development Department for the welfare of Scheduled Castes. During the year 2005-06, the state share earmarked for the State Plan Schemes, state share of Centrally Sponsored Schemes and Corpus Fund amounted to Rs. 112.80 crore, whereas the central share for the Centrally Sponsored Schemes is Rs. 49.59 crore.

14.140 The schemes implemented by the Scheduled Caste Development Department cover a wide area comprising education, health, housing and so many other schemes which promote the economic and social welfare of scheduled castes and other backward classes. Physical targets and achievements of major schemes implemented by the department during 2004-05 is given in Appendix .

14.141 Scheduled Caste Development Department implements 19 schemes for educational development. The total amount spent for educational development under Plan and Non plan was Rs. 101.92 crore during the year 2004-05. The details of the schemes implemented during 2004-05 are given in Appendix.

14.142. Programme for education includes boarding and lodging facilities at pre-metric and post-metric level, incentives and awards to talented students stipends, lump sum grant, pocket money to students, special coaching and tutorial facilies to improve results, supply of books and equipments etc.. Eight Model Residential Schools run by the department provide residential school facilities. Information Cum-Guidance Centre, Pre-Examination Training Centres and Civil Service Examination Society etc are also run by the department for Scheduled Caste candidates to equip them to appear for various competitive examinations

Box 14.10

Educational assistance was provided to 5,13,746 Scheduled Caste Students during the year 2004-05. Out of the them 4,22,440 were from pre-metric classes and 91,306 belonged to post matric classes

14.143 An intensive drive for providing houses to the houseless people was taken up recently. Accordingly, 5471 houses were constructed during 2004-05 and during 2005-0610,093 houses have been constructed up to October 2005.

Programmes of Scheduled Tribe Development Department

14.144 A total amount of Rs. 57.41 crore is earmarked during the year 2005-06 for the development programmes by the Scheduled Tribe Development Department which consist of State Plan schemes, Centrally Sponsored Schemes and projects under Corpus Fund as well as Special Central Assistance. Details of Financial and Physical targets and achievements of schemes implemented by the department during 2004-05 is given in Appendix.

14.145 The main objective of the development plan is to promote the socio-economic conditions of the Scheduled Tribes and to free them from exploitation. To achieve this objective, top priority is given for the educational development of the Scheduled Tribes. educational concessions, scholarships and other kinds of assistance are provided to tribal students from pre-primary level to post graduate level. During the year 2004-05, educational assistance benefited 78,382 Scheduled Tribe students. Major portion of the non-plan outlay of Scheduled Tribe Development Department is for educational development activities. Rs. 33.35 crore was expended for educational programmes under Plan and Non plan during the year 2004-05 against the budget provision of Rs. 35.58 crore.

14.146 In order to provide residential education to tribal students from remote areas, the department runs 108 pre-metric hostels and for providing quality education 18 Model Residential/Ashram Schools are functioning under the department. In addition to the existing 40 single teacher schools for providing pre-primary education to tribal students living in very remote and inaccessible areas, 37 centres were also started during 2005 under the peripatetic education scheme for imparting primary education to primitive tribe children. For imparting job oriented technical training, 28 training centres are functioning under the department. The students who get admission in professional courses are given one month residential course in personality development and spoken English.

Box 14.11

Model Residential Schools under Scheduled Tribes Development Department

A study by the State Planning Board

General observations

- Eighteen Model Residential Schools functioning under Scheduled Tribe Development Department provide better education facilities to the children of Scheduled Tribe people.
- Community and social life in family like atmosphere are provided to the students in these schools.
- Food, accommodation, uniform, dresses, soap, oil, towel, mirror, note book, test book etc are provided to the students free of cost.
- 3630 students were studying in Model Residential Schools during the academic year 2004-05. Out of these 2950 are Scheduled Tribe students (81%).
- Admission in the Model Residential School is provided in the ratio of 19 ST's 13 SC's, and 3 others.
- Cent percent pass in the SSLC Examination in the three Schools of Kattela, Munnar and Kasaragod during the academic year 2004-05.
- An amount of Rs. 4646.45 lakhs was expended for the functioning of these schools from 1986-87 to 2003-04.

Suggestions for improvement

- Adequate infrastructure facilities to all Model Residential School to be provided.
- Hostel accommodation facilities to students to be improved.
- The mess fee to students to be revised at regular intervals taking into account increase in prices and change in needs.
- Improved residential facilities to be provided to teachers to ensure that they reside with the students.
- Timely filling of vacant post of wardens / resident tutors.
- Service of experienced teachers to be ensured in all the schools.
- Co-ordination of the activities of ST Development Department, Education Department and Higher Secondary Department to be ensured.

14.147 Despite the fact that Scheduled Tribe Development Department constructed about 5000 new houses during the 10th plan, housing is still a problem among Scheduled Tribes as a large number of houses constructed 10 to 15 years ago have become dilapidated. According to the Scheduled Tribe Department, the requirement of new houses are more than 20,000.

14.148 In order to provide better medical facilities to tribes, department expended Rs. 2.59 core for health programmes during 2004-05 under Plan and Non-plan. During the period under review, a project titled "Outreaching Health Care Programmes to the Tribes" amounting to Rs.18 lakh was sanctioned under Corpus Fund. The Health Department runs 69 primary health centres and 13 tribal mobile medical units to provide health care to the tribes living in remote and inaccessible areas. The Scheduled Tribe Department has 4 Mid Wifery Centres. 17 Ayurveda

Dispensaries, 6 Allopathy Dispensary/OP Clinics, one Ayurveda Hospital, 2 Mobile Medical Units and One allopathy Hospital at Mananthavady.

14.149 Insurance coverage has been provided to 500 families of Primitive Tribal Groups for a period of 5 years beginning from 2004-05. The Primitive Tribal Groups of Koraga in Kasaragod district and Cholanaikan in Malappuram district are covered under the scheme with a view to provide insurance coverage to all Primitive Tribal Group families within the next 3 years. Government of India have sanctioned Rs. 5.00 lakh to the state for the coverage of 1000 families during 2005-06.

14.150 In order to rehabilitate tribal destitute, three Destitute Care Homes, two in Wayanad district and one in Palakkad district, have been started during 2004-05 under Corpus Fund. Each centre has facilities for accommodating 25 inmates.

Tribal Development Mission

14.151 A special scheme for providing land to the landless and houses to the houseless is being implemented in the state. As part of the resettlement of landless, Tribal Development Mission has been formed to undertake rehabilitation activities based on a Master Plan. They have identified 22052 landless tribal families and 32131 families with less than one acre of land. The highest number of landless tribes are found in Wayanad District with 60.32% of the total followed by Palakkad with 24.44%. So far a total of 5902.92 acres of land have been distributed to the benefit of 3802 landless tribal families. Details of district-wise landless tribals, area of land distributed and number of families benefited are furnished in the Table 14.36

Table 14.36
District-wise details of landless tribal families and families benefited and land distributed under TRDM- upto September 2005

Sl. No.	District	Landless tribals (Nos)	Tribals <1 acre land(Nos)	Families covered (Nos)	Land distributed (acres)	Average land per family (acres)
1	2	3	4	5	6	7
1	Kasaragode	226	171	69	73.43	1.6
2	Kannur	1395	2249	740	644.37	0.87
3	Wayanad	13303	12184	739	2363.9	2.82
4	Kozhikkode	318	889	420	600	1.43
5	Malappuram	339	2224	61	46.38	0.76
6	Palakkad	5389	2637	10	4.44	0.44
7	Thrissur	271	840	20	5.68	0.28
8	Ernakulam	132	888	296	418.90	1.42
9	Idukki	190	5436	1072	1583	1.48
10	Kottayam	153	1340	19	19	1.0
11	Alappuzha	117	568	114	27.75	0.24
12	Pathanamthitta	68	1032	14	1.39	0.1
13	Kollam	138	572	128	114.68	0.9
14	Thiruvananthapuram	13	1101	--	--	–
	Total	22052	32131	3802	5902.92	1.55

Source: TRDM

Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes

14.152 The Corporation, with its Registered office at Thrissur, functions through 12 Regional Offices and covering all the districts, is implementing various schemes to enable the SC/ST people to become self-reliant in all respects. The sources of finance for implementing various schemes are Corporation's own share capital and assistance from other national refinancing agencies like NSFDC, NSTFDC, NSKFDC and HUDCO. The Corporation is now concentrating more on self employment schemes to enable the target people to engage in some creative and most viable income generating activities and earn their livelihood and thereby improve their socio-economic status in the society.

14.153 The major schemes implemented by the Corporation include agricultural land purchase, micro-credit finance, mini-venture loans, small enterprise loans, housing, educational loan, marriage assistance etc. During 2004-05, 255 families were assisted under land purchase schemes. Micro credit finance schemes benefited 276 families.

14.154 During the period under review, the Corporation launched certain innovative schemes for Women Empowerment, which include Adivasi Mahila Sakthikaran Yojana sponsored by NSTFDC and Mahila Samridhi Yojana sponsored by NSFDC. Both these schemes provide soft loan assistance to the enterprising women from SC/ST communities for promoting conventional trades and activities. Scheme for Tribal Medical Practitioners is another innovative scheme started during the current year. Under the scheme, financial assistance up to a maximum of Rs. 2 lakh per head is provided to the eligible ST practitioners for arranging hospital facility near their houses to under take conventional tribal treatment.

14.155 The Corporation also conducts a few training programmes for improving the workmanship, efficiency and vocational skills among SC/ST people. During the year 2004-05, training on value addition through product diversification in coconut, Enterpreneurship Development Programme' and TIG & MIG welding were undertaken.

14.156 The scheme wise details of physical and financial achievement of the Corporation are given in Appendix.

Kerala Institute for Research, Training and Development Studies (KIRTADS)

14.157 The Institute conducts research and intensive study on Scheduled Caste and Scheduled Tribe population of the state. During the year under review, the following activities were under taken by KIRTADS:

1. The project report for the Automation of the Library and Modernization of Museum.
2. An Action Plan for the Primitive Tribal Groups of Kerala revealing their present development status.
3. Special action plan for the vulnerable tribal communities like Vedan and Nayadi.
4. The study of Customary Law among Scheduled Tribes.
5. The studies referred to by the Kerala State Commission for Backward Classes for measuring the backwardness has been started.
6. A project on the language studies of all the Scheduled Tribes in Kerala by the Linguistics Wing.

14.158 The evaluation wing of KIRTADS under took the following evaluation studies during this year:

a) Eco tourism : Scope and its implications in selected Tribal areas.
b) Socio-cultural changes of Mavilan Tribe: A contractual appraisal.
c) The role of NGOs in Tribal areas of Kerala: A case study from Wayanad district.

14.159 The training wing conducted selected training programmes for the counselors and peripatetic teachers appointed in the Scheduled Tribe Development Department.

Kerala State Backward Classes Development Corporation

14.160 The Corporation aims at the socio-economic upliftment of the backward classes and minorities in the state. The major objectives of the Corporation are:

a) To promote the comprehensive development of the Other Backward Classes and Minorities of Kerala by rendering assistance by way of loans and advance for establishing small income generating enterprises in various sectors.
b) To promote schemes, establish institutions for the socio, economic and educational upliftment of the target group.
c) To assist Other Backward Classes and Minorities for the upgradation of technical and entrepreneurial skills.

14.161 The Corporation mobilizes funds from the National Backward Classes Finance & Development Corporation (NBCFDC) and National Minorities Development & Finance Corporation (NMDFC) in addition to State Government support.

14.162 The source-wise expenditure and the physical achievements of the Corporation during 2004-05 and 2005-06 are given in the Table.14.37

Table 14.37
Kerala State Backward Classes Development Corporation Ltd.
Physical and Financial Achievements 2004-05 and 2005-06 (upto 31-10-2005)

(Rs lakh)

Sl No.	Source of Fund	Fund received		Expenditure		Physical Target and Achievements (Nos)			
						2004-05		2005-06	
		2004-05	2005-06*	2004-05	2005-06*	Target	Achievement	Target	Achievement
1	2	3	4	5	6	7	8	9	10
1	Government of Kerala	30.00	0.00	1806.49	503.97	10413	4714	5928	1404
2	KSBCDC**	2043.93	76.06	1455.45	1353.72	6317	14181	9375	3398
3	NBCFDC	1500.00	1200.00	1482.53	1044.56	3570	3224	4925	2354
4	NMDFC	1850.00	300.00	N.A	N.A	N.A	N.A	N.A	N.A
5	Opening Balance	646.74	1326.19	N.A	N.A	N.A	N.A	N.A	N.A
	Total	6070.67	2902.25	4744.47	2902.25	20300	22119	20228	7156

Source: Kerala State Backward Classes Development Corporation Ltd
* Upto 31st October 2005, ** Own Accruals

Kerala State Development Corporation for Christian Converts from Scheduled Castes and the recommended Communities

14.163 The main objective of this Corporation is to improve social, educational, cultural and economic condition of the converted Christians from Scheduled Castes and other recommended communities. The main schemes under implementation by the Corporation are agricultural land

purchase, foreign employment, housing, cash incentive to students, marriage loan, agriculture and allied sector assistance, small business, educational loan etc. The Corporation implements these schemes with the financial assistance received from state government and the loan assistance from NBCFDC. The achievements the Corporation up to October 2005 are given in Table 14.38.

Table 14.38
Financial and Physical Achievements of KSDC for Christian Converts

(Rs. lakh)

Sl No.	Scheme	Outlay		Expenditure		Physical Targets and Achievements(Nos)	
		2004-05	2005-06	2004-05	2005-06 up to October	2004-05	2005-06 up to October
1	2	3	4	5	6	7	8
1	State Schemes	29.75	300.00	146.90	28.44	298	43
2	Incentive grant to students			0.19	2.88	22	330
3	NECFDC Schemes	50.00	50.00	28.76	22.76	72	48

Source : Kerala State Development Corporation for Christian Converts from SC and Other recommended communities

CHAPTER 15

PRICES AND FOOD SECURITY

PRICES

Consumer Price Index (CPI)

Consumer Price Index (CPI) measures the changes in the level of retail prices of a fixed set of goods and services (consumption basket). It is an indicator of inflationary trend. During 2005 (up to November) the consumer price index of the State went up by 4 points (base 1998 – 99 = 100) compared to the corresponding period in 2004.ie. the index rose from 121 points in 2004 to 125 points in 2005 (Table 15.1). The annual rate of inflation in terms of consumer price index went up by 3.1 per cent in 2005 (up to November) compared to the corresponding period in 2004. Among the seventeen selected centres subjected to review, the indices of nine centres fell below the State average of 125 points. The highest increase was recorded at Thiruvananthapuram (132 points) followed by Kollam (130 points). The lowest index of 121 points was registered at four centres namely Punalur, Mundakkayam, Munnar and Meppady. The percentage change of indices in 2005 over 2004 in the various centres ranged from 1.5 to 4.5, the largest being at Thiruvananthapuram and lowest at Kannur.

15.2 Month wise movement of consumer price index is shown in Appendix 15.1.The movement of indices is within a range of 118-134 points. The highest increase was recorded at Ernakulam with 6 points from 123 points in November 2004 to 129 points in November 2005 and the lowest increase was at Kannur with one point from 127 to 128 during the same period. Movement of indices in most of the centres during the first quarter of the year remained more or less the same and went up in the next two quarters.

Retail Prices

15.3 Table 15.2 provides the average retail prices of selected items as at the end of December 2002 to 2005 and its per centage variation over the previous years. Prices of selected essential commodities in 2005 (latest data available up to December 2005), compared to the same period in 2004 reveals that as many as 9 out of 18 items recorded negative growth. The increase in trend was reflected in the prices of Chillies, Onion (small) and coriander under Spices and condiments group and banana under Fruits and Vegetable group. Under Condiments and Spices group, prices of Chillies, onion (small) and coriander recorded negative growth of 6.7 per cent, 15.8 per cent and 3.6 per cent respectively compared to the price level in the corresponding period of 2004. Under Fruits and Vegetables group, price of banana came down by 11.2 per cent. All items except ground nut oil under Oil and Oil Seeds group recorded fall in prices. The fall in prices registered by coconut oil and coconut with out husk w s10.1 per cent and 7.4 per cent respectively. The other items, which witnessed fall in prices, were Rice (mutta) (2.2%) and Dhall (4.6%). Items witnessed increase in prices include sugar (12 3%), green gram (16.8%) red gram (3.3%), ground nut oil (0.15%), egg (8.4%), milk (4.3%) and potato (16.5%).

Table - 15.1
Annual Average Consumer Price Index Numbers in Selected Centres of Kerala -2002 to 2005 (Base: 1998-99 = 100)

Centres	Year						% variation over previous year			
	2002	2003*	2003	2004*	2004	2005*	2003	2004*	2004	2005*
1. Thiruvananthapuram	116	121	122	126	127	132	5.2	3.3	4.1	4.5
2 Kollam	117	122	123	126	126	130	5.1	3.3	2.4	2.7
3. Punalur	113	113	113	116	116	121	0.0	1.8	2.7	4.0
4. Pathanamthitta	114	118	118	121	121	125	3.5	2.5	2.5	3.0
5. Alappuzha	113	115	115	120	120	124	1.8	3.5	4.4	3.0
6. Kottayam	115	116	117	121	121	124	1.7	3.4	3.4	2.0
7 Mundakkayam	113	115	115	118	118	121	1.8	2.6	2.6	2.5
8. Munnar	115	114	114	118	118	121	-0.9	2.6	3.5	2.8
9 Ernakulam	114	117	117	120	121	126	2.6	2.6	3.4	4.3
10 Chalakkudy	113	115	116	119	119	123	2.7	3.5	2.6	3.5
11 Thrissur	114	115	116	119	119	123	1.8	3.5	2.6	2.9
12. Palakkad	113	116	116	120	120	125	-2.7	2.6	3.5	3.9
13 Malappuram	114	117	118	121	122	126	3.5	3.4	3.4	3.5
14. Kozhikkode	113	115	116	119	120	123	2.7	3.5	3.5	2.8
15. Meppady	115	113	114	117	117	121	-0.9	3.5	2.6	3.3
16. Kannur	114	116	117	124	124	126	2.6	6.0	5.98	1.5
17 Kasaragod	113	117	119	126	126	129	5.3	7.7	5.9	2.5
18 State Average	**114**	**116**	**117**	**121**	**121**	**125**	**2.6**	**3.4**	**3.4**	**3.1**

**Up to November 2005*

Source: Directorate of Economics and Statistics

15.4 The month wise movement of retail prices of essential commodities is given in Appendix 15.2. Prices of coconut oil, gingely oil, coconut without husk, chillies (dry) onion (small) and tamarind at the end of September 2005 came to a level lower than that in January 2005. Items like green gram, black gram split (with out husk), and banana witnessed substantial increase in price within a period of 9 months from January 2005 to September 2005. Prices of most other commodities witnessed uptrend though erratic within a moderate change during the same period.

Table 15.2
Average Retail Prices of Essential Commodity in Kerala 2002 to 2005.

Commodities	Prices at the end of December					% change over previous year		
	Unit	2002	2003	2004	2005	2003	2004	2005
Cereals								
1. Rice (Red) OM Matta	Kg.	13.40	13.81	13.76	13.50	3.06	-0.4	-2.2
Pulses								
2. Green Gram	,,	30.32	27.61	27.95	32.60	-8.94	1.2	16.8
3. Black Gram	,,	29.59	25	27.1	34.60	-15.51	9.1	27.7
4. Red Gram	,,	29.41	23.2	20.9	21.60	-2.12	-11.81	3.3
5. Dhal	,,	31.03	33.6	34.6	33.00	7.70	4.5	-4.6
Other Food Items								
6. Milk (Cow's)	Lt.	13.04	14	14.01	14.60	7.36	0.07	4.3
7. Egg (hen's Nadan)	Dozen	26.55	27.08	27.00	29.60	2.00	2.1	8.4
8. Sugar OM	Kg.	13.31	14.04	16.40	18.70	5.48	17.5	12.3
Oil & Oil Seeds								
9. Coconut oil	Kg.	60.53	70.86	71.00	63.80	17.07	1.1	-10.1
10. Groundnut oil	,,	59.43	68.2	69.00	68.60	14.76	0.97	0.15
11. Refined oil (postman)	,,	76.06	90.38	86.00	84.70	18.83	-5.8	-1.7
12. Coconut (w/o husk)	100 Nos.	5753	689.04	676.0	625.8	19.78	-1.3	-7.4
Spices & Condiments								
13. Coriander	Kg.	37.64	38.5	32.42	30.4	2.28	-15.8	-6.7
14. Chillies (Dry)	,,	51.55	53.73	43.85	36.90	4.23	-18.4	-15.8
15. Onion (small)	,,	18.89	13.23	13.80	13.80	-29.96	4.3	-3.6
Tubers								
16. Tapioca	Kg.	5.96	5.62	5.81	6.20	-5.70	12.7	6.9
17. Potato	,,	10.28	9.67	10.90	12.70	-5.93	12.7	16.5
Fruits & Vegetables								
18. Banana	Kg.	10.78	14.68	15.40	13.50	36.18	4.9	-11.2

Source: Directorate of Economics and Statistics.

Consumption Expenditure

15.5 The Monthly Per capita Consumption Expenditure (MPCE) is an important indicator of human living standards. Being a consumer State, the pattern of expenditure in Kerala is different from other regions in the country. The details of per thousand distribution of persons over 12 monthly per capita consumer expenditure (MPCE) classes of rural sector based on 59th round of National Sample Survey (NSS) is given in Appendix 15.3. About 73 per cent of population at all India level are concentrated in the expenditure class below Rs 615. Interstate comparison reveals that wide variation exists among the states. In Orissa 38.4 per cent of population is having MPCE below Rs.300. In Punjab it is 1.9 per cent and in Kerala 2.2 per cent. In Kerala, in the rural sector larger concentration of population is in the higher expenditure class as evidenced from Appendix 15.3. About 36.3 per cent of population is having MPCE above Rs.950 which is the

highest among all other states. Next to Kerala is Punjab (31.4 per cent) and Haryana (20.3 per cent), while at all India level the per centage is only 8.2 per cent. In the case of average rural MPCE also, Kerala tops first with Rs.981 followed by Punjab (Rs.886) and Haryana Rs.781, while the all India average is Rs.554. Among the 15 major states the average MPCEs of 5 major states viz., Bihar (415), Madhya Pradesh (455), Orissa (398), Uttar Pradesh (509) and West Bengal (538) are below the all India average.

15.6 A similar trend has also been observed in urban areas, the details of which are given in Appendix 15.4. It is observed that the consumption expenditure is higher in Kerala than that in the neighbouring States and all India level. In Bihar when 45.2 per cent of the population lies in the lowest expenditure class (Rs.0 - 500), in Punjab it is just 6.4 per cent and in Kerala 9.3 per cent. Kerala is placed first in terms of MPCE (above Rs.1925) (14.4%) among other states followed by Punjab (13.4%) and Andra Pradesh (10.8 %).

15.7 At all India level, the average urban MPCE exceeds the average rural MPCE by 84.5 per cent. The interstate disparity is comparatively smaller in Kerala (32.5 per cent) and in Punjab (41.1 per cent) while it is sharper in Orissa (109%), Madhya Pradesh (126 %), Maharashtra (100%) and Andhra Pradesh (88 %).

15.8 Average consumer expenditure, per person for a period of 30 days is given in Table 15.3. In 1970's the average consumer expenditure per person in Kerala both in rural and urban sectors was close to the all India level. Since 1980s it continued to increase year after year and in 2003 it exceeded all India level by 77 per cent in rural sector and 27 per cent in urban sector.

BOX-15.1
Consumer Expenditure (NSSO 59th round)

- During the survey period January - December 2003 the all-India average monthly per capita consumer expenditure (MPCE) was 554 for rural India and Rs. 1022 for urban India. This average urban MPCE exceeded average rural MPCE by 84%.

- In 2003, One half of the rural population of India had MPCE below Rs. 470. About 13% had MPCE below Rs. 300. Among the Urban Population 80% had MPCE above Rs. 500. About 16% had MPCE above Rs. 1500.

- For rural India, Average MPCE of Rs. 554 comprised of Rs. 299 for food and Rs. 255 for non-food expenditure. Food expenditure included Rs. 99 for cereals and cereal substitutes and Rs. 105 for milk , milk products, vegetables and edible oil. Non food expenditure included Rs. 51 for fuel and light and Rs. 44 for clothing and footwear.

- For the urban population average MPCE of Rs. 1022 comprised Rs. 429 for food and Rs. 593 for non-food expenditure. Out of food expenditure, only Rs. 102 went towards cereals and cereal substitutes while Rs. 161 was spent on milk, milk products, vegetables and edible oil. Rs. 94 was spent per person per month on fuel and light and Rs. 71 on clothing and foot wear.

- The share of cereal in total consumption expenditure was 18% in rural India in 2003

compared to 26% in 1987-88. In urban India it was 10% in 2003 compared to 15% in 1987-88.

- The decline in the share of food in total expenditure seen over the part several rounds continued. The share of food was 54% in rural areas compared to 64% in 1987-88 and 42% in urban areas compared to 56% during 1987-88.

- The proportion of urban households using LPG as cooking fuel rose the 55% in 2003 compared 47% in 2000-01. Among rural households the proportion measured to 9% from 7% in 2000-01.

Source: N.S.S.O 59th round

15.9 Percentage distribution of expenditure on food and nonfood items in various rounds of NSS is given in Table 15.4. It is seen that consumption expenditure in Kerala as well as in all India (both urban and rural areas) is higher for nonfood items. The share of expenditure on food items exceeded non-food items in rural areas of the State till (55th round) 1999-2000 (53.7%) for food items and 46.3% for non-food items). There after the trend had reversed showing a higher per centage of expenditure on non-food items. The trend remained same in urban sector but it started much earlier, that is, from (46th round) 1990-91 (49.66%) for food items and 50.34% for non food items.

Table - 15.3

Trends in Average Consumer Expenditure per person for the period of 30 days in various NSS rounds

Year & Round of NSS	Rural		Urban	
	Kerala	India	Kerala	India
1	2	3	4	5
1970-71 (25th)	36.12	35.31	47.63	52.85
1972-73 (26th)	42.19	44.17	58.27	63.33
1977-78 (32nd)	74.76	68.89	84.10	96.15
1983-84 (38th)	145.44	112.31	179.81	165.80
1987-88 (43rd)	211.47	158.10	266.81	249.93
1990-91 (46th)	261.85	202.12	369.36	317.75
1993-94 (50th)	390.40	281.60	493.50	457.70
1999-00 (55th)	765.71	486.00	932.00	855.00
2000-01 (56th)	841.31	494.91	1203.65	914.58
2002-03 (58th)	881.00	530.74	1266.64	1011.94
2003 January to December (59th)	981.00	554.0	1300.0	1022.00

Source: N.S.S.O

Table 15.4
Trends in per centage distribution of Food and Nonfood Expenditure classification in various NSS rounds

Year & Round of NSS	Rural				Urban			
	Kerala		India		Kerala		India	
	Food	Nonfood	Food	Nonfood	Food	Nonfood	Food	Nonfood
1	2	3	4	5	6	7	8	9
1970-71 (25th)	70.21	29.79	73.58	26.42	63.34	36.66	64.41	35.59
1972-73 (26th)	70.42	29.58	72.81	27.19	64.85	35.15	64.49	35.51
1977-78 (32nd)	60.75	39.25	64.35	35.65	60.61	39.39	59.98	40.02
1983-84 (38th)	61.56	38.44	65.56	34.44	58.24	41.76	58.69	41.31
1987-88 (43rd)	59.92	40.08	63.77	36.23	57.08	42.92	55.92	44.08
1990-91 (46th)	63.29	36.71	65.97	34.03	49.66	50.34	55.63	44.37
1993-94 (50th)	60.45	39.55	63.21	36.79	53.90	46.10	54.62	45.38
1999-00 (55th)	53.70	46.30	59.47	40.53	49.03	50.97	48.07	51.93
2000-01 (56th)	49.63	50.37	56.29	43.71	43.22	56.78	43.80	56.20
2002-03 (58th)	50.23	49.77	55.07	44.93	40.25	59.75	42.47	57.53
2003 (January to December) (59th)	44.92	55.08	53.88	46.12	38.36	61.64	41.98	58.02

Source: N.S.S.O

Box 15.2
Trends in all India average per capita consumption expenditure and in consumption pattern at all India level since 1987-88.

1. The index of all India rural MPCE in Money terms has increased to 351 in this round from 100 in 1987-88 (43rd round). Consumer prices in rural India have increased during the same period from 100 to 288 (index values). This would indicate a rise in real consumption expenditure of the order of 22%.

2. For urban India, the index of average MPCE in money terms rose from 100 in 1987-88 to 409 in 2003, indicating a real increase of 26% with the consumer price index having increased from 100 to 325 over the same period.

3. In 2003 the average rural India spend 18 Paise on cereals out of every rupee he spent on house hold consumption, compared to 26 paise in 1987-88. The average urban resident spent ten paise of his rupee on cereals compared to fifteen paise in 1987-88.

4. In both rural and urban India, the share of food in total expenditure continued to fall though out the period 1987-2003. The overall fall was from 64% to 54% in rural areas and from 56% to 42% in urban areas. The fall was spread over nearly all food groups for urban areas. In rural areas, the share of a few food groups registered an increase in particular, vegetables from (5% to over 6%).

5. The share of fuel and light in household consumer expenditure rose from under 7% to 9% in both sectors. The share of the pan, tobacco and intoxicants group fell noticeably in the urban sector from 2.6% to 1.6%.

6. The average MPCE at constant prices (a measure of "real consumption") is seem to have increased from Rs. 158 to Rs. 193 during 1987-2003 in rural India and from Rs 246 to Rs. 314 in urban India. But per capita quantity of consumption of cereals showed a declining trend over the period 1987-2003 in both sectors indicating that the rise in real consumption took place in items of consumption other than cereals.

Source: N.S.S.O 59th round

Wholesale Price Index

15.10 The Wholesale Price Index of agricultural commodities in Kerala (Table-15.5) up to October 2005 (the latest period for which data are available), came down by 74 points compared to the corresponding period in 2004, registering a decline of 2.5 per cent. Index of all commodities except molasses declined during the year under review. Among various crops deceleration registered in the price index of condiments and spices was sharper. It declined by 684 points (23.2%) during 2005 compared to the same period of previous year. The fall in price index of non food crops (6.3%) was sharper when compared to the food crops which declined by 2.4% during the same period.

15.11 Month wise details of wholesale price index is given in Appendix 15.5. The wholesale index of all crops witnessed a declining trend from the beginning of the year, though erratic

during the first half, but maintained a continuous trend there after. Similar trend was observed in all most all items also.

Table - 15.5
Wholesale price Index of Agricultural commodities 2002-05 (Base 1952-53=100)

Crops	Weight	Year						Per centage variation over previous year			
		2002	2003 *	2003	2004 *	2004	2005*	2003	2004*	2004	2005*
A. Food Crops	63.5	2022	2580	2660	2820	2906	2752	31.6	6.0	5.5	-2.4
Rice	40.4	1585	2434	2504	2605	2601	2602	57.98	5.8	3.9	-0.1
Condiments & Spices	10.4	2448	1975	2298	2954	2873	2270	-6	20.0	25.00	-23.2
Fruits & Vegetables	10.7	3281	3867	3743	3548	3527	3508	14	-2.8	-5.8	-1.1
Molasses	2.0	1891	1773	1899	2858	2979	2949	0.4	29.4	56.81	3.2
B. Non Food Crops	36.5	2375	2799	2899	3234	3287	3031	22	5.8	13.4	-6.3
Oil Seeds	25.5	2823	3407	3551	3865	3920	3658	25.8	5.5	10.4	-5.4
Plantation Crops	11.0	1337	1394	1392	1775	1824	1683	4	7.3	31.1	-5.2
C. All Crops	100.0	2151	2660	2747	2971	2982	2897	27.7	5.9	8.6	-2.54

** Up to October*

Source: Directorate of Economics and Statistics.

Parity Index

15.12 Parity index is the relative measure of prices received by farmers and prices paid by them. The terms of trade of the farming sector is considered to be fair when the parity works out to 100. The parity index denotes the price situation of the farming community within the State

15.13 During 2004, Parity Index grew by 2 points from 57 points in 2003 to 59 points as against an increase of 8 points from 49 points in 2002 to 57 points in 2003 (Table 15.6). The annual average growth rate of prices received by farmers increased by 5.5 per cent, and prices paid by them increased by 7.5 per cent from 1995-2004. Farm cultivation cost grew at a rate of 9.4 per cent and domestic expenditure increased at a rate of 5.7 per cent. It is seen that index of prices paid by farmers was higher than what they received throughout the decade (1995-2004). The annual growth rate in the index of prices received by farmers was unfair to farming community during 2000, though the situation is improving since 2002. The recurring occurrence of drought, fall in prices of many of the agricultural commodities particularly the commercial crops and the agricultural related trade policies adopted by Government of India, adversely affected the farming community. Though Parity Index has been reflecting an increasing trend during the last two years, it does not imply that the condition of farmers has improved with the increasing cost of cultivation.

Table - 15.6

Index of Parity - prices received and prices paid by farmers from 1995 – 2004

(Base: 1952-53=100)

Year	Prices received by farmers	Growth Rate	Farm cultivation costs	Growth Rate	Domestic Expenditure	Growth Rate	Prices paid by Farms	Growth Rate	Parity Index on Col. 2 and 8
1	2	3	4	5	6	7	8	9	10
1995	1802		3312		1641		2331		77
1996	2079	15.37	3928	18.60	1810	10.30	2666	14.37	78
1997	2486	19.58	4571	16.37	1979	9.34	3007	12.79	83
1998	2447	-1.57	4895	7.09	2107	6.47	3212	6.82	76
1999	2907	18.80	5556	13.50	2246	6.60	3532	9.96	82
2000	2492	-14.28	6173	11.11	2384	6.14	3836	8.61	66
2001	1927	-22.67	6584	6.66	2489	4.40	4048	5.53	48
2002	1999	3.74	6684	1.52	2542	2.13	4122	1.83	49
2003	2454	22.76	7056	5.57	2615	2.87	4295	4.20	57
2004	2651	8.03	7360	4.31	2705	3.44	4459	3.82	59
Annual Average Growth Rate		5.50		9.40		5.70		7.50	

Source. Directorate of Economic &Statistics

Wages

15.14 The average daily wage rates of both skilled and unskilled workers in agriculture sector from 1994-95 to 2004-05 are given in Table 15.7 & 15.8 The daily wage of carpenter increased by Rs. 7.33 (3.8 per cent) and those of mason increased by Rs. 6.08 (3.2 per cent) during 2004-05 compared to the previous year. Corresponding increase in 2003-04 was Rs. 1.93 (1.0 per cent) for carpenter and Rs.1.7 (0.9 per cent) for mason. Wages of paddy field workers also showed a similar trend. The gap in the wage rate of male and female paddy workers which was 50.8 per cent in 1995-96 came down to 49.49 per cent in 2000-01 and further to 43.05 per cent in 2004-05.

Table - 15.7
Average daily wage rates of skilled workers in Agricultural Sector 1994-95 to 2004-05

(Rs.)

Year	Average daily wage rates		Per centage changes over previous year	
	Carpenter	Mason	Carpenter	Mason
1994-95	87.44	87.04	14.32	13.62
1995-96	107.20	105.96	22.60	21.74
1996-97	128.54	127.81	19.91	20.62
1997-98	145.94	144.04	13.54	12.70
1998-99	155.42	154.80	6.50	7.47
1999-00	165.35	164.70	6.39	6.40
2000-01	176.15	173.85	6.53	5.56
2001-02	182.42	180.06	3.56	3.57
2002-03	190.07	186.30	4.20	3.5
2003-04	192.00	188.00	1.02	0.9
2004-05	199.33	194.08	3.82	3.2

Source: Directorate of Economics & Statistics

Table - 15.8
Average daily wage rates of unskilled workers in the Agricultural Sector 1994-95 to 2004-05

(Rs.)

Year	Average daily wage rates of paddy field workers		% change over previous year	
	Male	Female	Male	Female
1994-95	63.53	41.92	17.08	18.12
1995-96	77.17	51.17	21.47	22.10
1996-97	92.18	60.52	19.45	18.27
1997-98	103.72	69.35	12.52	14.59
1998-99	111.76	71.42	7.75	2.98
1999-00	118.90	78.80	6.39	10.33
2000-01	123.15	82.38	3.57	4.54
2001-02	127.21	88.75	3.30	7.73
2002-03	144.90	99.73	13.9	12.4
2003-04	148.72	101.64	2.6	1.9
2004-05	165.58	115.75	11.34	13.9

Source: Directorate of Economics & Statistics

15.15 Details of average daily wage rates of skilled and unskilled workers on the construction sector are given in Table 15.9 and 15.10 respectively. In 2004-05, the wage of carpenter increased by Rs. 6 in rural areas and by Rs. 8 in urban areas whereas for mason the increase was Rs.6 in rural areas and Rs. 10 in urban areas. Wages of unskilled male workers both in urban and

rural areas increased by Rs. 8, while that of women workers in rural areas increased by Rs. 5 and urban areas by Rs. 7

Table - 15.9
Average daily wage rates of skilled workers in the construction sector 1992-93 to 2004-05

(Rs.)

Year	Carpenter		Mason	
	Rural	Urban	Rural	Urban
1992-93	68.89	70.92	68.07	70.23
1993-94	73.57	76.50	72.75	75.98
1994-95	87.03	91.47	86.49	90.55
1995-96	109.45	113.85	107.59	112.83
1996-97	129.57	134.87	129.20	134.07
1997-98	147.00	150.00	146	149
1998-99	158.09	159.17	156.71	157.88
1999-00	171.09	172.21	168.77	171.94
2000-01	182	184	181	183
2001-02	185	187	184	186
2002-03	176	178	175	178
2003-04	181	184	180	182
2004-05	187	192	186	192

Source: Directorate of Economics and Statistics

Table - 15.10
Average daily wage rates of unskilled workers in the construction sector from 1992-93 to 2004-05

(Rs.)

Year	Men		Women	
	Rural	Urban	Rural	Urban
1992-93	46.34	48.66	37.23	39.38
1993-94	50.36	52.58	40.89	42.80
1994-95	60.08	63.63	49.94	52.00
1995-96	76.59	79.15	62.80	65.34
1994-95	88.47	90.76	73.73	75.76
1997-98	101	104	85.00	87.00
1998-99	111.18	112.43	93.44	94.06
1999-00	125.45	126.54	102.59	105.27
2000-01	130	133	108	111
2001-02	135	136	111	114
2002-03	137	141	112	114
2003-04	139	143	114	118
2004-05	147	151	119	125

Source. Directorate of Economics and Statistics.

FOOD SECURITY

Public Distribution System (PDS)

15.16 The Public Distribution System (PDS) in India is more than half a century old as rationing was first introduced in 1939 in Bombay by the British government as a measure to ensure equitable distribution of food grains in the face of rising prices. In 1984, Government of India created the Ministry of Food and Civil Supplies with two departments viz.: Department of Food and Department of Civil Supplies. The Public Distribution System, which is under Department of Civil Supplies, is an instrument for ensuring the availability of certain essential commodities at affordable prices to the people particularly the poor. The Government, through the Food Corporation of India (FCI) procures and stocks food grains and releases every month for distribution through the Public Distribution System network across the country. The Essential Supplies Programme gave way to Revamped Public Distribution System (RPDS) in 1992 with focus on disadvantageous areas.

Targeted Public Distribution System

15.17 The Public Distribution System was a general entitlement to all consumers without any targeting. The self-sufficiency in foodgrains production achieved by India could not be translated into household level food security for the poor due to lack of purchasing power. The Government of India thus introduced Targeted Public Distribution System from 1st June 1997 in which allocation of foodgrains out of the central pool was made to the states at two sets of prices, at higher subsidized price for the poor and near open market price for others.

Box 15.3

Targeted Public Distribution System (TPDS) intends to target subsidised provision of food grain to 'poor in all areas' unlike Revamped Public Distribution System (RPDS) which laid stress on "all in poor areas".

Public Distribution System in Kerala

15.18 Kerala has a long history of public distribution system, dating back to the beginning of Second World War. Universal and Statutory rationing was introduced on 24.10.1965. The state also switched over to the national pattern of Targeted Public Distribution System from 1.6.1997. Accordingly families under Above Poverty Line (APL) and Below Poverty Line (BPL) categories have been identified and distinctive ration cards under each category have been issued and food grains are distributed to the families at different prices.

15 19 The shift in policy in the allocation and pricing of foodgrains, by the Central Government, caused a major departure with regard to food security policy in the country. On the one hand, it has sought to restrict the coverage of the subsidized Public Distribution System to the poor. On the other hand it has increased the price of the foodgrains. One of the hard hit states of this policy shift is Kerala, which is facing severe foodgrains deficit. In the process, State's Public Distribution System, built-up over a long period of time and hailed as a model one, is now facing survival problems.

Profiles of PDS System in Kerala

15.20 In Kerala, the coverage of ration cards is almost hundred per cent. Ration cards are issued to all families including those who do not have house numbers. The total number of ration cards in the state has increased from 64.47 lakhs as on 1st April 2004 to 66.84 lakhs as on 1st April 2005 showing an increase of 3.68 per cent. Out of the total cardholders, 46.43 lakhs families (69.46%) are APL, 15.69 lakhs (23.47%) are BPL and 4.72 lakhs are (7.07%) under (AAY) scheme. The number of ration permits for institutions has come down from15878 in 2004 to 15215 in 2005. Rationed articles at subsidised price are distributed to the cardholders through a net work of 325 authorized wholesale dealers and 14147 authorized retail dealers. At present there are 22 FCI sub depots in the State. Table 15.11 describes the position of PDS in Kerala from 2001 to 2005.

Table 15.11
Public Distribution System in Kerala – A profile (2001-2005)

(Nos.)

Sl.No	Items	2001	2002	2003	2004	2005
1	2	4	5	6	7	8
1	a) Ration cards for families	63,34,221	63,89,241	62,60,966	64,46,957	66,84,418
	b) Ration Permits for institutions	17,358	17,338	16,183	15,878	15,215
2	FCI Sub Depots	22	23	23	22	22
3	Wholesale Shops a) Co-operative Sector	39	38	42	38	37
	b) Others	304	297	259	269	288
4	Ration shops a) Co-operative Sector	986	958	828	697	634
	b) Others	13247	13212	13249	13441	13513

Source: Directorate of Civil Supplies

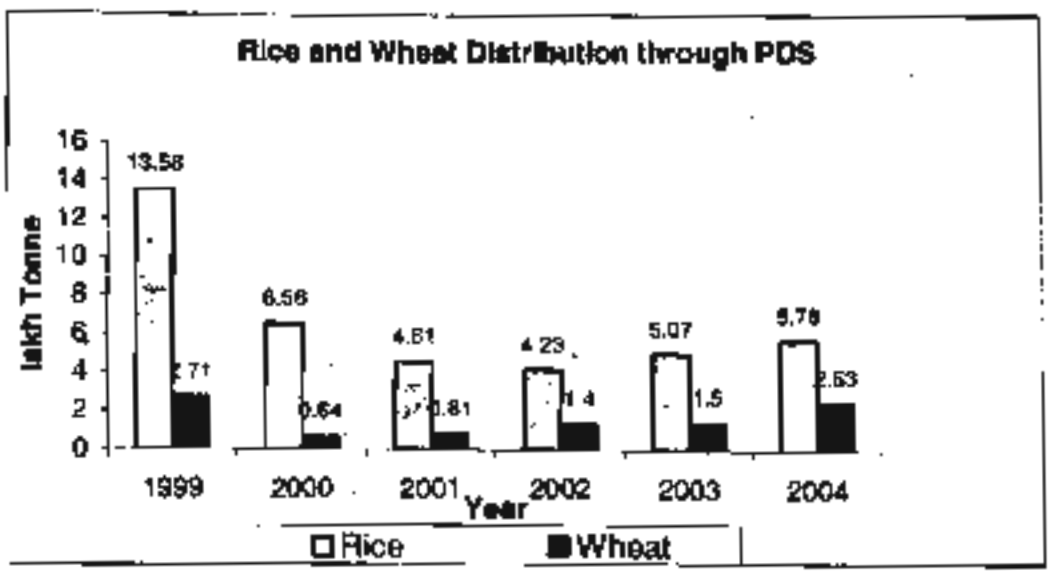
Distribution of Rice and Wheat

15.21 During 2004-05, total allotment of rice and wheat in the country as a whole from the Central Pool was 258.47 lakh tonnes and 281.81 lakh tonnes respectively. The off take quantity was 115.39 lakh tonnes of rice and 88.74 lakh tonnes of wheat accounting for 45 per cent and 33 per cent respectively of the allotment.

15.22 Distribution of rice and wheat through Public Distribution System in Kerala shows declining trend upto 2002, but increasing trend afterwards. In 1999 the off take of rice through Public Dstribution System was 13.58 lakh tonnes and wheat was 2.71 lakh tonnes. It declined to 4.23 lakh tonnes of rice and 1.40 lakh tonnes of wheat in 2002 and afterwards shows a marginal

increase. Reduction of Central subsidy for foodgrains under APL category from April 2000, , lack of desired quality of foodgrains and restriction of levy sugar to BPL cardholders are the reasons for the low off-take of foodgrains under TPDS. The fall in the distribution of rice and wheat is shown in Fig.15.1. The decline was more at 57% in rice distribution during 2004 compared to 1999.

Fig. 15.1



15.23 After the introduction of TPDS, there is sharp fall in APL families buying food grains from PDS shops. District wise distribution of rice and wheat to BPL and APL families during 2004 is given in Appendix-15.6. Table 15.2 explains the item wise/category wise food grain distribution in Kerala during 2004.

15.24 Retail-prices of commodities issued through ration shops during 2004 are shown in Table 15.12.

Table 15.12
Retail Price of Commodities issued through Ration Shops

Sl.No.	Items	Price as on April 2004 (Rs. per Kg)
1	Rice - APL BPL	8.90 6.20
2	AAY	3.00
3	Wheat - APL BPL	6.70 4.70
4	Sugar - BPL	13.50
5	Kerosene/Lure	9.50 to 9.70
6	Annapoorna rice	Free of cost

Source: Directorate of Civil Supplies

Central Allotment of Rice and Wheat

15.25 During 2004-05 113420 MT of rice and 37325 MT of wheat for distribution to APL families, 28403 MT of rice and 9467 MT of wheat to BPL families and 16514 MT of rice to AAY families are allotted monthly by the Government of India. In a year a total of 19-lakh MT rice and 5.62 lakh MT wheat were allotted to Kerala. Details shown in the Table 15.13.

Table 15.13
Quantity of Rice and Wheat allotted per month to Kerala

Sl. No.	Target Group/ Families	Number of card holders (lakhs)	Rice (MT)	Wheat (MT)
1	2	3	4	5
1	Above Poverty Line	46.43 (69.46%)	1,13,420 (71.63%)	37,325 (79.77%)
2	Below Poverty Line	15.69 (23.47%)	28,403 (17.94%)	9,467 (20.23%)
3	Antyodaya Anna Yojana	4.72 (7.07%)	16,514 (10.33%)	--
Total		*66.84(100.00)*	*1,58,337(100.00)*	*46,792(100.00)*

Central Allotment of Sugar and Kerosene

15.26 Central allotment of Sugar is restricted to BPL cardholders alone from February 2001 onwards. Thus central allotment declined from 147517 MT in 2001 to 36759 MT in 2004. But during 2004-05, central allotment increased by above 52%. The central allocation of kerosene to the state also reduced year after year. For instance allotment of Kerosene to state was 396620 Kilo Litres in 2000-01 and it came down to 284988 Kilo Litres in 2004-05 showing a decrease of 28%. It is shown in the Fig.15.2 & Fig.15.3. Monthly distribution of sugar and kerosene from 2000 to March 2005 is given in the Appendix 15.7.

Fig.15.2

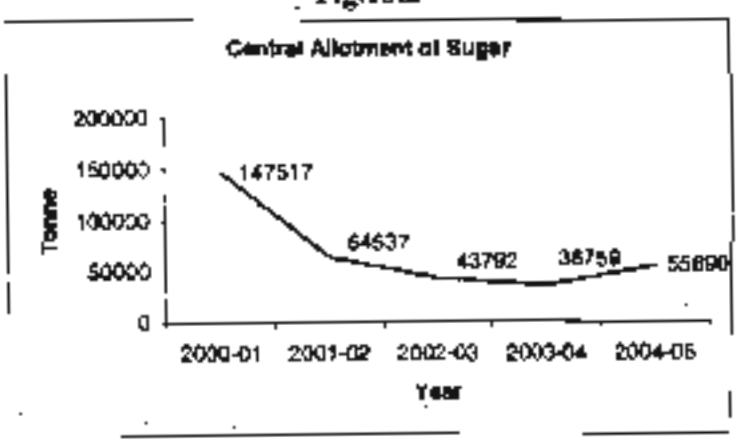
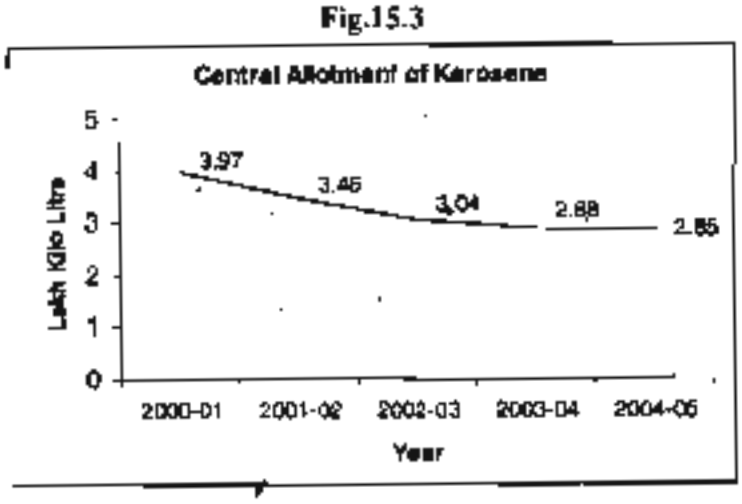


Fig.15.3



Special Schemes

Antyodaya Anna Yojana Scheme (AAY)

Box 15.4

A national sample survey exercise points out that 5% of the total population in the country sleeps without two square meals a day. This section of the population can be called as "hungry"

15.27 Antyodaya Anna Yojana, launched in December 2000 in the country, aim at providing wheat at Rs. 2 per kg and rice at Rs. 3 per kg to the poorest of the poor households.

15.28 This scheme which was implemented in Kerala since Feb. 2001 provides 35 kgs of foodgrains to the poorest of the poor families per month @ Rs.3 per kg. Eventhough the Central Government have fixed the target of beneficiaries in the state initially at 2,38,200, later the target was revised at 471400 during August 2004 as part of further expansion of the scheme. The Government of India is allotting rice under the scheme @ Rs 3000 per MT and the State Government is meeting the expenses towards transportation and handing charges due to the dealers. The expenditure on this account comes to around Rs.7 crore per year. The Table 15.14 shows the allotment and off take of rice under AAY in Kerala and Central.

Table 15.14
Allotment and Off-take of Rice under AAY – India & Kerala
(In lakh MT)

Sl.No.	*Year*	*India*		*Kerala*		*per cent*	
		Allotment	**Offtake**	**Allotment**	**Offtake**	**India**	**Kerala**
1	2	3	4	5	6	7	8
1	2000-01	0.35	0.07	-	-	20	-
2	2001-02	10.29	9.04	0.71	0.54	88	76
3	2002-03	22.85	19.00	1.00	1.07	83	107
4	2003-04	25.06	23.82	1.18	1.12	95	95
5	2004-05	70.23	21.01	1.58	1.59	30	101

Source: Planning Commission

(2) Annapoorna Scheme

15.29 Annapoorna scheme originally was a 100% centrally sponsored one and from 1-4-200, it has been transferred to State. The Central Government provide fund under Additional Central Assistance for purchase of rice from Food Corporation of India and State will have to meet the expenses on transportation and handling charges due to the dealers through a mandatory provision. As per the Scheme destitutes above the age of 65 years who are not receiving National Old Age Pension, are eligible for 10 kgs of rice per month free of cost. The Central Government have identified 44980 beneficiaries and the distribution of rice could not be satisfactorily maintained as the actual beneficiaries come over one lakh in Kerala. As decided by the State Government, all tribals who are unable to work have also been included under the scheme.

(3) Mid day Meal Programme

15.30 The Mid-day Meal Programme aimed at providing nutritional support to primary school-going children was introduced in 1995. Under this scheme, every child is entitled for 3 kg wheat or rice per month for 10 months a year where food grains are distributed in raw form and at the rate of about 100 gms per child per school per day where cooked meal is being served. The food grains are issued by the FCI to the nominees of the District Collectors without charging any price from them. However, a revolving fund of Rs.300 crore has been created by the Ministry of Human Resource Development to reimburse the cost of the food grains to FCI.

15.31 The Supply of Commodities to schools for Noon – Meal scheme is entrusted to SUPPLY CO. During 2004-05 the Corporation supplied 59027.2 MT of rice and 9650.9 MT of pulses to 11968 schools and about 21.16 lakh children got the benefit of the scheme. While the number of schools under this scheme increased compared to last year, the number of children benefited and the quantity food grains distributed decreased marginally. Due to reduction in the purchase price, through various measures, noon feeding issue price has been reduced upto 30%. Details of midday Meal Programme during the last five years are given in the Table 15.15

Table 15.15
Mid - day Meal Programme – 2000-01 to 2004-05

Sl.No.	Year	Schools (Nos.)	Children benefited (Lakhs)	Supply of food grains (Quintal)	
				Rice	Pulses
1	2	3	4	5	6
1	2000-01	11864	23.28	6483444	110020
2	2001-02	11881	23.35	466047	93693
3	2002-03	11897	21.56	46477	95141
4	2003-04	11906	21.67	595327	98248
5	2004-05	11968	21.16	590272	96509

Source: Civil Supplies Corporation

Kerala State Civil Supplies Corporation

15.32 The Kerala State Civil Supplies Corporation was set up in the state in 1974 with the mission of "food security for Kerala". The main function of the Corporation include wholesale distribution of rationed articles in six districts, procurement and distribution of levy sugar, procurement of paddy in the entire state and the supply of essential commodities at reduced price.

15.33 The Corporation acts as a second line of PDS in the State by distributing essential commodities through Maveli Stores/Labham Markets at reduced prices.At present Corporation has 869 Maveli Stores and 163 Labham Markets. In addition to these the Corporation has established some profit making ventures like Sabari super market, which sell luxury items, 45 Maveli Medical Stores, 10 petrol bunks and 4LPG outlets. In maveli medical stores, the selling price is less by 30% to 60% of the market price. The procurement and distribution of levy sugar and rationed articles are organised through 56 Taluk Depots and from March 2005, the Corporation has started selling essential commodities through a chain of 1400 ARD Sabari Stores. Details given in Table 15.16

Table 15.16

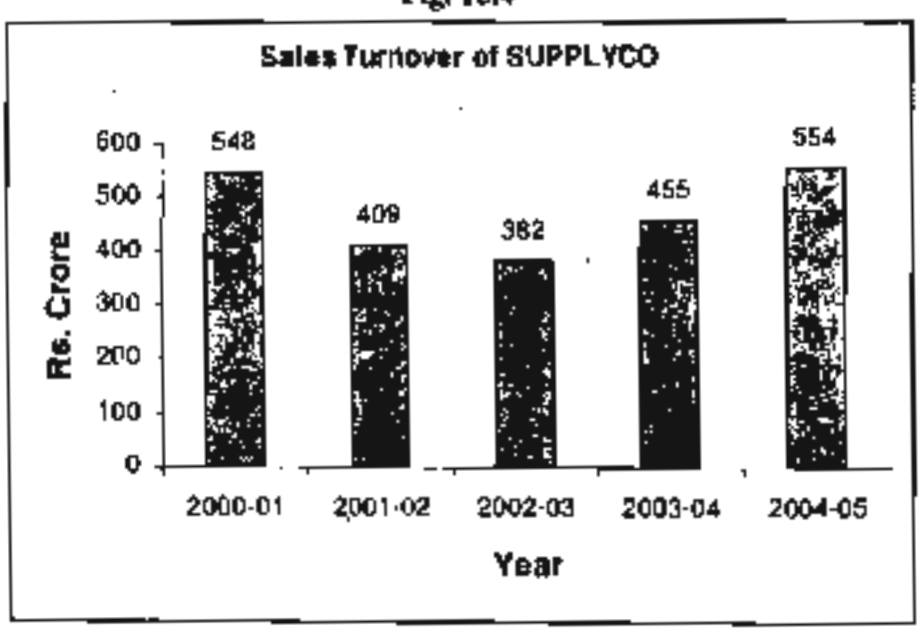
Outlets opened by the Civil Supplies Corporation - 2001-02 to 2004-05

Sl.No	Name of Outlets	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6
1	Maveli Store	28	32	21	42
2	Labham Market	-	77	29	47
3	Sabari Super Markets	-	-	-	5
4	Maveli Medical Store	04	04	04	05
	Total	*32*	*113*	*54*	*99*

Source: Civil Supplies Corporation

15.34 Another major activity of the Corporation is the organisation of fairs and markets in all parts of the State during the festival seasons so as to control price levels. During the period under review, the Corporation organised 10 onam fairs, 5 metro fairs and 87 onam markets in the District and Taluk Headquarters through which a variety of consumer goods and vegetables were sold. The total turn over of the onam markets was Rs.4.66 crore. The Corporation has also set up a hotel at Sannidhanam during sabarimala season. The sales turn over of the Corporation increased from Rs.409 crores in 2001-02 to Rs.554 crores during 2004-05. It is depicted in the Fig.15.4.

Fig. 15.4



15.35 Apar from these, the Corporation has started paddy procurement scheme as a market intervention to protect the income of farmers and providing quality rice through PDS. Paddy procured through Agricultural Co-operative Societies and Padasekharam Committees at the price fixed by the Government is converted into rice and distributed by the Corporation for sales.

CHAPTER-16

EXPORT AND IMPORT

World Trade

The world export growth rate during 2004 was 21.6% as against 5.7% during 2003. The export from the developing countries increased from 18.4% in 2003 to 27% in 2004. The highest growth was observed in China where it was 35.5% in 2004 followed by India with 28.1%. The share of developing countries in the world export was 40.2% in 2004. China's share in the world exports increased from 5.9% in 2003 and 6.2% in 2004 while India's share remained stagnant at 0.8% during the last three years. Table 16.1 shows the export growth and share of selected countries in the world exports. The Fig.16.1 shows the rate of growth of world export and India's export.

Table 16.1
Export Growth and Share in World Exports of Selected Countries

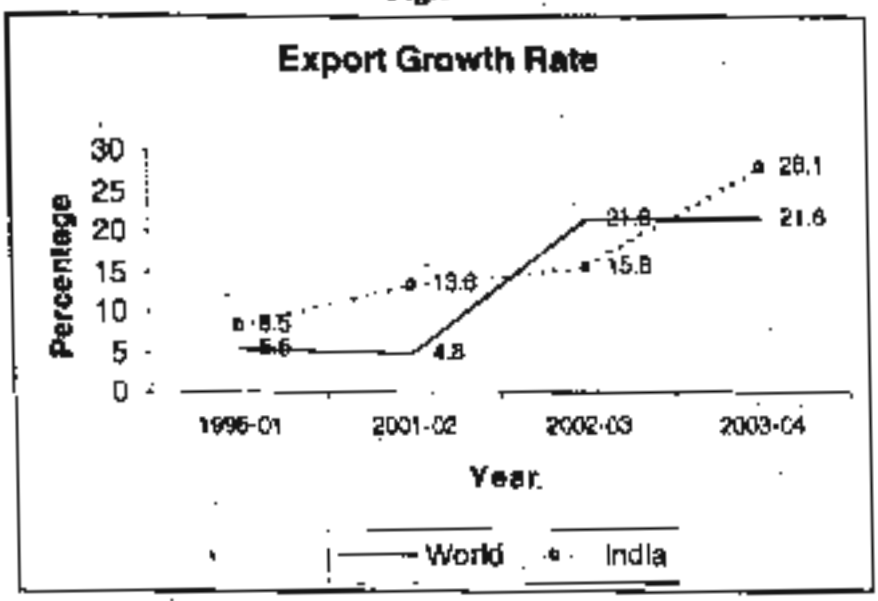
Sl. No.	Country	Percentage growth rate				Share in the World Exports			
		1995-01	2002	2003	2004*	2001	2002	2003	2004*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	China	12.4	22.4	34.5	35.5	4.3	5.1	5.9	6.2
2	Hong Kong	3.6	5.4	11.9	16.5	3.1	3.1	3.0	2.9
3	Malaysia	6.6	6.0	6.5	26.9	1.4	1.5	1.3	1.4
4	Indonesia	5.7	3.0	5.1	-8.4	0.9	0.9	0.8	0.7
5	Singapore	4.1	2.8	15.2	25.3	2.0	1.9	1.9	2.0
6	Thailand	5.9	5.6	17.1	20.9	1.1	1.1	1.1	1.1
7	**India**	**8.5**	**13.6**	**15.8**	**28.1**	**0.7**	**0.8**	**0.8**	**0.8**
8	Korea	7.4	8.0	19.3	29.3	2.5	2.5	2.6	2.7
9	Developing Countries	7.9	7.9	18.4	27.0	36.8	37.9	38.7	40.2
10	**World**	**5.5**	**4.8**	**21.6**	**21.6**	**100**	**100**	**100**	**100**

Source: Economic Survey 2004-05
** January-August, 2004*

India's Foreign Trade

16.2 The Government of India announced a foreign trade policy for 2004-2009 on 31st August 2004. The foreign trade policy has two major objectives. (1) to double our percentage share of global merchandise trade within next five years (2) to act as an effective instrument of economic growth by giving a thrust to employment generation.

Fig.16.1



16.3 Government of India has introduced a new scheme to accelerate the growth of exports called "Target Plus". Exporters who achieve a quantum growth in exports would be entitled to duty free credit based on incremental exports substantially higher than the general annual export target fixed. A new scheme to establish Free Trade and Ware Housing Zone has also been introduced to create trade related infrastructure to facilitate the export & import of goods and services with freedom to carryout trade transactions in free currency.

16.4 India's export as well as import have shown remarkable progress. India's export was for Rs.293367 crores and import for Rs. 359108 crore, during 2003 and 2004 (Appendix –16 1). The total value of merchandise exports from India during 2004 was $ 72530 Million accounting for 0.80 per cent of the total world export. The total value of imports to India was $ 95156 Million accounting for 1 02 per cent of the total world import. The share of manufactured goods to total exports from India is 77 per cent. High technology exports accounted for 5 per cent of the total exports as against 18 per cent in the world total exports.

16.5 Major items of Indian exports are manufactured goods, engineering goods, gems & jewellery, agriculture & allied products, textiles, chemicals and other related products. India's major import items are petroleum and non-petroleum products, capital goods, electronic goods, pearls (precious & semi precious), gold, silver and non electrical machinery.

Export – Import Trade of Kerala through Cochin Port

16.6 A lion's share of Kerals's trade is being conducted through the port of Cochin. It is expected that the volume of export will be strengthened on completion of Vallarpadom container terminal and Vizhinjam Port. Important export items from Kerala are pepper, cashew, coir and coir products, tea ,marine products and spice oils and oleoresins. Software export is also gaining momentum in recent years.

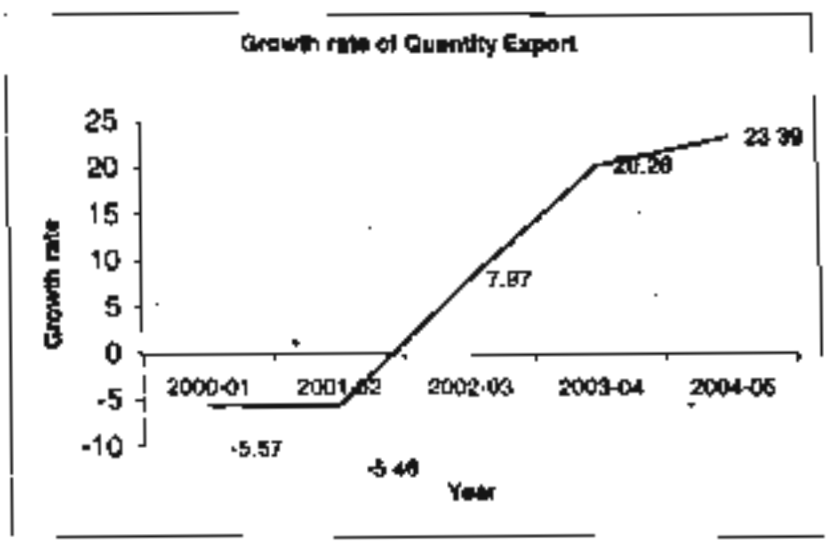
Commodity Composition of Exports through Cochin Port

16.7 Total value of foreign export through Kochi port increased from Rs. 5980.45 crore in 2003-04 to Rs.8033.73 crore in 2004-05 showing an increase of 34.33%. Out of the total value of export in 2004-05, cashew kernels accounted for

21.38% followed by seafood 14.41% and coffee 5.76%.

16.8 The export of sea foods through Kochi port increased only by 2.17% in 2004-05 as against 20.54% in 2003-04. Export of coir products declined from 113638 tonnes in 2003-04 to 88470 tonnes in 2004-05 which shows a decrease of 22.15 percent. The export of coffee declined by 3.45%. The export value of tea steeply declined from Rs. 269.93 crores in 2003-04 to Rs. 96.20 crores during 2004-05, showing a decrease of 64.36%. The quantity of tea export decreased by 0.24% only. Details of commodity wise export through Kochi Port is furnished in Appendix –16.2. Growth rate of export quantity through cochin port is shown in Fig.16.2

Fig.16.2
Commodity composition of Kerala's Imports through Kochi Port



16.9 Petroleum products accounted for 91.14% of the total imports through Kochi port during 2004-05. Growth rate of news print import declined by 30.28% in 2004-05 compared to 2003-04. Import of cashew nuts through Kochi port also decreased during 2004-05. But import of Iron, steel and machinery increased from 61427 tonnes in 2003-04 to 76278 tonnes during 2004-05 showing 24.18% growth. .Fertilizers and raw materials import also improved during 2004-05. Commoditywise imports through cochin port is given in Appendix –16.3

Marine Products -National Scenario

16.10 The export value of marine products was Rs.6646.69 crores during 2004-05. The quantity of export increased by 11.97% and value in rupee by 9.11%. The average unit value marginally decreased by 0.78%. The export details of marine products from India shown in Table 16.2.

Table – 16.2
Export Growth of Marine Products 2003-04 & 2004-05
(Q: Quantity in M.tons V: Value Rs. Crore $: US $ Million)

Year	Unit	Export	variation to previous year	percentage variation	Unit value
1	*2*	*3*	*4*	*5*	*6*
2003-04	Q:	412017	-55280	-11.83	
	V:	6091.95	-789.36	-11.47	Rs. 147.86
	$:	1330.76	-94.14	-6.61	$: 3.23
2004-05	Q:	461329	49312	11.97	
	V:	6646.69	554.74	9.11	Rs. 144.08
	$:	1478.48	147.71	11.10	$: 3.20

Source: MPEDA, Kollam

16.11 Frozen items like shrimp, cuttlefish, fish, squid etc: showed an increase in export where as dried items showed a decrease. Frozen shrimp continued to be the major item of marine products export sharing 29.93% in quantity and 63.50% in value during 2004-05. The export value of frozen shrimp increased by 5.17 percent and quantity by 6.41 per cent during 2004-05. The export of frozen fish also shows an increase of 15.70% in quantity and 22.32% in rupee value. Frozen Squid export increased in quantity by 27.21 % and value by 27.98 %. Details on item wise export of marine products from India for last 5 years are given in Appendix – 16.4.

16.12 The European Union emerged as the largest market for Indian marine products with an intake of 117742 tonnes valued at Rs. 1819.28 crores. In the total export their share was 25.52 per cent in quantity and 27.37% in value. Export to the European Union during 2004-05 increased by 26.71%. Market wise export of marine products from India for the last 5 years are given in Appendix – 16.5.

16.13 Export of marine products from India to all important markets except USA recorded an increase during 2004-05. But USA continued to be the single largest market for Indian marine products with a share of 23.41% in value during 2004-05 relegating Japan to the 2nd position. However the market showed slight depression during 2004-05 mainly due to the impact of antidumping duty imposed by the US government on import of warm water shrimp. The export to Japan increased by 3% in rupee terms and 16% in volume. Details are given in Table –16.3.

Table – 16.3
Country-Wise Export Of Marine Products
Q: Quantity in M T, V: Value in Rs. Crore, $: US Dollar Million
US$: Unit value in US$/KG

Sl.No.	Country	% Share to Total	Unit	Apr-Mar 2004-05	Apr-Mar 2003-04	Variation	(%) change
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Japan	12.54	Q:	57832	50020	7812	15.62
		18.09	V:	1202.45	1163.69	38.76	3.33
		18.06	$	266.96	253.86	13.10	5.16
2	USA	10.85	Q:	50045	53153	-3108	-5.85
		23.41	V:	1556.09	1682.06	-125.97	-7.49
		23.37	$:	345.52	365.84	-20.32	-5.55

3	European Union	25.52	Q:	117742	96284	21458	22.29
		27.37	V:	1819.28	1470.99	348.29	23.68
		27.42	$:	405.40	319.95	85.45	26.71
4	China	27.06	Q:	124826	123738	1087	0.88
		10.43	V:	693.25	676.46	16.79	2.48
		10.42	$:	154.10	151.60	2.50	1.65
5	South East Asia	13.84	Q:	63842	50670	13171	25.99
		9.46	V:	628.83	545.77	83.06	15.22
		9.45	$:	139.77	119.13	20.65	17.33
6	Middle East	3.60	Q:	16624	14711	1913	13.00
		3.68	V:	244.42	201.52	42.90	21.29
		3.70	$:	54.70	43.92	10.78	24.55
7	Others	6.59	Q:	30418	23441	6977	29.76
		7.56	V:	502.37	351.46	150.91	42.94
		7.58	$:	112.03	76.46	35.57	46.52
	TOTAL	**100**	**Q:**	**461329**	**412017**	**49312**	**11.97**

Source. MPEDA

Marine Products from Kerala

16.14 Kerala's share to the total export of marine products from India accounted for 19% in quantity and 17% in value. This was sharp decline of about half in terms of value and quantity as seen in Appendix -16.6. During 2004-05, Kerala exported 87379 tonnes of marine products valued at Rs. 1157.40 cores showing an increase of 14% in quantity and 5% in rupee value. In the export of frozen squid the share of Kerala in India's export was 37%. The share of Kerala in frozen shrimp export constituted 20% in quantity and 13% in value.

16.15 The export of frozen shrimp decreasd by 6% in value and 4% in quantity during 2004-05. In the export of live items also decline was noted. The export of frozen squid and dried items registered 65% and 389% increase respectively in volume and 51% and 309% increase in value respectively during 2004-05. Details are given in Table – 16.4.

Table – 16.4

Item wise Exports of Marine Products from Kerala during 2004-05.

Sl.No.	Item	Qty. (Tons)	Val. (Rs. Crores)	Us$ (Million)
1	*2*	*3*	*4*	*5*
1	Frozen Shrimp	28017	561.56	125
2	Frozen Fish	12406	60.28	13
3	Frozen Cuttle Fish	19954	251.52	56
4	Frozen Squid	17926	195.80	43
5	Dried Items	142	2.60	1
6	Live Items	173	9.00	2
7	Chilled Items	1049	15.58	4
8	Others	7712	61.06	14
	Total	**87378**	**1157.40**	**257**

Source: MPEDA

16.16 European Union accounted for the largest market by purchasing 45437 tons valued Rs. 572.95 crores of marine products from Kerala. Japan was the single largest market followed by

USA. The figure 16.3 and the Table 16.5 shows the market wise export of marine products from Kerala .

Fig. 16.3

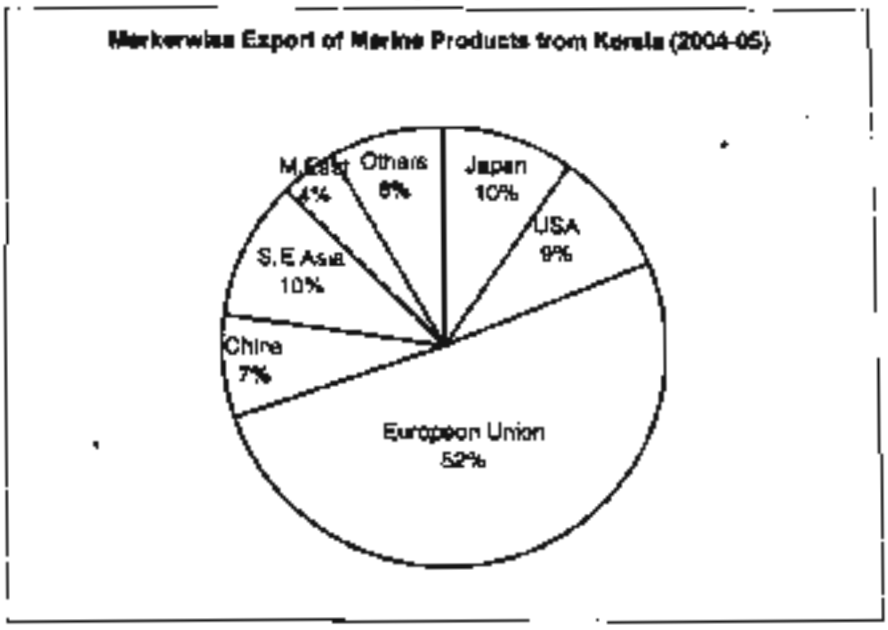


Table – 16.5

Export of Marine Products from Kerala to major markets

Sl.No.	Country	2004-2005			2003-2004		
		Qty. (Tons)	Val. (Rs. Crores)	US$ (Million)	Qty. (Tons)	Val. (Rs. Crores)	US$ (Million)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	European Union	45437	572.95	12716	38145	525.52	114.19
2	Japan	8429	178.23	39.66	9008	206.58	44.92
3	USA	8140	139.00	30.90	7709	142.50	30.91
4	China	6406	74.22	16.48	5979	77.17	20.51
5	South East Asia	9025	59.94	13.30	6045	48.94	10.66
6	Middle East	3755	58.33	13.11	2658	36.55	7.96
7	Others	7198	74.75	16.66	7085	61.87	13.48
	Total	**87379**	**1157.40**	**257.27**	**76627**	**1099.13**	**242.64**

Source: MPEDA

Export performance of Indian spice industry

16.17 The spices export during 2004-05 reached an all time high record both in quantity and value. During the period the export registered 32% increase in quantity and 15% in rupee value. In dollar value, the growth is 18%. The export of chilli, turmeric, coriandar, ginger, Cumin, fennel, fenugreek and spice oils and oleoresins shows significant increase both in terms of quantity and value. The export value of cardamom (small), Tamarind, mint products, nutmeg and mace increased while the quantity of export decreased. During 2004-05, Chilli became the highest earner in the spices export basket, sharing 41% in quantity and 23% in value. Spice oils and oleoresins including mint products shared 40% of the total export earnings.

16.18 The export earnings from corriander and its product valued Rs. 82.66 crore during 2004-05. The ginger export increased by 177% in quantity and 161% in value. The share of pepper in

export earnings declined from 7.47%in 2003-04 to 5.53% in 2004-05. The spices that shows increase in value are pepper, cardamom, (small), celery, garlic, nutmeg and mace, curry powder and other seed spices. As regards vanilla, though export increased by 59% in quantity, value increased by only 26%. This was a blow to the vanilla cultivators due to price decline during 2004-05 India exported 43 tonnes of vanilla valued at Rs. 28.76 crore in 2004-05 as against 27 tonnes valued at Rs. 38.72 crore during 2003-04. The Pepper which shared top in spices export dropped to 6 per cent. Pepper export come down to 14150 tonnes valued Rs 121.40 crores during 2004-05 from 16635 tonnes valued Rs. 142.77 crores during 2003-04. India with strong domestic demand has become in competitive in the international market against Vietnam with a production of more than 85,000 tonnes and negligible domestic demand Similarly, the export of cardamom (small) also declined to 650 tonnes valued at Rs 23.90 crores during 2004-05 from 757 tonnes valued at Rs. 36.92 crores in 2003-04 because of the severe competition form Guatemala The item wise export of spices from India from 2000-01 to 2004-05 is furnished in Appendix -16 7.

Spices – Kerala Scenario

16.19 The export of spices from Kerala are mainly through Cochin and Trivandrum Ports. Major items of export of spices from Kerala are pepper, cardamám (s), ginger, turmeric, curry powder, spice oils and oleoresins, vanila, nutmeg and mace. Export of pepper from Kerala declined from 15710 MT during 2003-04 to 13358 MT in 2004-05, showing a 15% decrease in quantity. However Kerala's share to total pepper export from India is above 94% both in quantity and value Export earnings from ginger more than doubled during 2004-05 though quantity increased by only 21%. The sharp rise in the price of ginger from Rs. 68.16 per kilo during 2003-04 to Rs.127,56 during 2004-05 helped to increase the earnings.

16.20 The export of nutmeg, mace and cardamom also shows a downward trend both in quantity and value. The export value of cardamom (small) declined by 35% and nutmeg and mace by 16% during 2004-05 over 2003-04. This was mainly due to fall in the unit price of these products. With regard to turmeric though the quantity of export declined from 6667 tonnes in 2003-04 to 5069 tonnes during 2004-05, export value increased by 11% due to hike in unit price. Details of export of spices products from Kerala through Cochin and Thiruvananthapuram ports are given in the Table 16.6

Table 16.6

Export of Spice Products from Kerala - 2000-01 to 2004-05

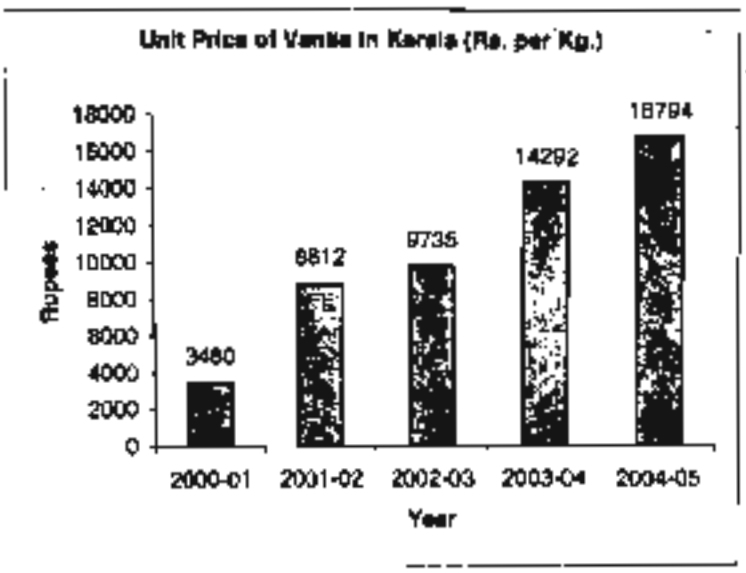
(Qty: MT, Value: Rs.crores)

Sl No.	Items	2000-01		2001-02		2002-03		2003-04		2004-05	
		Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Pepper	18639	312.12	21448	187.21	15094	139.90	15710	134.47	13358	114.35
2	Cardamom	825	42.41	630	40.32	475	32.78	435	21.62	387	13.99
3	Ginger	2752	14.82	2560	14.14	2415	13.71	2089	14.24	2518	32.12
4	Turmeric	2682	11.91	4800	17.87	4770	24.09	6667	26.71	5069	29.74
5	Curry Powder	1025	8.77	1100	10.71	1695	16.99	1685	16.50	1582	17.71
6	Spice Oils & Oleoresins	2811	290.37	3150	291.62	3496	309.06	4208	320.38	4987	423.30
7	Nutmeg & Mace	800	15.20	1225	18.84	1241	25.31	1263	23.54	1106	19.72
8	Vanilla	4	1.39	3	2.64	6	5.84	4	5.72	7	11.76

Source. Spices Board

16.21 Kerala exported 7 metric tonne of vanila and earned Rs. 1175.61 lakhs during 2004-05 achieving 75% increase in quantity and 100% in value compared to 2003-04. But the price in the domestic market has decreased considerably during this period. The variation in the export unit price of vanilla for the last five years is diagramatically represent in Fig.16.4

Fig. 16.4



Cashew

16.22 India is the largest producer of raw cashew nuts in the world followed by Brazil and Vietnam. Among Indian states, Maharashtra comes first in production followed by Andhra Pradesh and Kerala .

Export of Cashew Kernels

16.23 The total export of cashew kernels from India during 2004-05 was 126667 MT valued at Rs. 2709.24 crores. It shows an increase of 25.63% in quantity and 50.14% in rupee value and 53.44% in dollar value during 2004-05 over to 2003-04. In 2003-04 export was 100828 MT valued at Rs.1804.43 crore. The unit export price of cashew kernels went upto Rs. 213.89 per Kg during 2004-05 compared to Rs. 176.96 during 2003-04; recording an increase of 19.52 per cent.

Box 16.1

As per the export-import statistics published by the DGCI&S, Kolkatta, the share of agricultural products in the total export earnings of the country during 2004-2005 is 6.5% and cashew kernels ranked second among them contributing 10.07%. This accounted to 0.66% of the total foreign exchange earnings of the country through exports. (Cashew Export Promotion Council of India.)

16.24 The export of cashew Kernels from Kerala during 2003-04 was 68119 M.T valued at Rs.1204.56 crore. The quantity increased to 79950. M.T and the value to Rs.1715.94 crore during 2004-05. The share of Kerala in the total export from India declined to 63.12% in quantity and 63.34% in value. It is shown in the Table 16.7.

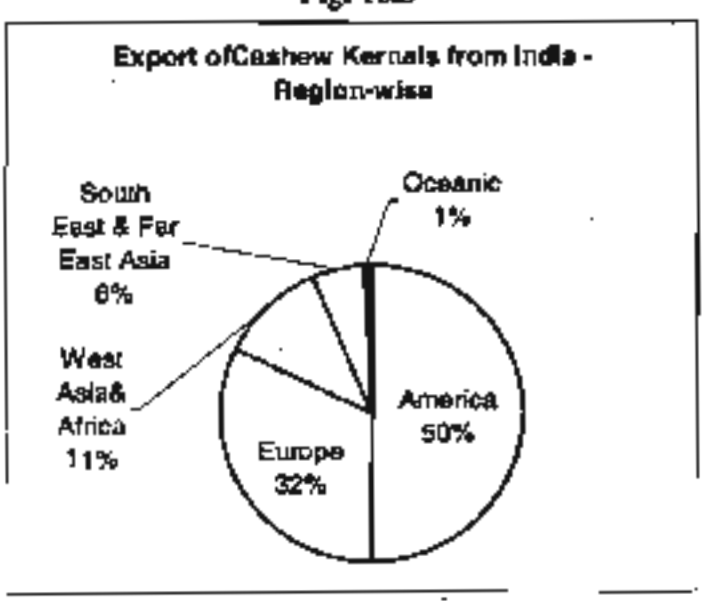
Table-16.7
Export of Cashew Kernels: Kerala and India (2000-01 to 2004-05)
(Quantity in MT and Value in Rs. Crore)

Year	Kerala*		India		Share of Kerala (%)	
	Quantity	Value	Quantity	Value	Quantity	Value
1	*2*	*3*	*4*	*5*	*6*	*7*
2000-01	49874	1152.36	89155	2049.60	55.04	56.22
2001-02	54717	971.21	98203	1788.70	55.72	62.96
2002-03	66859	1216.96	104137	1933.02	64.20	62.96
2003-04	68119	1204.56	100828	1804.43	67.56	66.76
2004-05	79950	1715.94	126667	2709.24	63.12	63.34

**Export through Cochin Port.*
Source: The Cashew Export Promotion Council of India

16.25 Nearly half the total quantity of Cashew Kernels exported during 2004-05 were to America followed by Netherlands (13%) and UK (6%). Export to America amounted to 61544 MT valued at Rs. 1288.49 crores during 2004-05 showing an increase of 26.88% in quantity and 46.16% in value over 2003-04. In the export of cashew kernels to Japan, there was a decrease of 8.6% in quantity and an increase of 9% in value. Exports to Hong Kong and Malaysia recorded increase while exports to South East and for East Asian Zone decreased. Major export markets of cashew kernels from India is shown in Appendix –16.8. The share of different market regions to Indian cashew kernel export is diagrammatically represented in figure 16.5.

Fig. 16.5



16.26 The export of cashew nut shell liquid from India during 2004-05 was 7474 M.T valued at Rs 7.91 crore as against 6926 M.T valued at Rs. 7.03 crores during 2003-04. USA is the prime market which shared 87.64% in quantity and 81.67% in value during 2004-05. During 2003-04, the share of USA was 95% in quantity and 92% in value. During 2004-05, Indonesia, Spain, China and Mexico also entered into the market as given in the Table 16.8.

Table 16.8

Country-wise Export of Cashewnut Shell Liquid From India 2003-04 & 2004-05

Sl. No	Countries	2003-04				2004-05			
		QTY.	% of Qty.	Value	% of Value	QTY.	% of Qty.	Value	% of Value
1	2	3	4	5	6	7	8	9	10
1	USA	6600	95.29	6.45	91.75	6550	87.64	6.46	81.67
2	Indonesia	0	0.00	0.00	0.00	384	5.14	0.50	6.32
3	Spain	0	0.00	0.00	0.00	213	2.85	0.33	4.17
4	Japan	135	1.95	0.19	2.70	154	2.06	0.24	3.03
5	Korea Rep.	191	2.76	0.40	5.69	125	1.67	0.31	3.92
6	China	0	0.00	0.00	0.00	32	0.43	0.04	0.52
7	Mexico	0	0.00	0.00	0.00	16	0.21	0.03	0.37
		6926	100	7.03	100.00	7474	100.00	7.91	100

Source: Cashew Export Promotion Council

16.27 The share of Kerala to India's export of Cashew nut shell liquid was 89% in quantity and 83% in value during 2004-05. Export of Cashew nut shell liquid from Kerala decreased both in value and quantity during 2004-05 compared 2003-04. The details of export of cashew nut shell liquid from Kerala and India is furnished in the Table 16.9.

Table –16.9

Export of Cashew nut Shell Liquid - Kerala & India (2000-01 to 2004-05)

(Quantity in MT and Value in Rs. Crores)

Year	Kerala*		India	
	Quantity	Value	Quantity	Value
1	2	3	4	5
2000-01	907	1.31	2246	3.89
2001-02	3365	4.56	4178	5.93
2002-03	6424	7.55	7215	9.26
2003-04	6784	6.68	6926	7.03
2004-05	6674	6.58	7474	7.91

**Export through Cochin Port*

*** Various Custom Houses*

Source: The Cashew Export Promotion Council of India

16.28 The total raw cashew nuts imported to India during 2004-05 increased to 578884 MT valued at Rs. 2183.26 crore which is an all time record. This was 28% more in quantity and 56% more in value compared to 2003-04. Indonesia was the major supplier of raw cashew nuts to India. Almost 50 per cent of the imported raw cashew was utilised by Kerala. Details of import of raw cashewnut by India and Kerala is furnished in Table 16.10

Table- 16.10
Import of Raw Cashewnuts: Kerala and India (2000-01 to 2004-05)
(Quantity in M.T. value in Rs. Crores)

Year	*Kerala		India	
	Quantity	Value	Quantity	Value
1	2	3	4	5
2000-01	152516	552.74	249318	960.85
2001-02	191579	502.46	355556	950.01
2002-03	249970	772.47	400659	1236.60
2003-04	294552	909.45	452398	1400.90
2004-05	283149	1055.08	578884	2183.26

**Import through Cochin Port. ** Various Custom Houses,P-Provisional*
Source: The Cashew Export Promotion Council of India

Coffee

16.29 Export of Coffee from India in terms of quantity fell from 232684 MT in 2003-04 to 211566 MT during 2004-05 but value increased from Rs.1158.45 crores to Rs.1223.61 crores. It is against India's export of 246908 MT of coffee valued at Rs.1374.25 crore during 2000-01.

16.30 During 2003-04, the share of coffee export from Kerala to India's total coffee export was only 1.37% in quantity and 1.25% in value. It again reduced to 0.85% and 0.77% respectively in 2004-05. Export of coffee from Kerala has been showing a decreasing trend both in quantity and value since 2000-01 except 2003-04. Total coffee export from Kerala was 3195 tonnes valued at Rs.14.50 crore during 2003-04 and it declined to 1808 tonnes valued at Rs.9.45 crore in 2004-05. Details of export of coffee from India and Kerala are shown in Table 16.11.

Table-16.11
Export of Coffee from India & Kerala (2000-01 to 2004-05)

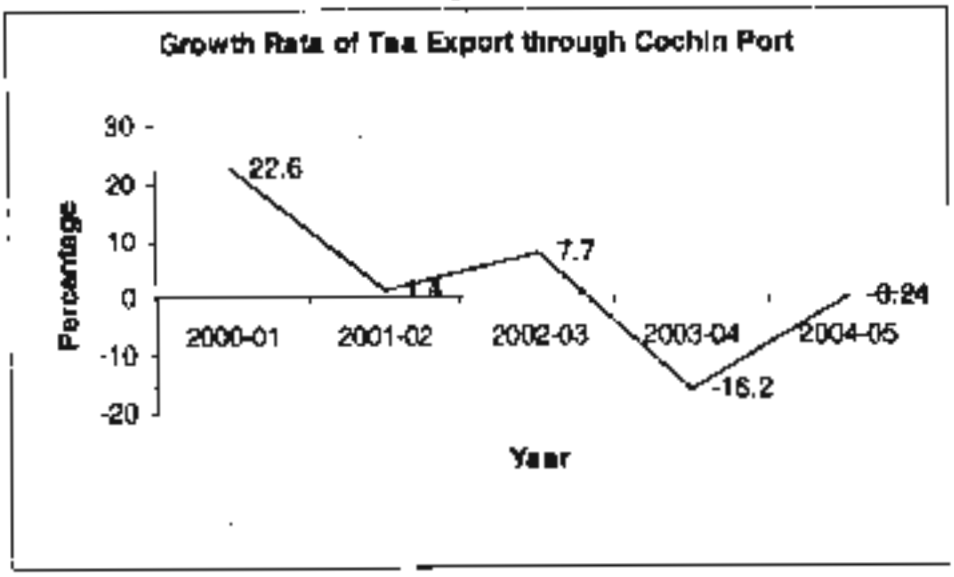
Year	Kerala		India	
	Quantity in MT.	Value (Rs. Lakhs)	Quantity in MT.	Value (Rs. Lakhs)
1	2	3	4	5
2000-01	5,374	2,431.5	2,46,908	1,37,425.1
2001-02	3,685	1,623.2	2,13,586	1,05,036.1
2002-03	3,103	1,162.8	2,07,333	1,05,144.6
2003-04	3,195	1,449.7	2,32,684	115844.7
2004-05	1,808	945	2,11,566	1,22,361

Source: Coffee Board

Tea

16.31 During 2004-05, India exported 194550 tonnes of tea valued at Rs.1784.18 crores. It shows an increase of 9.44% in quantity and 8.97% in value over 2003-04. The quantity of tea export through Cochin Port was 86589 MT and the value realised was Rs.96.20 crores. The growth rate of tea export through Cochin Port from 2000-01 to 2004-05 is diagrammatically shown in Fig.16.7.

Fig.16.7



Coir & Coir Products

16.32 Export of coir and coir products from India during 2004-05 was 122927 tonnes valued at Rs. 473.40 crores It shows an increase of 20% in quantity and 16% in value over 2003-04.

16.33 During 2004-05, export of coir fibre, coir pith, coir rugs, coir yarn, handloom mattings, coir geo textiles, power loom mats tufted mats and coir other sorts shows an increase compared to 2003-04 year. Out of the total export of coir products from India during 2004-05, handloom mats constitute 33% in terms of quantity and 53% in terms of value followed by coir pith (35.32% and 6.43%) ,coir yarn (8.94% and 7.1%) in terms of quantity and value respectively. The coir fibre export was 1350 tonne valued at Rs 1.86 crores. Export of Coir pith recorded 49% increase in quantity and 54% increase in value during 2004-05. Export of curled coir, handloom mattings and rubberized coir decreased both in quantity and value. Export of coir yarn decreased by 11% compared to 2003-04. Export of coir and coir products from India from 2000-01 to 2004-05 is furnished in Appendix – 16.9

16.34 About 21 countries import coir products from India and the major countries are USA, Germany, U.K, France, Netherlands Italy, Belgium, Denmark, Spain, Ireland, Finland, Portugal, Sweeden and Greece. The major markets are USA, Netherland, UK, Italy, Germany and Spain. Country wise quantity and value of coir products exported from India is given in the Table 16.12.

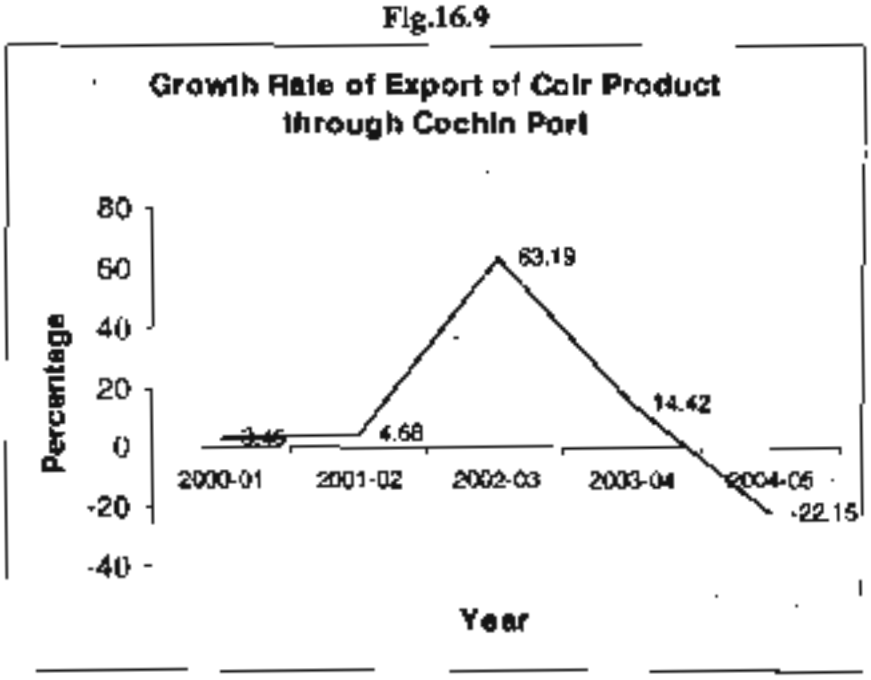
Table –16.12
Major Markets for Coir Products

Sl. No.	Country	Quantity (MT)	Value (Rs. lakhs)
1	2	3	4
1.	USA	32583.14	18625.43
2.	UK	9333.41	4941.59
3.	Germany	5909.35	3011.05
4.	Italy	5274.13	2419.48
5.	Netherland	22323.01	3667.31
6.	France	3885.41	1962.23

7.	Australia	4082.09	1072.55
8.	Belgium	2218.01	903.22
9	Portugal	853.40	348.24
10.	Canada	2238.28	1010.17
11.	Greece	686.29	378.52
12.	Irish Republic	311.16	91.00
13.	Spain	7418.98	1848.68
14.	Denmark	692.29	388.32
15.	UAE	1600.87	336.98
16.	Japan	891.96	584.75
17.	Sweden	1192.67	659.11
18.	Israel	579.21	190.59
19.	Saudi Arabia	662.28	270.91
20.	Newsland	360.09	181.07
21.	Other Countries	19830.76	42891.20
	Total	**122926.79**	**47340.27**

16.35 Export of coir products from Kochi Port during 2003-04 was 113638 M.T valued at Rs.259.27 crore. Export decreased to 88470 tonnes valued at Rs. 107 crore in 2004-05. The growth rate of export of coir products through cochin port for the last five years are shown in the figure 16.9

Fig.16.9



CHAPTER - 17

INSTITUTIONAL AND BANK FINANCE

Last three decades witnessed a conspicuous transition in the financial sector which is also reflected in the banking sector. This paradigm shift - change from financial transactions to the concept of financial super market - is the product of the post liberalisation in financial sector reforms. By adopting new marketing strategies and evolving modern technologies, Indian banking system is giving maximum focus on customers. This has paved way of innovation and efficient management of resources. Indian banking system became fully compliant with Basel - I standard by March 2005 and the platform is set for launching Basel - II norms.

17.2. The reflection of the above has totally resulted in customer services and relations and also updating of infrastructural facilities. The reforms took place in the banking sector were focusing on customer satisfaction in a highly competitive environment. The Narasimham Committee reforms demanded transparency in accounting standard and the whole banking operations were made suitable to operate in the "buyer's market" and not in "seller's market". The word customer satisfaction is now replaced by customer delay. Bankers are vying with each other with their "e-products" like core banking, phone banking, mobile banking, anywhere banking, ATMs etc. Customer can access to his bank account sitting in his home or office.

Box 17.1
Pillar 2 of the Basel II Accord

The Supervisory Review Process is intended to ensure that banks have adequate capital to support all the risks in their business and also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks. This process also recognises the responsibility of bank management in developing and internal capital assessment process and setting capital targets that are commensurate with the bank's risk profile and control environment. Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene where appropriate.

The four basic and complementary principles on which the Pillar 2 rests are: (a) bank should have a process for assessing its overall capital adequacy in relation to its risk profile as well as a strategy for maintaining its capital levels; (b) supervisors should review and evaluate a bank's internal capital adequacy assessment and strategy as well as its compliance with regulatory capital ratios; (c) supervisors expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum; and (d) supervisors should seek to intervene at an early stage to prevent capital from dipping below prudential levels.

Implementation of Pillar 2 requires that a comprehensive assessment of risks be carried out by both the banks (internally) and the supervisor (externally). Banks and supervisors need to focus on key risks which are not directly addressed under Pillar 1 and supervisors are required to ensure proper functioning of certain aspects of Pillar 1.

Some of the key issues are: (i) interest rate risk in banking book; (ii) residual risk; and (iii) credit concentration risk. Supervisors are also required to consider whether the capital requirement generated by Pillar I gives a consistent picture of the bank's operational risk exposure.

Source: Annual report 2004-05, RBI.

Box - 17.2
Restructuring of Banking Sector

"The system is an increasingly competitive environment and would face new challenges and also new opportunities. There would be more scope for competition, both among the banks and between the banks and other players in the system who are more conscious of costs and who place an accent on efficient service. It is, therefore, necessary that banks equip themselves with right organisational structure and even more importantly, right personnel and systems to cope with these challenges".

Source. 'Banking Sector Reforms' by the 'Narasimham Committee Report'.

Box 17.3
Customer Service - some Important Recommendations of the Talwar Committee

- Establishment of customer service committee/staff committee in every branch.
- Customer meet to be held at branches at least once in a half year
- Fifteenth of every month (next day if 15th is a holiday) to be observed as customers' day at branches and at administrative offices
- Provision of complaint - cum - suggestion box in every branch
- Provision of "May I help you" counter in branches
- Immediate credits of cheques up to Rs.2500 which has since increased to Rs.15000.
- Payment of penal interest in cases of delay in collection cheques.

Source: 'Survey of Indian Industry 2005' by 'THE HINDU'

Institutional Finance

17.3. The flow of credit by financial institutions to the states during 2004-05 revealed that NABARD disbursed an amount of Rs.8577.46 crore at all India level against Rs.7605.29 crore disbursement of 2003-04. Uttarpradesh received the highest assistance of Rs.1473.57 crore (17.18%) followed by Punjab, Rs.1041.81 crore (12.15%). Regarding the south Indian States Andhra Pradesh received Rs.899.94 crore (10.43%), Karnataka received Rs.455.44 crore (5.31%), Kerala Rs 448.01 crore (5.22%) and Tamil Nadu Rs.389.20 crore (4.54%). The assistance from NABARD to Kerala during 2003-04 was Rs.342.05 crore (4.50%).

17.4 Similarly NCDC disbursed an amount of Rs.1060.72 crore in 2004-05 at all India level against a disbursement of Rs.626.62 crore of 2003-04. Andhra Pradesh received the highest assistance of Rs.186.73 crore (17.41%) followed by Maharashtra Rs.165.77 crore (15.63%). Tamilnadu received Rs.149.92 crore (14.13%) and Kerala received Rs.109.24 crore (10.30%). Assistance to Kerala during 2003-04 from NCDC was Rs.96.58 crore (15.41%). The major 15

states received a total of Rs.812.98 crore (76.64%) in 2004-05 against Rs.575.02 crore (91.76%) of 2003-04.

17.5 Considering the combined financing by NABARD and NCDC together, the all India level reached to Rs.9638.18 crore from Rs.8231.91 crore of 2003-04. Cumulative disbursement by NABARD in March 2005 at all India level marked Rs.81166.47 crore against Rs.72588.99 crore in March 2004. The cumulative assistance by NABARD to Kerala in March 2005 is Rs.3575.61 crore (4.40%) against Rs.3127.59 crore (4.32%) in 2003-04. Cumulative disbursement by NCDC at all India level as on March 2005 is Rs.8784 crore against Rs.7723.28 crore in March 2004. The total disbursement by NCDC to Kerala since March 2005 is Rs.750.30 crore (8.54%) against Rs.641.06 crore (8.30%) in March 2004.

17.6 State-wise disbursements by NABARD and NCDC and their combined disbursement during 2004-05 are given in Appendix 17.1.

17.7 The state-wise cumulative disbursement by NABARD and NCDC (up to March 2005) and their combined disbursement are given Appendix 17.2.

Increase in Bank Branches

17.8 There were 8262 bank branches all over India at the time of Bank Nationalisation in 1969. The number rapidly grew to 66970 as on March 2004 and to 68116 as on March 2005. Of this 31958 (46.92%) are rural branches, 15375 (22.57%) are semi urban, 11498 (16.88%) are urban branches and 9285 (13.63%) are metropolitan branches. The 60048 branches (88.16%) are spread over 15 major states. The largest number of bank branches are in Uttar Pradesh, [8299 (12.2%) numbers] followed by Maharashtra [6439 (9.5%) nos.] and Andhra Pradesh [5393 (7.9%) numbers].

17.9 The number of bank branches in Kerala as on March 2005 is 3493. There has been an increase of 89 branches as compared to March 2004. The number of rural branches are 345, semi urban 2491 and urban 657 during 2005.

17.10 The State wise rural, semi urban, urban and metropolitan number of scheduled commercial bank branches and their percentages to all India total are furnished in Table 17.1.

Table - 17.1

State-wise distribution of Scheduled Commercial Bank Branches as on March 2005

Sl. No	State	Rural		Semi Urban		Urban		Metropolitan		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Andhrapradesh	2385	7.5	1286	8.4	1143	9.9	579	6.2	5393	7.9
2	Assam	788	2.5	269	1.8	178	1.6	-	-	1235	1.8
3	Bihar	2481	7.8	681	4.4	425	3.7	-	-	3587	5.3
4	Gujarath	1496	4.7	861	5.6	501	4.4	847	9.1	3705	5.4
5	Haryana	705	2.2	440	2.9	523	4.6	-	-	1668	2.5
6	Karnataka	2186	6.8	1075	7.0	845	7.4	860	9.3	4948	7.3
7	Kerala	345	1.1	2491	16.2	657	5.7	-	-	3493	5.1
8	Madhyapradesh	1850	5.8	797	5.2	454	3.9	385	4.2	3486	5.1
9	Maharashtra	2202	6.9	1126	7.3	977	8.5	2134	23.0	6439	9.5
10	Orissa	1585	5.0	340	2.2	342	3.0	-	-	2267	3.3
11	Panjab	1130	3.5	753	4.9	644	5.6	228	2.5	2755	4.0

12	Rajasthan	1836	5.8	768	5.0	524	4.6	280	3.0	3408	5.0
13	Tamil Nadu	1719	5.4	1259	8.2	1039	9.0	829	8.9	4846	7.1
14	Uttar Pradesh	4833	15.1	1370	8.9	1520	13.2	576	6.2	8299	12.2
15	West Bengal	2269	7.1	570	3.7	656	5.7	1024	11.0	4519	6.6
	Total	27792	87.0	14086	91.6	10428	90.7	7742	83.4	60048	88.2
	All India	31958	100	15375	100	11498	100	9285	100	68116	100

Source: Quarterly Statistics by Reserve Bank of India, March 2005
Note: Percentage are to All India Total.

Advances by Scheduled Commercial Banks.

17.11 As per quarterly banking statistics, March 2005, of Reserve Bank of India, the total advances financed by all scheduled commercial banks at all India level reached to Rs.1157807 crore from Rs 890866 crore of March 2004. The increase at all India level is Rs.266941 crore. The major chunk of this advances goes to the 15 major states. They received Rs 963971 crore (83.26%) in March 2005 against Rs.732734 crore in March 2004. Maharashtra continues to keep the first place on receiving maximum advance of Rs.365925 crore (31.61%) in March 2005. The corresponding advance during March 2004 was Rs.262399 crore. All other states are far behind Maharashtra. The advance during 2005 to Tamil Nadu is Rs.108605 crore (9.38%) in the place of Rs.88622 crore (9.95%) of March 2004. During this period Kerala received Rs.39351 crore (3.40%) against Rs.31548 crore (3.54%) of March 2004. The increase in advance by all commercial banks is Rs.7803 crore.

17.12 State-wise advances by scheduled commercial banks during March 2004 and March 2005 with their percentages to all India total are furnished in Table 17.2.

Table - 17.2

State-wise Advances Financed by Scheduled Commercial Banks as on March 2004 and March 2005.

(Rs. crore)

Sl. No	State	Advances 2004		Advances 2005	
		Amount	Percentage	Amount	Percentage
1	2	3	4	5	6
1	Andhrapradesh	55992	6.29	73987	6.39
2	Assam	4607	0.52	6219	0.54
3	Bihar	9244	1.04	11453	0.99
4	Gujarath	36681	4.12	45643	3.94
5	Haryana	14820	1.66	19163	1.66
6	Karnataka	58519	6.57	81106	7.01
7	**Kerala**	**31548**	**3.54**	**39351**	**3.40**
8	Madhyapradesh	21147	2.37	26344	2.28
9	Maharashtra	262399	29.45	365925	31.61
10	Orissa	12345	1.39	16591	1.43
11	Panjab	26885	3.02	30242	2.61
12	Rajasthan	22288	2.50	29892	2.58
13	Tamil Nadu	88622	9.95	108605	9.38
14	Uttar Pradesh	39634	4.45	50137	4.33
15	West Bengal	48003	5.39	59313	5.12
	Total	**732734**	**82.25**	**963971**	**83.26**
	All India	**890866**	**100**	**1157807**	**100**

Source: Quarterly Banking Statistics, March 2004 & 2005, RBI.
Note: Percentages are to All India Total.

17.13 As per SLBC (Kerala) statistics of March 2005, State Bank of Travancore disbursed an amount of Rs.8713.80 crore as advances, State Bank of India disbursed Rs.4166.68 crore, Canara Bank disbursed Rs.3841.93 crore and Union Bank of India disbursed Rs.2142.68 crore. Among private sector banks Federal Bank disbursed Rs.4366.08 crore, South Indian Bank Rs.2178.65 crore, ICICI Bank Rs.1694.81 crore and Catholic Syrian Bank disbursed Rs.1109.41 crore. Regional Rural Banks disbursed Rs.1862.38 crore and Co-operative banks (KSCARDB & KSCB) disbursed Rs.3048.94 crore as on March 2005. The total advances disbursed by banks in Kerala as on March 2005 is Rs 43997.43 crore.

17.14 Advances by scheduled commercial banks from 1985 to 2005 to Kerala as well as India with their percentages of annual growth and incremental advance in Kerala are furnished in Table 17.3.

Table - 17.3

Advances by Commercial Banks in Kerala and India (From 1985 to 2005)

(Rs. crore)

Sl. No.	Year	Advance in Kerala		Incremental Advance in Kerala	Advance in India	
		Amount	% of growth		Amount	% of growth
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	1985	2181	-	-	48953	-
2	1986	2371	8.7	190	56067	14.4
3	1987	2769	16.8	585	63308	20.1
4	1988	3116	12.5	347	70536	11.4
5	1989	3701	18.8	585	83719	20.1
6	1990	4118	11.3	417	101453	19.8
7	1991	4638	12.6	520	116301	14.6
8	1992	5003	7.9	365	125592	8.0
9	1993	5818	16.3	815	151982	21.0
10	1994	6442	10.4	624	164418	8.2
11	1995	7797	21.0	1355	211560	28.7
12	1996	8961	14.9	1164	254015	20.1
13	1997	10482	17.0	1523	278401	9.6
14	1998	12274	17.1	1793	324079	16.4
15	1999	13577	10.6	1303	368837	13.8
16	2000	15941	17.4	2364	435958	18.2
17	2001	19180	20.3	3239	511434	17.3
18	2002	22062	15.0	2882	589723	15.3
19	2003	27007	22.4	4945	759210	28.7
20	2004	31548	16.8	4541	890866	17.3
21	2005	39351	23.5	7803	1157807	30.0
Average						
22	1985-1990	3043	13.6	387	70839	15.7
23	1991-1995	5939	13.7	736	153971	16.1
24	1996-2000	12247	15.3	1629	332258	15.6
25	2001-2005	27830	25.45	3117	781808	27.06

Source: Quarterly Banking Statistics by Reserve Bank of India.

Growth of Bank Deposits.

17.15 According to State Level Bankers Committee (SLBC) report, the total bank deposit in Kerala as on March 2005 is Rs.71673 crore with an annual growth rate of 8.66 per cent. The total deposit as on March 2004 was Rs.65961 crore with an annual growth rate of 9.95 per cent. The NRE deposits in March 2004 was Rs.30100 crore declined to Rs.29121 crore in March 2005. Domestic deposits marked an increased growth rate of 18.7 per cent (Rs.42552 crore) in March 2005 from 16.8 per cent (Rs.35861 crore) in March 2004. The above trend in deposit continued in September 2005. As per SLBC report the total deposit as on September 2005 is Rs.73205 crore with an annual growth rate of 11.17 with respect to September 2004 deposit of Rs.65852 crore. Growth rate of NRE deposit continued negative during September 2005. But domestic deposit marked a high growth rate of 20.73 in September 2005 compared with 14.50 of September 2004.

17.16 According to RBI statistics, the total deposits by all scheduled commercial banks at all India level in March 2005 is Rs.1753174 crore against Rs.1517200 crore of March 2004. The corresponding deposits with respect to Kerala are Rs.70461 crore and Rs.66695 crore respectively. In the case of deposits Maharashtra is far ahead among the states by mobilizing the largest deposit of Rs.384389 crore (21.93%) in 2005 and Rs.322685 crore (21.27%) in 2004. The second place for deposit mobilization goes to Uttar Pradesh with Rs.135568 crore (7.73%) in March 2005 against Rs.119333 crore (7.87%) in March 2004. State wise deposits during 2004 and 2005 and their percentages to all India total are furnished in Table 17.4.

Table - 17.4
State-wise Deposits in Scheduled Commercial Banks as on March 2004 and March 2005.

(Rs. crore)

Sl. No	State	Deposits 2004		Deposits 2005	
		Amount	Percentage	Amount	Percentage
1	2	3	4	5	6
1	Andhrapradesh	84797	5.59	98526	5.62
2	Assam	14970	0.99	18081	1.03
3	Bihar	36131	2.38	41206	2.35
4	Gujarath	84682	5.58	97671	5.57
5	Haryana	30940	2.04	36892	2.10
6	Karnataka	93046	6.13	109417	6.24
7	**Kerala**	**66695**	**4.40**	**70461**	**4.02**
8	Madhyapradesh	44328	2.92	47522	2.71
9	Maharashtra	322685	21.27	384389	21.93
10	Orissa	22753	1.50	26677	1.52
11	Panjab	61975	4.08	66145	3.77
12	Rajasthan	38937	2.57	43322	2.47
13	Tamil Nadu	99873	6.58	110329	6.29
14	Uttar Pradesh	119333	7.87	135568	7.73
15	West Bengal	97325	6.41	110716	6.32
	Total	**1218470**	**80.31**	**1286206**	**73.36**
	All India	**1517200**	**100**	**1753174**	**100**

Source: Quarterly Banking Statistics, March 2004 & 2005, RBI.
Note: Percentages are to All India Total.

17.17 SLBC statistics of March 2005 shows that, among State Bank Group in Kerala, State Bank of Travancore mobilized Rs.15376.87 crore and State Bank of India Rs.7381.74 crore. Among other nationalised banks, Canara Bank mobilized Rs.6413.20 crore, Union Bank of India mobilized Rs.2626.82 crore and Indian Overseas Bank mobilized 2449.95 crore. Among private sector banks in Kerala, Federal Bank, South Indian Bank and Catholic Syrian Bank mobilized Rs.8296.82 crore, Rs.5001.50 crore and Rs.2671.37 crore respectively. Kerala State Co-operative Bank mobilized Rs.2276.84 crore in March 2005. The total deposit as per SLBC statistics during March 2005 is Rs.71672.68 crore.

Box 17.4
RBI Permits Door step Services by Banks

Bankers will now come to your door step to collect cash deposits.

The RBI has allowed banks to start door step banking, including collection of cash, but with its prior approval. Individual banks will have to formulate separate schemes for door step banking. Under this scheme a bank can send his representative to a customer's house and collect deposits. The scheme, worked out by the bank's board should have RBI approval.

Source: 'Business Line' dated 1st May 2005

Box 17.5
RBI issues new ECB norms for the NGOs

RBI has permitted Non Government Organisations (NGOs) engaged in micro finance activities to raise External Commercial Borrowings (ECBs) upto $ 5 million. The guidelines on ECBs for micro finance activities will come into force with immediate effect and will be subject to review from time to time. RBI in its guidelines, categorized NGOs into four types - 1) whether the borrower is genuine, 2) whether ECB funds are utilized for genuine purposes, 3) Credentials of the overseas lender of ECB and 4) systemic implications of such ECB flows including the risks of foreign currency borrowing. NGOs engaged in micro finance activities would be eligible to avail ECB.

Source: 'Deccan Herald', dated 27.4.2005

NRE Deposits

17.18 NRE deposits marked a negative growth rate in March 2005. Low interest rate along with the decision of the Central Government to bring NRE deposits into tax brackets and attraction in depositing in other ventures with high pay back are the main reasons for the reverse trend in NRE deposits. Even though the State urged the Centre for taking remedial measures in this regard, policy decisions are yet to be announced. As on March 2005, the NRE deposits consists of Rs.29121 crore (40.63%) out of a total deposit of Rs.71673 crore in Kerala. The corresponding figures as on March 2004 were Rs.30100 crore (45.63%) and Rs.65961 crore respectively. But domestic deposit increased to Rs.42552 crore (59.37%) in March 2005 from Rs.35861 crore (54.37%) of March 2004. The trend continued in September 2005. According to SLBC figures of

September 2005, the NRE deposits is Rs.28821 crore (39.37%) out of a total deposit of Rs.73205 crore.

17.19 Growth of bank deposit in Kerala (Total, NRE and Domestic) from 1988 to 2005 are furnished in Table 17.5.

Table - 17.5
Growth of Bank Deposit in Kerala 1988 to 2005)

(Rs. crore)

Year	Total Deposit		NRE Deposit		Domestic Deposit	
	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1988	4811	-	1369	-	3442	-
1989	5667	17.8	1584	15.7	4083	18.6
1990	6660	17.5	2012	27.0	4608	12.9
1991	7935	19.1	2304	14.5	5554	20.85
1992	9787	23.3	3039	31.9	6632	19.4
1993	12261	25.3	4499	48.0	7613	14.8
1994	15138	23.5	6015	33.7	8926	17.2
1995	17694	16.9	6886	14.5	10572	18.4
1996	20419	15.4	8103	17.7	12068	14.2
1997	23354	14.4	10178	25.6	13176	9.2
1998	27552	18.0	12735	25.1	14817	12.5
1999	31532	14.4	13329	4.7	18203	22.9
2000	38619	22.5	18724	40.5	19895	9.3
2001	44850	16.1	21431	14.5	23419	17.7
2002	51656	15.2	24534	14.5	27122	15.8
2003	59399	15.0	28696	17.0	30703	13.3
2004	65961	9.95	30100	4.89	35861	16.8
2005	71673	8.66	29121	-3.25	42552	18.7
Sep.2003	61119	12.0	28998	11.5	32121	12.4
Sep.2004	65852	7.74	29089	0.31	36763	14.5
Sep.2005	73205	11.17	28821	-0.92	44384	2073

Source: SLBC, Kerala.

Credit Deposit Ratio

17.20 According to RBI statistics, the CD ratio at all India level as on March 2005 is 66.04 which was 58.72 during March 2004. Tamil Nadu stands first with a high CD ratio of 98.44 in March 2005 against 88.73 in March 2004. CD ratio of Kerala as on March 2005 is 55.85 and that in March 2004 was 47.30.

17.21 Considering the RBI statistics on public sector banks alone, CD ratio at all India level is 62.44 in March 2005 against 55.2 in March 2004. Here also Tamil Nadu stands first with 95.70 in 2005 against 93.10 in 2004. Maharashtra is just behind with 89.47 in 2005 and 89.03 in 2004. The corresponding CD ratios of Kerala are 62.44 (2005) and 59.40 (2004). State-wise deposits, credits and CD ratios of June 1969, March, June of 2004 and March, June of 2005 under public sector banks are furnished in Appendix 17.7.

17.22 Again considering the CD ratios of major banks operating in Kerala, the Union Bank of India comes first with 81.57 in March 2005. The performance of other banks are - Bank of India - 80.61, Central Bank of India - 63.70, Syndicate Bank - 63.20, Canara Bank - 59.91, State Bank of India - 56.67, State Bank of Travancore - 56.45 and so on. The state average CD ratio is 61.39 for the year 2005 against 48.31 of 2004. CD ratios of selected major banks operating in Kerala from 1991 to 2005 are furnished in Table 17.6

17.23 Share of NRE deposit (as percentages) and CD ratios of major banks in Kerala as on March 2005 are given in Table 17.7.

Table - 17.7
Share of NRE Deposit (percentage) and CD Ratio of some major Banks in Kerala (as on March 2005)

Sl. No.	Name of Bank	Share of NRE Deposit %	CD Ratio
(1)	(2)	(3)	(4)
1	State Bank of India	12.50	56.45
2	State Bank of Travancore	23.57	56.67
3	Bank of India	0.77	80.61
4	Canara Bank	11.44	59.91
5	Central Bank of India	1.37	63.70
6	Indian Bank	2.37	35.59
7	Indian Overseas Bank	4.65	39.01
8	Syndicate Bank	2.11	63.26
9	Union Bank of India	3.56	81.57
10	Vijaya Bank	0.75	57.06
	Total Nationalized Banks	**31.80**	**59.27**
11	Catholic Syrian Bank	3.26	41.53
12	Federal Bank	14.72	52.62
13	South Indian Bank	8.69	43.56
	Total Private Sector Banks	**30.66**	**57.50**
	Total Regional Rural Banks	**0.65**	**106.25**
	Total State	**100.00**	**61.39**

Source: SLBC, Kerala June 2005.

Box 17.6
Micro Finance

The programme of linking Self Help Groups (SHGs) with the banking system has emerged as the major micro finance programme in the country. Accordingly, the Union budget has proposed to enhance the annual target of credit linkage to 2.5 lakh SHGs during 2005-06. As at March 2005, 14 lakh SHGs were linked to banks and total flow of credit to these SHGs was over Rs.6300 crore. NABARD and banks have set a target of linking additional 5.85 lakh SHGs to banks by the end of March 2007

Source: Annual Monitory and Credit Policy for 2005-06 dated 28.4.2005.

17.24 Bank group wise total deposits, NRE deposits, advances and CD ratios from 1990 to 2005 of Kerala are given in Appendix 17.8.

Table - 17.6

Credit Deposit Ratios of Selected Major Banks operating in Kerala (as on March)

Name of Bank	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
State Bank of India	67.50	59.90	54.20	45.30	44.70	47.00	48.00	47.53	41.95	39.80	46.68	42.64	42.32	45.59	56.45
State Bank of Travancore	60.00	50.60	49.50	44.50	48.00	43.50	45.20	44.82	44.93	45.97	46.00	46.13	48.06	50.89	56.67
Canara Bank	49.40	41.50	37.10	29.00	28.00	30.40	35.10	40.37	39.05	36.95	37.41	42.45	45.84	50.09	59.91
Indian Overseas Bank	35.60	28.00	25.20	21.80	24.00	25.80	25.00	25.22	26.03	26.25	28.00	33.14	32.33	35.68	39.01
Syndicate Bank	48.60	37.30	33.70	27.90	26.40	33.00	29.20	31.25	33.13	34.94	32.79	31.00	34.17	41.27	63.26
Indian Bank	74.90	72.00	69.70	61.00	51.50	61.30	47.50	41.13	34.21	32..59	35.53	29.80	31.78	33.61	35.59
Bank of India	36.90	36.00	39.30	37.30	35.90	39.20	34.00	34.21	28.80	32.83	34.08	31.20	59.31	62.48	80.61
Central Bank of India	62.60	58.00	58.80	46.00	53.00	50.30	44.00	42.38	42.84	35.48	37.03	35.00	35.26	53.79	63.70
Union Bank of India	69.70	57.00	47.60	44.50	45.00	45.70	47.30	47.30	51.47	51.36	45.00	49.97	53.54	61.33	81.57
Vijaya Bank	54.50	46.00	40.30	38.00	35.00	41.60	36.00	38.78	44.89	31.05	44.28	40.51	44.44	56.90	57.06
State Average	**59.00**	**51.00**	**48.00**	**43.10**	**44.70**	**44.40**	**45.50**	**44.88**	**43.06**	**41.28**	**42.77**	**42.71**	**45.47**	**48.31**	**61.39**

Source: SLBC, Kerala.

17.25 The district wise details of bank statistics in Kerala, shows that the largest number of bank branches are in Ernakulam (520 Nos.), followed by Thrissur (386 Nos.), Thiruvananthapuram (360 Nos.), Kottayam (279 Nos.), Kozhikode (263 Nos.), Palakkad (262 Nos.), Pathanamthitta (250 Nos.), Malappuram (323 Nos.), Kannur (225 Nos.), Alappuzha (218 Nos.), Kollam (197 Nos.), Kasaragod (128 Nos.), Idukki (99 Nos.) and Wayanad (74 Nos.). Ernakulam stands first in deposits and advances with Rs.14073 crore and Rs.9779 crore respectively. Wayanad stands last with Rs.397 crore as deposits and Rs.628 crore as advances. In the case of CD ratio Wayanad is far ahead with 158.19 and Idukki comes second with 104.83. The lowest CD ratio is in Pathanamthitta with 23.23. CD ratio of Ernakulam is 69.49, Kozhikode 70.68, Thiruvananthapuram 68.86, Kollam 62.54, Thrissur 60.68 and Kottayam 52.18. District wise - bank group wise banking statistics as on March 2005, Kerala is furnished in Appendix 17.9. Bank wise performance during 2004-05, Kerala is furnished in Appendix 17.10.

Housing Loans

17.26 During 2004-05, banks in Kerala issued an amount of Rs.7466.05 crore to 3,82,490 beneficiaries as housing loans corresponding figures for 2003-04 were Rs.3688.12 crore to 1,74,269 beneficiaries. During 2004-05 finance through direct housing was Rs.7398.59 crore and that through indirect housing was Rs.67.46 crore. State Bank group disbursed Rs.2561.81 crore to 1,01,604 beneficiaries, Nationalised Bank group disbursed Rs.2441.93 crore to 1,01,770 beneficiaries and RRBs disbursed Rs.153.86 crore to 12,039 beneficiaries. Private sector banks issued Rs.1634.80 crore to 62,062 beneficiaries, foreign banks issued Rs.45.63 crore to 849 beneficiaries and Co-operative Banks issued Rs.6838.02 crore to 1,04,166 beneficiaries. Taking bank-wise disbursement of house loans for 2004-05, SBT alone disbursed Rs.1584.79 crore, SBI disbursed Rs.959 crore, Canara Bank disbursed Rs.619.89 crore and Federal Bank disbursed Rs.698.82 crore. In disbursing housing loans also SBT is far ahead of other banks in Kerala.

Educational Loans

17.27 During 2004-05, Banking Sector in Kerala advanced an amount of Rs.826.61 crore as educational loans to 69853 beneficiaries. State Bank group disbursed Rs.414.99 crore, Nationalised Banks disbursed Rs.321.40 crore, RRBs disbursed Rs.10.95 crore, Private Sector Banks disbursed Rs.75.08 crore. State Bank of Travancore issued Rs.295.20 crore, State Bank of India issued Rs.117.74 crore and Canara Bank issued Rs.126.28 crore. It may be observed that private sector banks are disbursing lesser quantum of educational loans. Among private banks, Federal Bank disbursed Rs.51.25 crore. The total educational loan disbursed during 2003-04 by all banks in Kerala was Rs.526.48 crore to 36640 beneficiaries.

Advances to Weaker Sections and SC/ST.

17.28 During 2004-05 an amount of Rs.5323.49 crore has been disbursed to 2080035 beneficiaries of weaker sections in the State in which Rs.602.77 crore was to 294612 SC/ST beneficiaries. The corresponding advances during 2003-04 were Rs.3450.95 crore and Rs.445.20 crore respectively. State Bank Group disbursed Rs.1815.12 crore to 604381 beneficiaries, where as Nationalised Banks disbursed Rs.1554.31 crore, Regional Rural Banks disbursed Rs.1048.01 crore and Private Sector Banks disbursed Rs.408.98 crore to weaker sections in 2004-05. State Bank of Travancore alone disbursed Rs.1449.87 crore to 513713 beneficiaries. SC/ST loans also SBT stood first among all banks in the disbursement of SC/ST loans. SBT issued Rs.188.57 crore to 93616 SC/ST beneficiaries in 2004-05. Canara Bank issued Rs.125.69 crore to 85846 beneficiaries. Weaker section advance as at March 2005 as percentage of total advances was 12.1% and advance to SC/ST group was 1.37%.

Micro Financing

17.29 The poverty eradication programmes implemented through KUDUMBASHREE by organising the poor by creating community based structures of women below poverty line focus on self-help, demand-led convergence of available services and resources under the leadership of local self governments. At present (as on 31.12.2005) 159739 Neighbourhood groups, 14103 Area Development Societies (ADSs) and 1050 Community Development Societies (CDSs) are functioning in the state covering 32,35,086 BPL families. The thrift and credit societies functioning in the neighborhood groups have mobilised thrift to the tune of Rs.562.15 crore and an amount of Rs.1270.43 crore has been disbursed as loan to the members. There are 21,482 group micro enterprises and 30,066 individual micro enterprises. These micro enterprises facilitate employment to 2.42 lakh women. An amount of Rs.278.81 crore has been disbursed as bank loan to these micro enterprises under Kudumbashree.

AGRICULTURAL FINANCE

17.30 The share of agricultural credit in GDP has moved up from 10.3 per cent in 1993-94 to 16.7 per cent in 2002-03 at the national level. In order to further deepen the credit flow the Ministry of Finance and Reserve Bank of India undertook several measures during the last couple of years. In June 2004 a credit package was announced by the Ministry of Finance for the agricultural sector which envisaged doubling of agricultural credit over the next three years and the target set for the year 2004-05 was Rs. 1.05,000 crore for the country. Along with this, a number of task forces and working groups were constituted subsequently by the Ministry of Finance and Reserve Bank of India to address specific issues in the short term and long term cooperative credit structure, rural credit and micro finance, investment credit, ware house receipt and commodity futures and priority sector lending.

Priority Sector lending in Kerala

17.31 Priority sector advances as a percentage of net advances which was showing a declining trend during the recent years showed a slight increase in 2003-04 and 2004-05. The priority sector advances which was 45.9 per cent in 2002 has declined to 43.9 per cent in 2003 and increased to 49.4 per cent in 2004 and reached to 51 per cent in 2004- 05 against a mandatory norm of 40 per cent. The total priority sector advance disbursed during 2004-05 was Rs. 18387 crore against Rs. 13596 crore during 2003-04. The total bank advances outstanding was Rs.43998 crore out of which the priority sector advance outstanding was Rs.22489 crore.

17.32 Agency-wise disbursement of the annual credit flow is given in Table -17.8. In the disbursal of total advances, commercial banks stood at the first place disbursing Rs. 11871 crore (65%), followed by Co-operative Banks (27%) and RRBs (8%). In the lending for agriculture also commercial banks dominated by disbursing Rs.3884 crore (57%) followed by Co-operative Banks with Rs.1904 crore (28%) and RRBs. Rs. 1066 (5%) crore.

Table -17. 8
Agency-wise Annual Credit flow to Agriculture and total priority sector in Kerala

(Rs. in crores)

Sl. No	Agency	Priority Sector			Agriculture		
		2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	Commercial Banks	6703	8847	11871	1914	2579	3884
2	RRBs	628	1108	1473	408	755	1066
3	Co-operatives including KSPCARDB	3138	3539	4975	1192	1215	1904
4	Kerala Financial Corporation	94	102	68	0	0	0.36
5	Grand total	10563	13596	18387	3514	4549	6854
6	Percentage increase to previous year	28%	29%	35%	22.82%	29.44%	51%

Source: State Level Banker's Committee

17.33 Under Annual Credit Plan 2004-05, the total advance to the priority sector was to the tune of Rs. 18387 crore of which the share of agriculture (primary) was Rs 6854 crore (37%) secondary Rs. 2519 crore (14%) and tertiary Rs. 9013 crore (49%). There is a healthy increase of 35.24% in total disbursements over that achieved during the last financial year. In all the major sub sectors of priority sector also, the state achieved the disbursement targets. District wise analysis of the flow of credit to the priority sector reveals that out of the total disbursement, Kollam advanced the major share of Rs. 2247 crores (12.22%) followed by Ernakulam Rs. 1973 crores (10 73%), Trissur Rs. 1845crores (10.03%) Thiruvananthapuram Rs. 1829 crores (9.95%), and Kannur Rs. 1483 crores. (8.06%). In the case of disbursement to agriculture, Malappuram had a share of Rs. 825 crore, Thrissur and Palakkad have Rs. 629 crore, Kozhikode Rs. 591 crore, Thiruvananthapuram Rs. 567 crore, and Kottayam Rs. 562 crore. The details of district-wise credit flow to priority sector and agriculture are given in Appendix- 17.11

Table - 17.9
Flow of Credit to Priority Sector and Agriculture as a Proportion of Credit and Deposits (in percentage)

Year	All Commercial Banks			
	Priority Sector Lending		Agriculture Credit	
	As a % of Total Credit	As a% of total Deposits	As a % of Total Credit	As a% of total Deposits
2001	46.37	19.83	14.32	6.13
2002	45.93	19.61	13.76	5.88
2003	43 94	19.98	12.99	5.90
2004	49.35	23.84	14.13	6.82
2005	51.05	25.6	14.7	9.6

Source. State Level Banker's Committee

17.34 The achievements of the Commercial banking sector of the State under total priority sector advances (51.05%) and weaker section advances (11.79%) are above the National goal of 40% and 10% respectively. But under agricultural credit the percentage credit to total credit is below the mandatory level.

Table – 17.10
Targets and achievements under advances of commercial banks in Kerala

(Figures in percentage)

Sl.No.	Parameter	Targets	March 2003	March 2004	June 2004	March 2005
1.	Priority sector. Advances to Total Credit	40	43.94	49.35	50.37	51.05
2.	Agricultyre Advances to Total credit	18	12.99	14.13	13.95	14.68
3.	Weaker Section Advance To Total credit	10	8.7	10.83	10.35	11.79
4.	DRI Advance to Total Credit	1	0.04	0.04	0.05	0.01
5.	C.D. Ratio	60	45.47	48.31	49.82	59.01

17.35 All bank groups at national level were able to achieve the overall target for priority sector lending by March 2005 However 2 out of 27 Public sector banks and 12 out of 30 private sector banks fall short of the target of 40 per cent.

17.36 The Reserve Bank undertook several measures to improve credit delivery to the priority sector during 2004-05. More categories of advances were brought under priority sector lending like bank loans to storage units including cold storage units irrespective of location are to be treated as indirect agricultural finance under priority sector. Banks can advance loans to the distressed urban poor to preparing their debt to non-institutional lenders agent appropriate collateral or group security units in the priority sector. An internal working group was constituted by RBI to examine the issues in priority sector. The major recommendations of the group are shown in Box : 17.9

BOX : 17.9

Recommendations by the internal Working Group on priority sector lending

- The broad categories of priority sector for all domestic banks as also for foreign banks may comprise agriculture, SSI, Small business and educational loan.
- The loans granted to farmers who have not availed of bank finance for production of crops against pledge/hypothecation of agricultural produce including warehouse receipts for a period not exceeding 12 months can be considered for classification under direct agricultural advances to farmers.
- The scheme on agribusiness and agri clinics could be opened to non-agricultural graduates also and the finances may be classified under indirect finance to agriculture.
- Loans to Electricity Boards for reimbursing the expenditure already incurred by them for providing low tension connection from step down point to individual farmers for energizing their wells, loans to SEBs for systems improvement scheme under Special Project on Agriculture, Finance for hire purchase schemes for distribution of agricultural machinery and implements, the advances to State

sponsored corporations for onward lending to weaker sections, the loans granted to NCDC for non-lending to the Co-operative sector for agricultural purposes could be made ineligible for Priority sector status.

- All indirect finances to agriculture may be considered for a weightage of 25 per cent only for the purposes of reckoning under agriculture segment of priority sector. The present ceiling of 4.5% for lending (25% of 18%) under indirect finance to agriculture would consequently be withdrawn.

- As no distinction is made between direct and indirect finance to SSI in terms of fixing targets or computation of achievement or reporting mechanism, doing away with the separate classification of finance to SSI into indirect and direct may be considered. No separate target needs to be specialised for SSI sector.

- Credit provided to Government Sponsored Corporation/Organisation for onward lending to weaker sections, term finance/loan in the form of lives of credit made available to State industrial Development Corporation for financing SSIs, loans for getting up of industrial estates etc. are ineligible for priority sector status.

- Educational loans should include only loans and advances granted to individuals and not those granted to institutions.

- All banks which are required to lend to priority sector could be permitted to invest in PSL based IBPCs on a risk ,sharing basis and these would form a part of their priority sector lending.

- The Computation of priority sector lending obligation of banks could be linked to the total disbursements made by banks during the previous years.

Source : RBI, September 2005

Credit flow to Agriculture

17.37 As per the Tenth Plan projection, the flow of credit to agriculture and allied sectors is expected to be of the order of Rs. 7,36,570 crore. However, despite the extensive outreach of rural and semi urban branch network of commercial banks (about 33000) co-operative banks (about 1 lakh) and RRBs (about 14000) the estimated actual flow of credit to agriculture from formal rural financial institutions during 2002-03 stood at Rs. 69560 crore against the projected amount of Rs. 82073 crore (85 percent).

17.38 In order to boost up the credit flow to agriculture and ensure adequate credit availability to farmers so as to achieve 4 per cent growth in Agriculture sector during the Tenth plan period, Government of India announced a credit package envisaging 30 per cent growth in credit flow to Agriculture during 2004-05 over the previous year and doubling it over a period of three years. NABARD has been entrusted by Government of India with the responsibility of overseeing the implementation of the programme and its monitoring.

17.39 Accordingly RBI advised banks to make efforts to increase their disbursements to small and marginal farmers to 40 per cent of their direct advances under Special Agricultural Credit Plan by March 2007. Private Banks were advised to fix the SACP target for the year 2005-06 showing a growth rate of 30 per cent over disbursements during the year 2004-05. Banks were

allowed to waive margin/security requirements for agricultural loan upto Rs. 50,000. Interest rate on RIDF was also revised downwards.

17.40 As part of doubling the flow of credit to agriculture sector within three years, the target set for disbursement of credit to agriculture in the State during 2004-05 was Rs. 6491 crore, which is 41.40 per cent more than the achievement during the previous year. During the fiscal 2004-05, the credit flow to agriculture was Rs. 6854 crore against a target of Rs. 6491 crore registering an achievement of 105.6 per cent of the target. Quantum-wise co-operatives have disbursed the highest of Rs. 1904 crore followed by Nationalised Banks (Rs. 1596 crore)

17.41 The major targets and achievements in the implementation on doubling the flow of credit to Agriculture in Kerala as on September.2005 are given in Box : 17.10

BOX : 17.10
Major Targets and achievements in the implementation of doubling the flow of credit to Agriculture in Kerala

Target	Achievements	
	2004-05	2005-06, Sept 2005
1. 40% increase in flow of credit under special Agriculture Credit Plan	Overall target for agriculture lending during 04-05 is fixed at Rs. 6491 crores. Against this the achievement was Rs. 6854 crores (105.6%)	The overall target of agriculture lending during 05-06 is fixed Rs.8009.91 crores. Against this Rs. 3676 crores was disbursed.
2. Enhancing coverage of institutional credit through Kissan Credit Cards	During 04-05, 3,77,082 fresh credit cards were issued and an amount of Rs. 1290 crores was disbursed.	167387 fresh Kissan Credit Cards were issued and an amount of Rs. 622 crores disbursed.
3. The commercial banks should finance at least 100 new farmers by each rural/semi urban branch in a year.	Against a target of 2.81 lakh new farmers, 4.26 lakh farmers were financed disbursing an amount of Rs. 1732 crores through 2807 Rural/Semi urban branches for commercial banks achieving 152%. The co-operatives also financed 7498 new farmers disbursing Rs. 102.44 crores.	2.79 lakh new farmers out of a target of 2.81 lakhs farmers were financed disbursing an amount of Rs. 970 crores through 2807 Rural/Semi Urban branches for commercial banks achieving a percent of 99.28.
4. In every district on an average, all commercial banks put together will finance 10 agri-clinics during 04-05	9 Agri clinics and 14 Agri business centres were sanctioned against a target of 140 such centres	The progress in implementing the scheme for financing of Agro clinics and Agri business centers has not been encouraging 20 agri clinics and 3 Agri business centers have been sanctioned by banks against the target of 140 such centres.

5. Loans to Tenant Farmers and oral Lessees.	The Banks have financed 3256 Tenant farmers and 2551 oral lasses.	The Banks have financed 2800 tenant farmers and 1051 oral lessees
6. Two to three investment projects for each rural/semi urban branches in the area of plantation and horticulture, fisheries, organic farming, agro- processing, livestock, micro irrigation, watershed management and village pond development.	The banks have disbursed Rs. 510.63 crores as investment credit to 73862 farmers.	The banks have disbursed Rs. 336 crores as investment credit to 101666 farmers.
7. Coverage of small and marginal farmers and weaker sections.	An amount of Rs. 1503 crores have been disbursed to 4.08 lakh new small and marginal farmers. Weaker section advances was 11.79% of the total advances against the mandatory norm of 10%.	An amount of Rs. 776.07 crores have been disbursed to 2.52 lakh new small/marginal farmers during 2005-06. Weaker section advances was 10.43% of the total advances.

Source: SLBC

17.42 During 2004-05, disbursements to agriculture by Public sector banks under Special agricultural credit plans aggregated Rs. 65218 crore in the country against the projection of Rs. 55616 crore. There has been increase in both the outreach and flow of credit to agriculture sector over the years. However some problems continued to affect the flow of credit to agriculture. This is due to decline in credit Deposit ratio (CD) from 49 per cent in 1995 to 43.7 per cent in 2004 and variation in proportion of medium/long term loans in direct finance to agriculture and allied sectors and prevalence of wide disparities in the flow of credit across regions are also existed.

17.43 A number of follow up actions were taken for the implementation of the recommendations of the Advisory Committee on flow of credit to agriculture and related activities from banking system constituted under the Chairmanship of Prof. V.S. Vyas. The major recommendations of the Advisory Committee are given in Box 17.11 Out of 99 recommendations made by the Committee, 32 have been accepted and implemented by the Reserve Bank. These include waiver of margin/Security requirements on agricultural loans upto Rs. 50,000 and in case of agri business and agri clinics for loans upto Rs. 5 lakh, revision of non-performing asset norms for agricultural finance and dispensing with the Service Area Approach except for Government Sponsored Schemes. In respect of 32 recommendations action has already been initiated by the NABARD, like technical support and market linkage to SHGs, technical and financial support to Co-operatives and associating co-operative banks in SHG-bank linkage, review of refinance etc Out of the remaining 35 recommendations, 31 are under examination by the Government of India.

BOX : 17.11

The Advisory Committee on flow of Credit to Agriculture and Related Activities from the Banking System

- A review of mandatory lending to agriculture by commercial banks to enlarge direct lending programmes.
- Public and private sector banks to increase their direct agricultural lending to 12 per cent of net bank credit in the next two years and to 13.5 per cent two years thereafter, within the overall limit of 18.0 per cent of total agricultural lending.
- Banks to increase their disbursements to small and marginal farmers under Special Agricultural Credit Plan (SACP) to 40 per cent by March 2007.
- SACP to be restricted to direct lending and extended to private sector banks.
- Reduction in cost of agricultural credit by enhancing the cost effectiveness of agricultural loans.
- NPA norms for agricultural credit to be aligned with crop seasons. Loans for allied activities to be classified as NPA after 180 days of default.
- Credit flow to small borrowers to be improved through reduction in cost of borrowing, revolving credit packages, procedural simplification, involvement of Panchayati Raj institutions and micro-finance.
- The SAA to be modified to remove rigidities. SAA to be mandatory only for Government sponsored programmes and the format of village surveys to be changed in view of current realities.

Source RBI

17.44 At the all India level, the total ground level flow of credit for agriculture and allied activities was estimated at Rs. 115242 crores during 2004-05 recording a growth of 32.49 per cent over the pervious year. Agency-wise Ground Level Credit Flow is given in the following Table -17.11. The Commercial banks disbursed 63 per cent , co-operatives 27 per cent and RRBs 10 per cent.

Table -17. 11

Agency-wise Ground Level Credit Flow in India

(Rs.crore)

Agency	2001-02	2002-03	2003-04	2004-05
Co operative Banks	23,524	23,636	26,875	30638
Regional Rural Banks	4,854	6,070	7,581	11718
Commercial Banks	33,587	39,774	52,441	72886
Others	80	80	84	-
Total	62,045	69,560	86,981	115242

Source: Annual Report – NABARD

5. Loans to Tenant Farmers and oral Lessees.	The Banks have financed 3256 Tenant farmers and 2551 oral lasses.	The Banks have financed 2800 tenant farmers and 1051 oral lessees
6. Two to three investment projects for each rural/semi urban branches in the area of plantation and horticulture, fisheries, organic farming, agro- processing, livestock, micro irrigation, watershed management and village pond development.	The banks have disbursed Rs. 510.63 crores as investment credit to 73862 farmers.	The banks have disbursed Rs. 336 crores as investment credit to 101666 farmers.
7. Coverage of small and marginal farmers and weaker sections.	An amount of Rs. 1503 crores have been disbursed to 4.08 lakh new small and marginal farmers. Weaker section advances was 11.79% of the total advances against the mandatory norm of 10%.	An amount of Rs. 776.07 crores have been disbursed to 2.52 lakh new small/marginal farmers during 2005-06. Weaker section advances was 10.43% of the total advances.

Source: SLBC

17.42 During 2004-05, disbursements to agriculture by Public sector banks under Special agricultural credit plans aggregated Rs. 65218 crore in the country against the projection of Rs. 55616 crore. There has been increase in both the outreach and flow of credit to agriculture sector over the years. However some problems continued to affect the flow of credit to agriculture. This is due to decline in credit Deposit ratio (CD) from 49 per cent in 1995 to 43.7 per cent in 2004 and variation in proportion of medium/long term loans in direct finance to agriculture and allied sectors and prevalence of wide disparities in the flow of credit across regions are also existed.

17.43 A number of follow up actions were taken for the implementation of the recommendations of the Advisory Committee on flow of credit to agriculture and related activities from banking system constituted under the Chairmanship of Prof. V.S. Vyas. The major recommendations of the Advisory Committee are given in Box 17.11 Out of 99 recommendations made by the Committee, 32 have been accepted and implemented by the Reserve Bank. These include waiver of margin/Security requirements on agricultural loans upto Rs. 50,000 and in case of agri business and agri clinics for loans upto Rs. 5 lakh, revision of non-performing asset norms for agricultural finance and dispensing with the Service Area Approach except for Government Sponsored Schemes. In respect of 32 recommendations action has already been initiated by the NABARD, like technical support and market linkage to SHGs, technical and financial support to Co-operatives and associating co-operative banks in SHG-bank linkage, review of refinance etc. Out of the remaining 35 recommendations, 31 are under examination by the Government of India.

BOX : 17.11

The Advisory Committee on flow of Credit to Agriculture and Related Activities from the Banking System

- A review of mandatory lending to agriculture by commercial banks to enlarge direct lending programmes.
- Public and private sector banks to increase their direct agricultural lending to 12 per cent of net bank credit in the next two years and to 13.5 per cent two years thereafter, within the overall limit of 18.0 per cent of total agricultural lending.
- Banks to increase their disbursements to small and marginal farmers under Special Agricultural Credit Plan (SACP) to 40 per cent by March 2007.
- SACP to be restricted to direct lending and extended to private sector banks.
- Reduction in cost of agricultural credit by enhancing the cost effectiveness of agricultural loans.
- NPA norms for agricultural credit to be aligned with crop seasons. Loans for allied activities to be classified as NPA after 180 days of default.
- Credit flow to small borrowers to be improved through reduction in cost of borrowing, revolving credit packages, procedural simplification, involvement of Panchayati Raj institutions and micro-finance.
- The SAA to be modified to remove rigidities SAA to be mandatory only for Government sponsored programmes and the format of village surveys to be changed in view of current realities.

Source : RBI

17.44 At the all India level, the total ground level flow of credit for agriculture and allied activities was estimated at Rs. 115242 crores during 2004-05 recording a growth of 32.49 per cent over the pervious year. Agency-wise Ground Level Credit Flow is given in the following Table -17.11. The Commercial banks disbursed 63 per cent , co-operatives 27 per cent and RRBs 10 per cent.

Table -17. 11

Agency-wise Ground Level Credit Flow in India

(Rs.crore)

Agency	2001-02	2002-03	2003-04	2004-05
Co-operative Banks	23,524	23,636	26,875	30638
Regional Rural Banks	4,854	6,070	7,581	11718
Commercial Banks	33,587	39,774	52,441	72886
Others	80	80	84	-
Total	62,045	69,560	86,981	115242

Source: Annual Report – NABARD

Credit flow to Agriculture in Kerala

17.45 The credit flow to agriculture sector during the last five years is given in Table 17.12. The share of investment credit to agricultural credit disbursement declined from 20.42 per cent during 2003-04 to 17.24 per cent during 2004-05. On analysing the credit flow during 04-05, it was revealed that the disbursal of total credit was Rs. 6854 crores out of which 82.76 per cent was for production credit and 17.24 per cent crores for investment credit. (Fig. 17.1)

Table-17.12
Flow of Credit to Agriculture Sector

(Rs. Crores)

Year	Production Credit	Investment Credit	Total
2000-01	2312 (80%)	596 (20%)	2908
2001-02	2311 (81%)	550 (19%)	2861
2002-03	2901(83%)	613 (17%)	3514
2003-04	3620 (80%)	929 (20%)	4549
2004-05	5672 (83%)	1182 (17%)	6854

Source: SLBC

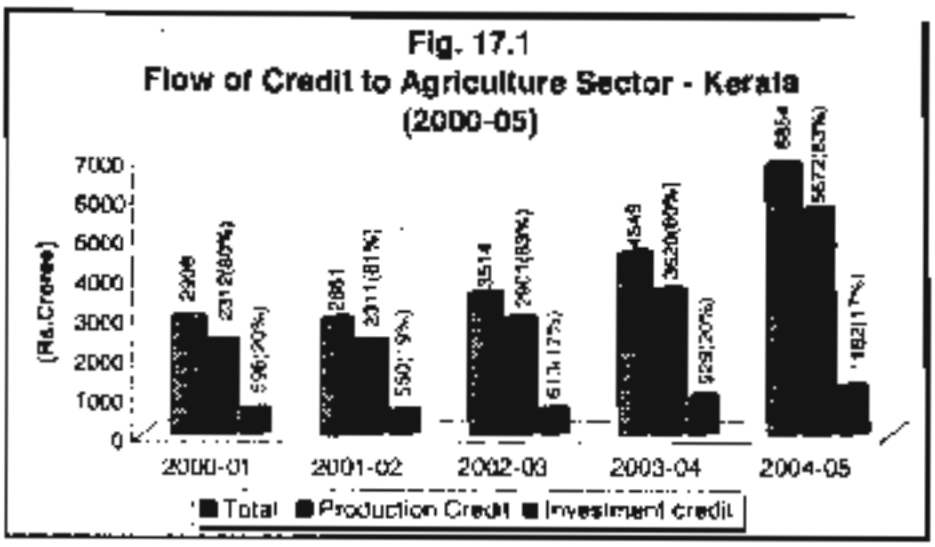
17.46 The major portion of short term and medium term credit requirements in the state are met by the Co-operative banking sector consisting of the State Co operative Banks, District Co-operative banks and Primary Agriculture Credit Societies which covers 1/5th of the activities and Commercial Banking sector. The share of co-operatives in the disbursal was 86 92 per cent in production credit and 13.08 per cent in investment credit (Table-17.13). The share of RRBs in production credit and investment credit was 97.09 per cent and 2.01 per cent respectively.

Table – 17.13
Agency wise flow of credit during 2004-05

(Rupees Crores)

Agency	Production Credit	Investment Credit	Total Credit	% of Production Credit to total Credit	% of Investment Credit to Total Credit	% share of Investment Credit in the State
Commercial banks	2982	902	3884	76.79	23.21	76.29
Co-operative Banks	1655	249	1904	86.92	13.08	21.07
RRBs	1035	31	1066	97.09	2.91	2.63
Others	0.17	0.18	0.35	50.00	50.00	0.02
Total	5672.17	1182.18	6854.35	82.76	17.24	100.00

Source: SLBC



Agency model for Rural credit

17.47 In the budget speech of the Union Finance Minister for 2005-06 it was suggested to accelerate the availability of banking services in rural areas and leverage the existing socially active organizations in the process by adopting an agency model. Following the suggestion, RBI constituted an internal Group to examine the issue of allowing banks to adopt the agency model and promotion of micro finance institutions. The selected recommendations of the Group are shown in Box: 17.12

BOX : 17.12

Selected recommendations of the Internal Working Group of RBI to examine issues relating to rural Credit and Micro finance

- For extending comprehensive financial services encompassing savings, credit and remittances, insurance and pension products in the rural areas, linkages between banks and external entities may be established under two models as business facilitator model and business correspondent model. NGOs, farmers clubs, panchayats, village knowledge centers, Krishe Vigjan Kendras etc. may function as business facilitators. Banks shall provide Commission to the agencies involved in both models based on the services provided.

- The concerns and issues arising out of Bank-NFI Partnership model may be studied by IBA and a model scheme to be formulated for adoption by banks.

- NABARD in consultation with Ministry of Information Technology may draw up a time bound action plan to set up Village Knowledge Centres partly funded from RIDF. These kiosks can be leveraged for expanding business facilitators.

- Corpus of Micro finance and Equity fund may be built up on an ongoing basis by contributions by the banks.

Source. RBI, July 2005

Access to rural credit

17.48 Access to available credit is an important factor in the economic well being of a rural household. According to (RFA 2003) 41 per cent of rural households have a deposit account and only 21 per cent of rural households have access to credit from a formal source.

17.49 Developments in India's financial sector particularly after the later 1960s resulted in substantial achievements in enhancing access to credit in rural areas. The share of banks was only 1 per cent in total household debt in 1951 then steadily increased to 29 per cent due to rising share of co-operatives. Later it increased to 61.2 per cent before declining in 1991.

17.50 The Banking sector of the State in responding to the directives of the Union Government has made concerted efforts to achieve the goal of doubling the flow of credit to agricultural sector in three years. A special attention was given to achieve 40% income in flow of credit under Special Agricultural Credit plan. Accordingly the target for agricultural disbursement during 2004-05 was revised and fixed at Rs. 6491 crore, which was 41.4% more than the achievement during the previous year ie. 2003-04. The target for 2005-06 projected was atleast 30% increase over that fixed for 2004-05. The all over target for agricultural disbursement during 2005-06 is fixed at Rs. 8009.91 crore. This target is 76.08% over the disbursement during 2003-04. The Banks had disbursed Rs. 3949.74 crore as on September 2005. The quantum wise analysis shows that the co-operatives have disbursed the highest (Rs. 1196.91 crore) followed by National Banks (Rs. 950.38 crore). The data shows that the banking sector is well on the path of doubling the flow of credit by next year.

17.51 As part of enhancing the coverage of institutional credit through KCCs, 17.26 lakh Kissan credit Cards have been issued in the State since inception of the scheme. In issuing the Kissan Credit Cards the commercial banks accounts for 54.33 per cent State co-operative Bank, a share of 45.77 per cent and Private banks 2.06 per cent. As per the agricultural Census 1995-96, the number of operational holdings in the State is estimated to be around 62.98 lakhs though all the land holdings in the state may not be eligible for KCC, there is a gap in the coverage, which needs to be bridged. Steps are necessary to enlarge he coverage under Kissan Credit Card scheme to eligible farmers. There should be a mechanism for identification of the farmers either by issue of suitable identify cards or issue of Pattas which would help to identify eligible farmers under KCC.

17.52 The tendency of the shift of the disbursement from farm to non-farm sector is increasingly reported due to less risks, lower transaction costs and better returns in the non-farm sector.

17.53 Another important area that needs attention is to make agricultural credit available at lower rates of interest. The benefit of declining rates of interest has not been passed on to the agricultural borrowers. The decision of the Finance Ministry to reduce interests on farm loans upto Rs. 50,000/- to 9 per cent may help the growers. The current PLR of most of the banks is in the range from 11 to 13 per cent which is greater than that prevailed during the previous year

Performance of State Co-operative banks and District Co-operative banks

17.54 State Co-operative banks and District Co-operative banks channelise their own fund and fund of NABARD for disbursal . The total deposit of State Co-operative Bank in 2003-04, was Rs. 2407.34 crore against Rs.2427.47 crore in 2002-03, registering a slight decline of 0.8 per cent. The total loans and advances stood at Rs. 1372.30 crore, the NPAs amounting 8.3 per cent of the total portfolio of the Bank, as against 8.3 per cent in the previous year. The interest

spread has become nil during 2004-05. The operational expenses has increased to Rs. 12.67 crore in 2004-05 from Rs.11.92 crore in the previous year.

17.55 The operations of the SCB are shown in Appendix -17.12. During the year under report, the deposit position of the Bank had increased marginally compared to the last year. The Bank's deposit has come down to 2408 crore to Rs.2427 crore recording a decline of 0.82 per cent in 2004-05. The borrowings from other institutions had increased to Rs.375.68 crore from Rs.164.30 crore. The working capital position has increased to 7.41 per cent in 2004-05. The deployment of loan by the bank was not affected by the decline of deposits of the Bank. The total disbursal during 2004-05 was Rs. 1372 crore against that of Rs. 1117.50 crore in 2002-03. The credit disbursement was mainly for agriculture, marketing, cottage & small scale industries, consumer business, consumption purposes, housing etc. The net profit of the bank shows a fluctuating trend during the last few years. In 2004-05, the profit amount showed a downward trend (Rs.4.19 crore) compared to the last year's position of Rs.5.05 crore.

17.56 The Bank has been implementing SHGs Scheme through Kannur, Palakkad and Ernakulam District Co-operative Banks. The thrust of the programme is organising SHGs of agriculturists and agricultural workers under PACS and financing from their own fund by making use of group dynamism. The financing is done from the own funds of the Bank.

17.57 The working results of SCB shows a steep rise in borrowings, from Rs. 87.79 crore in 2003-04 to Rs. 375.68 crore. The net profit of the institution declined from Rs.5.05 crore to Rs.4.19 crore. The major share of the profit was from trading in Government securities. The details are shown in Appendix – 17.12. The purpose wise cumulative loan disbursed by the State Co-operative Bank is furnished in Appendix – 17.13. During 2004-05, out of total loans and advances of Rs. 1372.25 crore, Rs. 219.57 crore i.e. 10.19 per cent was for agriculture. The share of flow of credit to agriculture has increased by two times.

17.58 During 2004-05 the total deposit of District Co-operative Banks had gone upto to Rs.6890.46 crore against that of Rs.6317.16 crore in the precious year (9%). The amount disbursed as loan and advances was Rs.5434.02 crore, which was 79 per cent of the total deposits. During 2004-05 all district Co-operative Banks except Kasaragod earned more progressive net profit. The average NPA to average loan out standing was 15 per cent. where as average NPA to average working capital was 10%. At the National level for SCBs and DCCBs the percentage of NPA to total loans and advances outstanding was 18.30 and 23.45 per cent respectively as on 31st March 2004 compared the previous year. The operational indicators of DCBS show that total Deposits and working capital is much higher in Ernakulam District, followed by Thiruvananthapuram. In the case of loans and Advances and NPA, it is higher in Thiruvananthapuram District. The indicators are given in Appendix -17.14

17.59 During 2003-04 total deposit of District Co-operative Banks had increased to Rs.6317.16 crore as against Rs.5617.74 crore in the previous year. The amount disbursed as Loan and Advances was Rs.4360.79 crore, which was 69 per cent of total deposits. The average overdue to the demand was Rs. 3445.93 lakhs. The district wise operational indicators of District Co-operative banks are given in Appendix - 17. 14

Long term credit:

17.60 A net work consisting the Kerala State Co-operative Agricultural and Rural Development Bank at the Apex and 46 primary co-operative Agricultural Rural Development Banks at Taluk Level is responsible for long term credit disbursement for rural development in the state. Various activities covered by KSCARDB's lending in scheme loan include Minor

Irrigation, plantation and Horticulture Agricultural machinery, Land Development, poultry, fisheries etc., where as under ordinary loan include construction of Wells/Tanks, construction of Godowns/cattle, Barbed wire or stone fencing, Construction of drainages channels, loans for redemption of prior debts etc. The Bank raises funds through floatation of debentures issued on government guarantee; NHB, LIC, SBI and SBT etc., are the financial institutions which invest in the debentures floated by the KSCARDB. The total long term loan disbursed during 2004-05 KSCARDB was Rs.332.86 crore against that of Rs.268.56 crore showing an increase of 24 per cent. In the purpose-wise disbursal, the major share of total disbursement is availed by Rural Housing (42%) followed by Agriculture (36%), non farm sector (22%). The details of loan disbursement is given in Appendix -17.15 and 17.16

17.61 Under the Non farm sector, lending scheme intends to provide financial assistance to meet the credit needs of individual artisans, craftsmen, handicraftsmen and small entrepreneurs who undertake manufacturing and processing activities as approval by the Development commissions of SSI, Government of India and maximum loan eligible under is Rs.10.00 lakhs to be repaid within 10 years. Small Road and Water Transport operators scheme for public goods carriage and passenger vehicles/boats, Integrated Loan Scheme for new industrial ventures/modernization of existing SSI Educational Loan for higher education in India and abroad as recognized by Central and State Government are also introduced under the long term loan disbursement scheme.

17.62 The measures taken by RBI to improve credit delivery to agriculture like enhanced limit of advances granted to dealers in drip irrigation/sprinkler irrigation system/agricultural machinery under Priority sector for agriculture, inclusion of loans to the Agri-clinics and Agribusiness centre under direct finance to agriculture under priority sector, widening the scope of Kissan Credit Cards are positive steps which need to be exploited in the State.

Refinance Support by NABARD

17.63 Investment credit facilitates capital formation in agriculture, which is necessary for raising the productivity of the existing resources and realising the long term growth potential. NABARD provides refinance for investment credit at concessional rates of interest, facilitates augmenting the flow of investment credit at the ground level through various policy initiatives/programmes.

17.64 At the national level, the refinance budget for deployment of investment credit was fixed at Rs.8,800 crore, comprising refinance port folio of Rs.8500 crore and co-finance portfolio of Rs.300 crore. The total refinance disbursement during the year increased by 13 per cent in the country aggregating Rs.8577.46 crore compared to Rs.7605.29 crore in the previous year. Considering the need for supplementing the resource of KSCARDB to enable them to provide adequate short term loans (production credit) at reasonable rates of interest to borrowers, availing term loans for agriculture and allied activities, a new line of short term refinance support was introduced by NABARD including Kerala State in December 2004 on a pilot basis. The total refinance from NABARD was Rs.448.01 crore in 2004-05 as against Rs.342.05 crore in the previous year recording an increase of 31 per cent. The agency wise analysis reveals that KSCARDB continued to avail the largest share (46%) followed by KSCB (32%), RRBs (15%) and commercial banks (7%). Agency-wise disbursement of refinance assistance by NABARD in Kerala is given in Appendix -17.17 and 17.18.

17.65 In absolute terms, the amount of refinance availed by commercial banks was on the increase. In the total refinance disbursal, though KSCARDB had availed the major share, there was a decline in the absorptive capacity of the Bank. The declining trend is an indicative of the need for more diversification in lending for investment credit

17.66 The position of refinance by NABARD in the State and Country level is given in Table-17.14

Table – 17.14
Refinance by NABARD

(Rs.crore)

Region	KSCARDB	State Co-operative Bank	Commercial Bank	RRBs
Country	2710	1244	2569	2049
Kerala	206	30	145	67
%	7.6	2.4	5.6	3.3

Source: NABARD, Annual Report 2004-05.

17.67 The purpose-wise analysis of the refinance by NABARD reveals that as in the previous years, the major share of assistance was availed by the non-farm sector (76.56%), under farm sector, the refinance disbursement have shown a declining trend. , In the disbursement, the major share was for land development (5.7%), plantation and horticulture (3.83%). The amount of refinance for the sectors like fisheries, poultry , dairy, farm mechanisation which are very important in the rural economy of Kerala remained to be low compared to the previous year. There is an imperative need to work out strategies to motivate the client institutions to avail of more refinance under farm sector activities.

17.68 NABARD's non farm sector investments are mainly on processing, (fish processing) concrete works, mat making, furniture making, bricks manufacturing etc. Additional income and employment generation are expected from this lending.

17.69 NABARD has slightly increased the interest rate on refinance from 6 to 6.75 per cent depending on the loan size, activity and region. The revised rate on refinance for farm and non-farm sector is given in Table-17.15

Table - 17.15
Interest Rates on Refinance for Farm and Non farm sector

(per cent)

Loan size	NER including Sikkim and A& N. Islands		Other Regions	
	Farm	Non-Farm sector	Non farm sector	Others
Up to Rs.50,000	6	6	6	6
Rs.50,000 to 2 lakhs.	6	6.25	6.25	6
Above 2 lakhs	6	6.25	6.50	6.75

Source: Annual Report NABARD

Rural Infrastructure Development Fund (RIDF)

17.70 The RIDF was set up in NABARD with contribution from the Commercial banks which were not able to fulfil the commitment of channelising at least 18 per cent of their total lending to agriculture. RIDF has been instrumental in strengthening the rural infrastructure in the State. The RID Fund started in 1995 96 with a corpus of Rs. 2000 crores has emerged as a popular and effective mechanism for financing rural infrastructure projects and its corpus from RIDF I to XI stands at Rs. 50000 crore. The corpus is Rs. 250 crore at state level during 2004-05. The quantum of loan is different for various sectors. From RIDF X onwards, it is 95 per cent for activities relating to agriculture including mini hydel, 85 per cent for social sectors and 80 per cent for rural connectivity. With the receipt of deposits of Rs. 4353.47 crore from Commercial

banks during the year, the cumulative deposits under RIDF received upto 31st March 2004 stood at Rs. 22657.53 crore. Deposit amouning to Rs. 7272.81 crore were redeemed during the year. An amount of Rs. 7807.29 crore was received from State Governments by way of repayment of RIDF loans during 2004-05. Disbursements under RIDF tranche I, II & III were closed at the end of March 2003 and for projects sanctioned under RIDF IV to VII, the implementation in order to complete the ongoing projects and avail reimbursement of expenditure incurred there against the lending and deposit rates in respect of the amounts disbursed on or before October 31, 2003 out of RIDF IV to VII have been restructured with effect from April 16, 2005

Assistance to Kerala

17.71 Kerala has been receiving assistance under RIDF for the last eleven years. The major projects for which refinance has been disbursed include watershed development projects, rural bridges, rural roads, reclamation of waterlogged area, inland navigation, tourism oriented roads and rural market yards. The scope of RIDF was widened in 1999-00 to include lending to Grama panchayats, Self help groups and Non-governmental organisations for implementing village level infrastructure projects, innovative projects such as information technology enabled services and new activities such a system improvement, mini hydel generation under power sector, construction of primary/secondary school buildings, primary health centres rain water harvesting structures etc. Among all, agriculture and allied sectors irrigation and power sector are given priority.

17.72 The cumulative sanction amount as on 31.10.05 was Rs. 1426.17 crore and the disbursement was Rs. 819.18 crore (57 %) for the implementation of 2252 projects. Out of 3423 projects, 1238 projects have already completed. The cumulative sanction and disbursement of projects as on 31.10.05 is given in Table-17.16. Purpose wise loan disbursement is given in Appendix-17.18. Upto 31.10.05, as part of rural infrastructure development, road projects by Block Panchayats, 317 roads by PWD, 19 watershed development projects and 163 bridges were completed as on 31.10.05 in rural areas. Through the completion of two medium projects 33791 ha and through completion of 595 minor irrigation projects 51890 ha of area has been reported to be brought under irrigation. The roads are expected to provide better transportation for marketing and distribution of agriculture/rural products and inputs. Through the construction activities, 93629 man days have been created.

Table - 17.16

Tranche wise Sanction & Disbursement under RIDF

(Rs. Crores)

RIDF	Kerala as on 31.10.05		India as on 3/05	
	Sanction	Disbursement	Sanction	Disbursement
I	95.83	86.26	1910.54	1760.87
II	85.64	73.12	2658.88	2397.95
III	86.20	73.88	2717.71	2453.5
IV	64.00	56.74	2904.03	2367.03
V	124.77	112.73	3504.41	2875.33
VI	173.86	136.45	4539.05	3638.07
VII	191.64	121.36	4792.52	3370.87
VIII	196.16	121.11	6039.62	3686.34
IX	81.17	7.01	5599.00	2147.63
X	222.74	30.52	8282.75	686.43
XI	104.16	0.00	-	-
Total	**1426.17**	**819.18 (57%)**	**42948.51**	**25384.02**

Table - 17.17

Purpose wise loan sanctioned and disbursements is given in table (I to XI)

(Rs. Crores)

SL No.	Purpose	No. of Projects	Sanctioned amount	Disbursed Amount
1.	Medium Irrigation	6	113.14	99.34
2.	Minor Irrigation	733	109.17	77.61
3.	Soil and Water Conservation	221	82.54	44.76
4.	Drainage and Flood Protection	27	76.64	23.48
5.	Rural Roads CRD	545	201.95	95.67
6.	Rural Roads PWD	146	217.4	132.02
7	Rural Bridges	298	509.61	319.47
8.	Rural Market Yards	109	10.84	3.85
9.	Tourism/roads	2	31.50	11.56
10.	Boat Jetties	4	.27	.02
11.	Inland Navigation	1	10	7.49
12.	Rural Drinking Water Supply	8	33.24	1.99
13.	Health	118	20.99	1.92
14.	Education	34	10.88	-
	Total	**2252**	**1426.17**	**819.18**

NON-BANKING FINANCIAL INSTITUTIONS IN KERALA

17.73 Non-Banking Financial Institutions (NBFIs), by virtue of variety of services offered, have become an integral part of economic life of the society.

17.74 The main NBFIs functioning in the State include Kerala State Industrial Development Corporation (KSIDC), Kerala Finance Corporation (KFC), Kerala Transport Development Finance Corporation (KTDFC), Kerala State Financial Enterprises (KSFE), other deposit taking NBFIs registered with Reserve Bank of India, Chit Companies, Money Lending Institutions (Regd), unregistered institutions and those registered in other states but operating in Kerala.

17.75 The enormous increase in the number of NBFIs, both formal and non-formal, has made the regulation framework rather difficult in the context of inexplicit legal provisions and inadequate regulatory mechanism. The State Planning Board constituted a Working Group under the chairmanship of Shri C.P. John, Member, Kerala State Planning Board, to study the functioning of NBFIs in the State. The focus of the study comprised of:

- Preparation of Database of NBFIs in the State
- Evaluation of performance of NBFIs
- Study the extent of Chit business
- Assessment of informal NBFIs
- Recommendations for improving functioning of NBFIs

17.76 The Working Group submitted its report in March 2005. The Report shows that between 1997-98 and 2002-03, nearly 45000 chits are registered in the formal sector in Kerala with a total Capital Turnover of Rs. 360.00 crore. About two-third of the formal sector chits are registered in Thiruvananthapuram and Ernakulam districts with 43 per cent and 23 per cent respectively. In addition, there are 5696 money lending institutions in the organized sector in Kerala, as on March 2004, with southern districts (Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzha) alone having more than half of them. At the same time there are only 3376 commercial bank branches in the State. In a sense, the money-lending institutions are overtaking the organised banking sector. Further, there is a vast informal sector with numerous unregistered institutions operating in each and every nook and corner of the State. Population covered per money lending institution in the State is 5590 as against 9431 per branch in the banking sector.

17.77 The Working Group undertook a Case Study in Kannur District which reveals that there are 139 money lending institutions in the formal sector, of which 45 per cent registered after 2001. This highlights the trend of growth of money lending institutions. The annual business turnover of these money-lending institutions in the district is worked out at Rs. 13.57 crore. Around 70 per cent of the money-lending institutions has business turnover less than Rs. 5.00 lakh and only 5 per cent with more than Rs. 50 lakh.

17.78 A primary survey on money-lending institutions in Thiruvananthapuram district reveals, that all of them are registered under Kerala Money Lenders Act and some are managed by women. Around 15 per cent of the money lenders accept deposit @ 7 – 12 percent interest and the majority extend loan @ 10 – 20 per cent on security of gold which is auctioned when defaulted. The major depositors are NRIs whreas the major loanees are ordinary workers, Government employees, businessmen etc. The major defaulters are farmers. The falling interest rate and liberal lending policies have become a question mark on the survival of these institutions.

17.79 The total assets of the NBFIs in the state rose from Rs. 141.76 crore in 1999-00 to Rs. 199.65 crore in 2001-02. They rely much on exempted borrowings as a source of finance to avoid regulatory provisions. Their recent trend is to lend against gold than hire purchase advance.

Chit Funds

17.80 Chit finance has great significance as a pure saving-cum-borrowing avenue. As an indigenous financial instrument, chit is complementary to modern financial techniques of savings and borrowing; with and inherent ideology of mutual help and co-operation that has survived the test of time and has became a part of the culture and traditions of the people of Kerala. Though KSFE is the dominant chit foreman in the State, it needs to be innovative and competitive in the wake of privatisation. The privilages the KSFE enjoyed as a Government company and exemptions from certain legal provisions, demand attractive schemes. The default record of KSFE is on the higher side due to poor revenue recovery. Its outreach to the rural areas is also not satisfactory.

17.81 The summary of the study and suggestions of the Working Group are given below.

1. The financial sector in Kerala is very complex and it includes not only the institutional finance but also a large volume of operations in the unregistered sector. The activities of commercial banks in Kerala are more focused on deposit mobilisation than on credit expansion. CD Ratio in the banking sector as of March 2003 was 45.47 per cent.
2. The share of non-resident deposits in the State has increased from 27 per cent of total deposits in late Eighties to 48 per cent in late Nineties.

3. Priority sector lending of commercial banks as a percentage of net domestic product shows a declining trend in recent years. With the introduction of Special Agricultural Credit Plans, the flow of bank credit to the agricultural sector has marginally improved.
4. Refinance support of NABARD to both co-operatives and commercial banks has started showing results in credit disbursement.
5. The non-governmental Chits that dominated the Chit business in the seventies and eighties have gradually given way to the KSFE Chits. The turnover of Chit business in the non-governmental sector, which constituted 98.5 per cent in 1970–'71 has gradually declined to 20.5 per cent in 2000–01.
6. The majority of the moneylenders has at least one paid employee. It was reported that all institutions have extended loans on the security of gold, and loans are recovered by different ways such as periodic regular collections, according to the convenience of the loanees etc.
7. The types of NBFCs regulated by RBI include Equipment Leasing (EL), Hire Purchase (HP), Loan Companies (LC), Investment Companies (IC), deposit and business activities of Residuary Non-Banking Companies (RNBCs) and deposit accepting Miscellaneous Non-Banking Companies (Chit Funds).
8. A business profile of the NBFCs in India shows that as of March 2003, the quantum of outstanding public deposits reported by 875 companies stood at Rs.20,100 crore, equivalent to 1.5 per cent of the aggregate deposits (Rs.13,55,880 crore) of scheduled commercial banks.
9. The NBFCs in Kerala have been growing over the years. Profile of NBFCs in Kerala as on 31st December 2002 shows that there are 23 registered public deposit-taking companies. But a comparison of the aggregate deposits of NBFCs in the State (Rs.50.47 crore in 2001-02) with the total deposits of NBFCs in India (Rs.18822 crore in 2002) reveals the insignificant size of the NBFCs in the State.
10. Recently, there has been a shift from Hire Purchase advance to lending against gold. This may be attributed to low risk perceptions associated with gold loan.
11. Only 17 per cent of the deposit-taking NBFCs in Kerala have obtained credit ratings
12. Unregistered moneylenders, locally known as 'Blades', have a definite role in providing finance for a target group.
13. A major group of moneylenders in the unregistered sector operate business from their own household premises or from fixed premises outside. As per the sample survey, 36.1 per cent of the moneylenders in the unregistered sector in Kottayam district operate their business without any fixed premises and 27.5 per cent of the moneylenders in Kollam district do their business from a cash bag.
14. Certain unregistered moneylenders even accept deposits. The study shows that around 11 per cent of moneylenders in both the districts accept deposits
15. The rate of interest charged on loans by the unregistered moneylenders varies between 24 to 120, per cent and in one extreme case 180 per cent. The rate of interest on loans by unregistered moneylenders in Kottayam district is comparatively higher than that in Kollam district.
16. The securities required for loans include gold, cheque, promissory notes, land documents, personal security etc. Some moneylenders are reported to have extended loans without any security, mainly to the so-called 'honest' customers.
17. The employment generation potential of moneylenders is negligible.
18. Methods of the recovery of loans include a fixed sum daily, fixed sum monthly, amount not fixed but collected according to the availability from the loanees, etc. It is reported that even physical force has been used to handle the defaulters. No legal measures are reported to persuade the defaulters.

19. The different categories of Chit Funds in Kerala include the public sector Chit Company (KSFE Ltd.), Co-operatives, Private Chit Funds registered in Kerala, Private Chit Funds with bases outside Kerala and those in the unregistered sector. The share of KSFE in the total volume of Chit business registered in Kerala has been 77 per cent as of March 2000.
20. Some of the restrictive provisions of The Kerala Chitties Act 1975 such as small Chit amount, strict security norms to be kept by the foremen, cumbersome registration formalities and procedural delay encourage the private Chit foremen to start Chits with bases outside Kerala, especially in Jammu & Kashmir, Faridabad etc. where no Chit regulations exist.
21. Many of the problems in the realm of Chit Finance in Kerala such as flight of foremen to other States, growth of the unregistered sector without State control, occasional Chit failures, loss of revenue to the State etc. are due to lacunae in the legal framework existing in the State.
22. The KSFE Ltd. and the Co-operatives have been enjoying many legal exemptions and concessions in Chit operations.
23. The main objective of the Kerala Chitties Amendment Act, 2002 has been to discourage the flight of Chit foremen outside Kerala for starting Chits. But in practice the effect of this Amendment is yet to be realised, due to the interim order obtained by the All Kerala Association of Chit Funds from the High Court.
24. The implementation of the Central Chit Fund Act, will enable the disciplined and healthy growth of the Chit fund industry. It can prevent the outflow of private foremen to other States; prevent loss to the State's exchequer and the unfair practices of some foremen creating bad reputation to the Chit fund industry.
25. Alternatively, amendments may be brought about in the Kerala Chitties Act and its strict enforcement is needed for the disciplined growth of Chit business in Kerala.
26. The core business of KSFE has been Chit Scheme since its very inception.
27. The Chit loan scheme, which provides quick loan facility to non-prized subscribers to meet their urgent needs, big sala Chits, and insurance coverage to the prompt subscribers are salient feature of KSFE chits
28. The market share of KSFE in the Chit business in the registered sector shows its clear dominance in Kerala and forms 79.4 per cent in 2000-01
29. Direct and indirect benefits of KSFE to the Government in the form of service charges, guarantee commission, registration and filing fees, and Chit security deposits with the Treasury are noteworthy
30. The privileges enjoyed by KSFE demand the need for fulfilling its social obligation.
31. The growing presence of the unregistered Chit Fund sector pinpoints the need for more dynamic growth for the KSFE and wider market outreach.

Suggestions

1. The credit policies of the Commercial Banks have to be restructured to give more emphasis to agriculture, small-scale industries, educational purpose and small borrowers. Further the procedural bottlenecks of the banking sector have to be removed to make it more customer- friendly.
2. The weakness in the Money Lenders' Act is to be rectified, specifically with regard to deposit mobilization.
3. There is a lack of uniformity consequent to the plurality of regulating Departments/Agencies of the NBFIs. This necessitates a new regulatory framework for moneylenders and chit companies.
4. Formation of an Arbitrate as in Tamil Nadu to control the moneylenders and chit companies.
5. Implementation of the Central Chit Funds Act 1982 with its Amendments 2001.

6. Alternatively, amendments may be brought about in Section 3(1), Section 3(5), Section 7(4), Section 15(1) of the Kerala Chitties Act in line with the Central Chit Funds Act.
7. Incorporation of the following provisions of the Chit Funds Act, 1982 such as Section 6(2), Section 8, Section 12, Section 14, Section 19, Section 67, Section 68, Section 87 on the power of the State Govt. to exempt any person or class of persons or any Chit or class of Chit from all or any of the Provisions of the Act, and Section 89 on the power of the State Govt. to make rules for giving effect to the provisions of this Act in the Kerala Chitties Act, 1975.
8. Credit Rating of Chit Companies by independent, professional agencies can boost subscriber confidence and encourage savings through Chits.
9. Chit companies rated with the highest safety could be permitted to conduct 'Corporate Chits' with a ceiling on Chit *Sala*.
10. A level playing field needs to be provided for all Chit Funds. Hence, the Chit regulations must be strictly enforced on all players if they are to be allowed to operate in the State.
11. The setting up of a State Chit Fund Regulatory Authority will serve as an enforcer of standards, as a problem solver and a reviewer and evaluator for helping Chit Fund companies.
12. Insurance schemes could be introduced to protect the interests of subscribers and foremen.
13. Further detailed studies are required in the area of NBFIs
14. The Department of Economics and Statistics should maintain a data bank on the NBFIs functioning in both the registered and unregistered sectors in the State.

Conclusion

17.82 Non-Banking Financial Companies have emerged as significant players in the financial sector of Kerala. They have larger reach and greater flexibility in meeting the credit requirements of sectors such as Hire Purchase (HP), Equipment Leasing (EL), Loan Companies (LC) and Investment Companies (IC). The KSFE Ltd., NBFCs registered with RBI, various categories of Chit Funds, registered Moneylenders, unregistered Moneylenders and Chits are the major categories of NBFIs in the State. Inadequacies of the legal framework lead to the growth of large unregistered Chit Funds and unregistered moneylenders in the State. The market share of KSFE in the Chit business in the registered sector shows its clear dominance in Kerala. The growing presence of the unregistered Chit Fund sector exposes the need for more dynamic growth of the KSFE with wider market outreach to rural areas. Implementation of the Central Chit Funds Act or suitable amendments in the Kerala Chitties Act and its strict enforcement is imperative for the disciplined growth of Chit Industry in the State. The presence of unregistered moneylenders charging very high rates of interest and accepting deposits is a matter of grave concern. This necessitates suitable amendments in the Kerala Money Lenders' Act. The growth of the Non-Banking Financial Sector, protecting the interests of all the concerned, would be beneficial for the people and the State.

CHAPTER – 18

GENDER AND DEVELOPMENT

The Women of Kerala are in a better position in terms of social development indicators such as education and health. Kerala has the highest life expectancy & literacy and lowest infant mortality rate. Women are educated but are more unemployed than men. Women live longer than men but if it is of poor quality of life, it makes to burden some. However, the increase in the suicide rate of women and violence against them are posing social problem. The Gender profile of Kerala presents contrasting features.

Literacy

18.2 As per 2001 Census, the literacy rate of Women in Kerala is 87.86 percent and it is 33% above the national average of 54.16 percent. The decadal growth rate of female literacy rate is 1.69%(1991-2001) as against the male literacy growth rate of 0.58%. The gender gap in literacy rate which was 7.45 percent during 1991, declined to 6.34 percent in 2001, reflecting a decline of 1.11 percent. Sex-wise literacy position of India and Kerala during 1991 and 2001 is given in Table 18.1.

Table . 18.1

Sex-wise Literacy rate - India and Kerala (1991 and 2001)

(%)

Year	India			Kerala		
	Persons	Male	Female	Persons	Male	Female
1991	52.21	64.13	39.29	89.81	93.62	86.17
2001	65.38	75.85	54.16	90.92	94.2	87.86

Education

18.3 The educational status of Women in Kerala, is much above the all India average. Girls constituted 49.07 percent of the total enrolment in school education in Kerala, which is very near to the male female birth ratio. Out of 48.42 lakh students enrolled in schools in 2004-05, 49.07 percent students were girls. The percentage of girl students to total students enrolled in lower primary, upper primary and secondary levels were 49.52, 48.41 and 49.14 respectively during 2004-05. The details of students enrolled in schools during 2004-05 in Kerala is given in Table18.2

Table-18.2

Enrolment of students in schools stag[illegible]ise ; 2004-05

LPS(I-IV)			UPS (V-VII)		
Boys	Girls*	Total	Boys	Girls	Total
932490	914583	1847073	758358	[illegible] 643	1470001

H.S(VIII-X)			GRAND TOTAL		
Boys	Girls	Total	Boys	Girls	Total
775560	749381	1524941	2466408	2375607	4842015

(Source :- Directorate of Public Instruction-2005 Kerala)

18.4 Out of the total students, enrolled in plus two courses during 2004-05, the percentage share of girls was 65.38. Similarly, in Degree and Post Graduate Courses, the percentage of girl students got admitted were 65.39 and 76.46 respectively. Though nearly half the students enrolled in schools and more than 65 percent of the students enrolled in colleges were girls, enrolment in the technical education sector is low. The girl students enrolled in Technical High Schools and

Polytechnics during 2005-06 were 9.9% and 35.97% respectively to total enrolment. On the other hand, 54.71 percent of newly enrolled medical students were girls. In the teaching profession, too, women out number men. The strength and percentage of women teachers working in schools and ITI's during 2004-05 are given in Table 18.3.

Table-18.3

Male-Female Teaching Man Power in Schools- 2004-05 (Nos.)

Sl. No	Educational level	Men	Women	Total	Percentage of women
1	Lower primary	15126	46364	61490	75
2	Upper Primary	17317	36175	53492	68
3	High School	21339	38437	59776	64
4	Industrial Training Institute.	173	313	486	64
	Total	**53995**	**121289**	**175244**	**69**

(Source- Directorate of Public Instruction, 2005)

In other educational institutions, except in Technical High Schools, women teachers were above 35% during 2004-05. The percentage of women working in various higher educational institutions as teachers during the year 2004-05 is given in Table 18.4.

Table-18.4

Teaching Manpower In Technical and Medical Educational Institutions - 2004-05

Sl.No	Educational Institutions	Women Teachers(%)
1	Technical High Schools	18
2	Polytechnics	36
3	Engineering Colleges	38
4	Medical Colleges	40

Health

18.5 The female to male sex ratio in different age groups is above unity except in the 5-14 age groups. The ratio of females in the 65+age group in the state is high due to higher life expectancy of females. Kerala ranks top among the Indian state's with Human Development Index (HDI) at 0.638 against 0.572 for all India. The comparative statement of various gender profile of Kerala against India are given in Table 18.5. Over the last three decades, there has been rapid decline in the total fertility rate in Kerala. Despite low levels of total fertility, urban-rural differences still persist in Kerala. Total Fertility rate is 27 percent lower in urban area than in rural area.

Table-18.5

GENDER PROFILE OF KERALA AND INDIA ON SELECT INDICATORS

	Kerala	India
Sex Ratio (Females per 1000 Males)	1058	933
Birth Rate (per 1000 population)	16.70	24.80
Death Rate	6.30	8
Infant Mortality Rate (per 1000)	11	60
Child Mortality Rate (per 1000)	2.6	29.3

Meternal Mortality Rate (per 1000)	0.30	4037
Total Fertility Rate	1.99	3.30
Life at Birth -Male	71.67	64.10
-Female	75	65.80
Literacy Rate (%) -Male	94.20	75.85
-Female	87.86	54.16
Drop out rate I to X (%)		
2001-02 Boys	23.82	66.41
Girls	14.29	71.51
Human Development-Index	0.638	0.572

(Source. 1. Planning Commission, GOI-2001
2. Census of India
3. NFHS-2, 1998-99)

Health Status of Women

18.6 The health status of women in Kerala are comparatively higher to other parts of India due to the higher educational status, awareness, increased accessibility to health services and better quality of services rendered. Due to higher health awareness, 93 percent deliveries in Kerala take place in health institutions. Details on health status of women in Kerala are given in Table.18.6.

Table-18.6
Health Status of women in Kerala

Sl. No.	Item	Status
1	Children born after 36 months of birth interval	42.4%
2	Median age of women at the time of birth of the first child and the last birth	40-49
3	At least one antenatal checkup undergone by pregnant women	98.8%
4	Two or more tetanus toxoid injections taken by pregnant women.	86.4%
5	Mothers receiving iron or folic acid syrup or tablet	95.2%
6	Institutional Deliveries	93%
7	Deliveries attended by health professionals	94%
8	Maternal mortality (per 1000 population)	0.30

(Source: Register General, India, Sample Registration system, statistical Report,1998. International Institute of population sciences, NFHS-2, 1998-99)

18.7 Female infant mortality in Kerala is lower than that of male. Eventhough mortality rate under-five years has declined significantly since 1991, the Juvenile sex ratio increased to 958 per1000 population in Kerala from 954 but it declined from 933 to 927 at all India.

18.8 The nutritional status of women and children of Kerala is also comparatively better. The degree of aneamia in the women flock in Kerala during the year was 28 percent. At the same time, it was above 60 percent in several other states in India. The details of certain health indicators of women in Kerala during the year is given in Table 18.7.

Table -18.7.
Nutritious status of women and children in Kerala

Sl.No.	Items	Status
1	Body Mass Index (BMI)	22
2	Women with some degree of anaemia	28
3	Children having some degree of anaemia	44
4	Under-weight children below three years of age	27

Source: NFHS-2-1998-99

However, NFHS-Survey II shows that nearly 23% of women have some degree of anemia.

Box.18.1

Nutritional Anaemia is a serious problem that affects 60 to 70 percent of pregnant women. The states of Assam, Bihar, West Bengal & Orissa have high incidence of anaemia and more than 60% of the women in these states are Anaemic. Anaemia is higher among women belonging to Scheduled Tribes as well as those belonging to lower economic sections

Source: Social and Economic profile of India – 2005

Life Expectancy

18.9 Eventhough health indicators such as life expectancy, IMR and MMR are high in the state, the high morbidity and diseases associated with poverty and life style are high in Kerala. Kerala ranks as number one with the highest proportion of elders (60+) in the country with 10.5 percent population in 2001 followed by Punjab and Himachal Pradesh. Out of these, the proportion of aged female was 55.4 percent in 2001. The number of elders are more in the age group of 60-64. The age structure of elders in Kerala during 2001 is given in Table 18.8. The District-wise profile-2004, indicates higher proportion of female elders in the population than males, except in 3 districts, viz, Kollam, Idukki and Malappuram. The District-wise details of elderly population in Kerala in 1999 and 2004 are given in Appendix.18.1.

Table-18.8
Age Structure of Elderly Population in Kerala-2001

(Lakhs)

Age(Years)	Male	Female	Total
60-64	4.80 (46.5)	5.52 (53.5)	10.32 (100)
65-69	3.99 (44.3)	5.02 (55.7)	9.01 (100)
70-74	2.73 (44.5)	3.40 (55.5)	6.13 (100)
75-79	1.74 (43.5)	2.26 (56.5)	4.00 (100)
80+	1.57 (40.4)	2.32 (59.6)	3.89 (100)
Age not specified	0.26 (65)	0.14 (35)	0.40 (100)

Source: Census India,2001 (Figures in brackets indicate percentage)

Disabilities

18.10 Women with disabilities face triple discrimination such as disabilities, female and poverty. Efforts have yet to be initiated in Kerala for ensuring equal rights and opportunities for disabled women and girls who face multiple barriers to their empowerment.

Box.18.2

Despite their significant numbers, women and girls with disabilities, especially in the developing countries, remain hidden and silent, their concerns unknown and their rights unrecognized.

(Source: Recommendations, UNESCAP Workshop on women & disability, Bangkok)

18.11 As per 1991 censes, out of the 8.61 lakh disabled persons in Kerala, 46.75 percent were females. Among the various disabilities, disability in hearing is more among females. The mental health status of women has been deteriorating at a faster rate due to various reasons. Among the psychiatric disorders, the most prominent is mental depression. Male mental disability is marginally higher than that of females. Distribution of disabled by type of disability in Kerala is given in Table. 18.9

Table- 18.9

Distribution of disabled by type of disability in Kerala

Sl.No	Disability	Males (lakhs)	Females (lakhs)	Total (lakhs)
1	In seeing	1.674 (50.01)	1.673 (49.99)	3.347 (100)
2	In speech	0.372 (55.44)	0.299 (44.56)	0.671 (100)
3	In Hearing	0.365 (45.73)	0.433 (54.27)	0.798 (100)
4	In movement	1.424 (59.89)	0.953 (40.11)	2.377 (100)
5	Mental	0.750 (52.94)	0.669 (47.06)	1.419 (100)

Source: Census India, 2001

figures in brackets indicate percentage to total

Crime Against Women

18.12 Women across socio-economic classes, irrespective of educational profiles, religious and cultural backgrounds are victims of gender specific crimes. Reported crimes against women have been steadily rising in the country. There has been a persistent increase in the number of crimes against women in Kerala since 1991. In 1991, crimes against women registered were 1867. It rose to 7743 in 1999 and came down to 7681 in 2004. The atrocities committed against women with respect to various offences against women in Kerala during 2001 to2004 are given in Table-18.10.

Table-18.10
Atrocities Committed Against Women In Kerala (2001-2004)

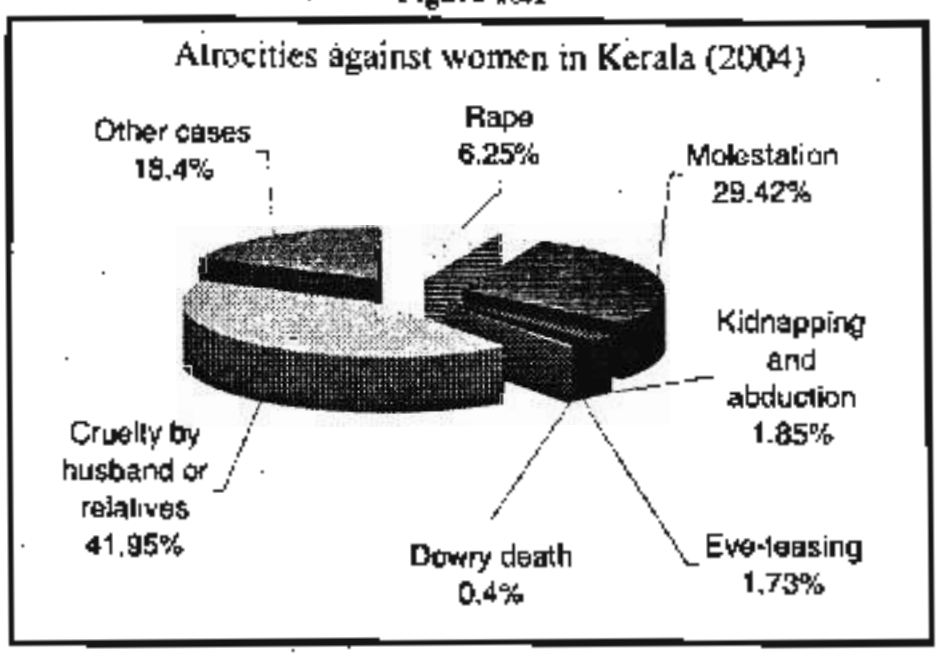
(Nos)

Sl. No.	Offences	2001	2002	2003	2004
1	Rape	562	499	394	480
2	Molestation	1942	2123	1947	2260
3	Kidnapping & Abduction	97	91	102	142
4	Eve-teasing	81	102	68	133
5	Dowry death	27	17	33	31
6	Cruelty by Husband or Relatives	2561	2836	2930	3222
7	Other IPC cases against women	2171	1833	1754	1413
	State Total	**7441**	**7501**	**7228**	**7681**

Source : State Crime Records Bureau – 2005

18.13 The largest number of crimes against women were accounted for cruelty by husbands and relatives followed by molestation. These two categories of offences constitute 71 percent of all crimes against women in 2004. It is a matter of serious social concern in Kerala. This is further evident from the increasing number of petitions filed by women in police stations, women's commission and family courts. The details are given in Figure 18.1

Figure 18.1



Women Suicides

18.14 The present suicide rate in Kerala is 27 per lakh population which is three times the national average. During 2004, 9053 suicide cases were registered in the state. Of which, 27 percent were those of women. Family problems, dreadful diseases, insanity and bankruptcy were the major causes identified for the female suicide. Out of the total female suicides reported, 22.4 percent were due to family problems followed by dreadful diseases and insanity/ mental illness are 15.9% and 15.3 percent respectively. Cause wise suicides in Kerala during 2004 is given in Table 18.11

Table 18.11
CAUSE-WISE SUICIDES IN KERALA

Sl No	Causes	2004 (Nos).		
		Male	Female	Total
1	Failure in Examinations	32	39	71
2	Poverty	5	1	6
3	Love affair	45	45	90
4	Insanity/mental Illness	971	410	1381
5	Family Problems	1482	546	2028
6	Property Disputes	9	0	9
7	Dreadful Diseases	996	444	1440
8	Unemployment	158	61	219
9	Bankruptcy or sudden change in economic status	799	89	888
10	Death of Dear Persons	54	36	90
11	Fall in Social Reputation	11	3	14
12	Dowry Disputes	0	15	15
13	Illegitimate Pregnancy	0	6	6
14	Causes not known	909	280	1189
15	Other causes	1127	480	1607
	State Total	**6598**	**2455**	**9053**

Source: SCRB-2005.

Other women problems - Women Headed Households

18.15 The number of women headed households in Kerala has been increasing at a very faster rate compared to other states in India. As per NFHS report, the proportion of female headed households in Kerala during 1999 was 22.1 percent, while it was only 10.3 percent at the national level. Divorce, desertion, death, migration etc., are the basic reasons for the formation of women-headed houses. By considering it, the state government have already insisted to grant priorities to women headed families at the time of selecting beneficaries to individual oriented projects in the Local Bodies. As domestic violence is one of the factors contributing to the increase in the number of women headed families, the problem has to be tackled through various angles. Among the major states in India, Kerala ranks first with 76 percent of its elderly women reporting no financial assets in their name and 56 percent of the married elderly women are widows. Widowhood coupled with poverty, increase in longivity of life and agonies of old age are the new challenges to be addressed seriously by the modern society . The UNICEF Report-April 2005, on the study of women component plan in Kerala also highlighted the need for bringing geriatric care under women component plan.

Empowerment

18.16 According to Bhasin and Dhar, empowerment is an ongoing and dynamic process, which enhances women's and any other marginalized and alienated groups abilities to change the structures and ideologies that keep them subordinate.

Box.18.3

"Empowerment" and inclusion are often seen as complementary process, empowerment focuring on enhancing the various capabilities of the excluded groups – a process "from below" while inclusive policies "from above" create enabling environment at the systems level for the excluded groups to enjoy their rights

(Source: DFID/World Bank 2005:8)

18.17 The women empowerment process has mainly three dimensions, viz., economic, social and political, which reinforce each other. Economic empowerment increase women's access to resources, while social empowerment enable women to change the discriminatory ideology. Political process give more strength and courage for the participation and influence in the power structure. Government of Kerala have been pursuing empowerment of women as an important approach in the development planning, especially through decentralised planning. However, there are yet many areas of gender equity which need empowerment in other groups like adolescent girls, widows, destitute women, women in difficult circumstances, tribal women and fisher women.

Box. 18.4

The Gender Empowerment Measures (GEM)

Focusing on Women's opportunities rather than their capabilities. The GEM captures gender inequality in three key areas

- political participation and decision making power, as measured by women's and men's percentage shares of parliamentary seats
- Economic participation and decision making power as measured by two indicators – Women's and Men's percentage shares of positions as legislatures, senior officials and managers and women's and men's percentage shares of professional and technical positions
- Power over economic resources, as measured by women's and men's estimated income

(Source: UNDP-Human Development Report – 2005)

Political Participation of women in Kerala

18.18 As society's development is positively related to participation, women participation in political process is encouraging in this state. The Local Bodies election, Kerala-2005, is an indication of such a positive trend in this regard. The number of women contestants and winners went beyond the requirement of one third of total seats (33%). Out of the 21,637 women contested for Local Government Institutions, 7,461 won the elections over and above the mandatory requirement of 6,184. The details of women contenstants in Local Bodies are given in Appendix-18.2. The elected members need substantial support to fulfill their responsibilities as Local Body members/chairpersons. Besides, they have to take the lead for the redressel of women problems at large. It is a difficult task form them due to lack of political and administrative experience and other constraints as being woman. However, the increased participation in Local Governance have uplifted the self-confidence and decision making powers of women community as a whole. It is also observed that many of these elected members were from Self Help (SH) Groups of Kudumbasree, a Government sponsored organization working for women empowerment, employment and income generation for poor women drawn from BPL

families. The consistent training programmes of Kudumhasree in terms of leadership, social responsibilities and social education was the asset of these women to contest for the election. All the elected CDS volunteers have to undergo a specially designed training programme covering 34 different topics grouped into three modules. The first module covers the conceptual areas and , the second module is on leadership skills. The training of second module is imparted only after the successful working in the field for six months. The final module covers the entrepreneurship development. The presence of these rigorous inhouse training and field experience of the Kudumbasree Community Based Organisations moulded them to take decisions independently with a social binding.

Kudumbasree

18.19 Kudumbasree, a new venture for generating employment and income to women drawn from Below Poverty Level families, operates through a three tier Community Based Organizations (CBOs), the Neighbourhood Group (NHG) at the grass root level, the ADS at the middle level and CDS at the apex level. The NHGs are an association of 20-40 adjoining poor families and numbering 161,753 are functioning as small Thrift and Credit Societies (T&CS). They have mobilised a sum of Rs 591.53 crores as thrift fund till December 2005 and disbursed an amount of Rs 1360.40 crores among their members. Of which, 65 percent of the loans were utilised for income generating activities.

18.20 The Micro Enterprise (ME) development programme of Kudumbasree has come a long way since the first micro enterprise unit of women was set-up in 1999 under the Swarna Jayanthi Shahri Yojana (SJSRY) Programme. Enterprise on menial works to Information Technology are running smoothly in the hands of NHGs. solid waste collection, multi purpose job clubs, direct marketing, date entry and hardware units, power laundry, bio-fertiliser units, tissue culture labs etc., are some of their area of operations. The traditional enterprises like goat rearing and dairying are also encouraged in place where those have scope. These enterprises led poor women to become the major income generators in the households with in a short spell of duration and this inculcated courage to contribute in decision making and develop leadership quality. It allowed about 3000 women from the Kudumbasree CBOs to contest in 2005 Local Body Elections under the banners of various political fronts and also as independents. 1408 women were elected from various constituencies covering 449 Local Self Government Institutions (LSGI). Among them 14 were elected to Corporations, 92 to Municipalities, 1212 to *Gram Panchayats*, 83 to *Block Panchayats* and 7 to *District Panchayats*. It is also observed that a good number of them have been elected as Presidents / Chairpersons of the LSGs. The district wise distribution of the elected members from Kudumbasree CBOs is given in Appendix 18.3. As members of the NHG's, the women are actively involving in the planning and implementation of various anti poverty programmes. They are playing an important role in the preparation of the anti-poverty sub plans for the Local Bodies also which is the consolidation of the 'micro plans' at NHG level and the 'mini plans' at the ADS level. The CDS is also involved in the selection of beneficiaries for the various anti-poverty programmes.. The various capacity building programmes also helps in building the capacities, capabilities and the competencies of the women. As part of women empowerment, the Kudumbasree State Level Unit is conducting different levels of training to equip these women to take up new tasks.

Other Women Development Agencies

18.21 More than 14 government departments and a good number of governmental & non government agencies are actively involved in the implementation of women developmental programmes in the state. The major Governmental Institutions other than Kudumbashree, are Women's Commission and Kerala State Women Development Corporation.

Kerala Women's Commission

18.22 Kerala Women's Commission was established in 1996 with the objective of improving the status of women as well as for conducting enquiry into unfair practices against women. The Commission received 3727 complaints during the period January 2005 to September 2005. Out of which, 555 are on harassment of husbands, 358 related to property, 357 regarding violence, 93 on dowry harassment and 144 related to job. The highest number of complaints were received from Thiruvananthapuram District (1088) and lowest from Wayanad (72). District wise distribution of complaints received are given in Appendix. 18.4. In a good number of complaints, the root cause was related to paternity of the child. DNA test is a means for settling this dispute effectively. The cost of the test @ Rs. 20,000 in respect of petitioners below poverty line, SCs and STs are borne by the Commission. During the period from January 1st to September 2005, 29 tests were conducted. Of which, 6 tests were in respect of SC/ST petitioners. The Commission conducts Forums & Adalaths in every district for speedy and timely redressal of petitions. During the said period, a total number of 3727 petitions were received and 59 Adalaths were held. The Commission also provide shelters in the short stay homes temporarily for the period of pendency of the petition to the poor and destitute women, who are unable to return to their homes due to reasons of cruelty and harassment.

Women Development Corporation

18.23 Women Development Corporation was started in 1988 for the socio-economic empowerment of BPL women. The Corporation provides loans for self-employment related to agriculture, small trade business, transport and services by mobilizing resources from National Backward Classes Finance and Development Corporation (NBCFDC) and National Minorities Development and Finance Corporation (NMFDC). The Corporation extended loans to 635 women amounting to Rs.338.32 lakhs during 2004-05. The Corporation also implement a scheme, named as 'Nagarasahayi 2004-05' to provide employment to women. Support is also granting for skill upgradation as part of the scheme. Already 400 beneficiaries have been selected and the project has been launched. The Corporation also financially supported 30 destitute women for starting sustainable livelihood activities at the rate of Rs. 10,000 per person. A project for the empowerment of fisherwomen community in collaboration with department of Fisheries is on the anvil. The Corporation runs nine Working Women's Hostel and three Women's Guest Houses. At present the Corporation is running 13 marketing centres and it is proposed to extend to 17 centres immediately.

Gender Budgeting

18.24 Gender Budgeting, at the Local Government level in Kerala, was initiated in 1997-98. The Government insisted the Local Bodies to set apart 10 percent of the allocation of plan fund exclusively for women component plan.

Box.No.18.5

' Gender Budgeting' is an attempt to change budgets from exercises in resource allocation to tools for social change. It serves as entry point for a broad based dialogue around gender equity issues, tools for Political and Economic empowerment of women and public education process on gender inequality.

If the the overall aim of gender budgeting is to harness the states' help in achieving true equality between men and women ,we need to push for policies that do not merely assist women to fulfill their traditional roles ,but also to promote them in roles that will change existing gender positions .

18.25 Instructions have also been given to provide sufficient funds in each year to compensate the backlog of women project utilisation in the preceding years. Details of plan grant to Local Bbodies set apart for Women Component Plan projects during the year 2004-05 under General, SCP&TSP Categories are given in Table 18.12.

Table-18.12
Distribution of Plan Grant of Local Bodies provided under Women Component Plan during 2004-05

(Rs. In Lakhs)

Sl. No	Type of Local body	General	SCP	TSP	Grant Total (3+4+5)
1	2	3	4	5	6
1	District Panchayat	485.39	393.29	185.71	1064.39
2	Block Panchayat	576.29	314.20	19.05	909.54
3	Municipality	486.32	174.30	0.00	660.62
4	Corporation	328.13	27.69	0.00	355.82
5	Grama Panchayat	4467.01	1270.76	111.24	5849.01
6	Total	6343.14	2180.24	316.00	8839.37

Source: IKM-2005, Kerala

Legal enactments related to women protection

18.26 Article 15, of the constitution of India prohibits discrimination and pledges equality for men and women. There are also certain special provisions for the protection of women and children which is provided in Article 15 (3) This is because of the women's physical structure and maternal functions which place her in a disadvantageous position Based on those provisions a good number of Acts were enacted at the central and state level. Some of those Acts and the protection provided to women are given in Box No.18 6

Box.18.6

Name of enactment	Protective provisions
1. Dowry prohibition Act, 1961	- Prohibit the giving and taking of dowry
2. Maternity Benefit Act, 1961	- Not required to work during six weeks immediately following the day of delivery.
3. The Domestic violence Act (2005)	- Protection of women from family members.
4. Child Marriage Act-1929	- To restrain the Solemnisation of child marriage
5. Muslim Women (Protection of rights on divorce)Act, 1986.	- Protects the rights of the divorced muslim women.
6. Immoral Traffic (Prevention Act)	- Prevention of Traffiking among women, 1956
7. Equal Remuneration Act -1976	- Payment of equal remuneration to men and women for same or similar nature of work protected under the Act.
8. The Plantation Labour Act, 1951	- Provision of creches in every plantation wherein 50 or more women workers are employed.
9. Kerala Women's Commission Act	- Act to provide for the constitution of women commission to improve the status of women in the state of Kerala.

CHAPTER 19

LABOUR AND EMPLOYMENT

The data on labour force and unemployment are being collected by the National Sample Survey Organization through Surveys. The survey reports show a declining trend of labour force in the rural area, especially in agriculture sector. The results of the 60th round survey of NSS on employment and unemployment indicate that the rural sector continue to employ more labour force than the urban sector. For instance, in urban area 37 per cent of the population constitute the labour force, where as in rural area it comes to 44 per cent. Report also indicates that unemployment rate in urban areas is higher than that in rural areas.

19.2 The average size of urban households is smaller than rural households. For instance, average household size is 4.5 member in the urban sector compared to five in the rural sector. 72% of the households are in rural India and they account for nearly 75% of the total households.

19.3 The percentage of men employed is much higher than women in both urban and rural areas. While 55% of rural males and 56% of urban males are in the labour force, the corresponding percentages for females are 32% and 16% respectively. The percentage of self employed women in the rural area is 62% as against 45% in urban areas. In the case of males while 57% are self employed in rural area it is only 44% in urban areas.

19.4 In the rural areas, 84% of the female labour force is employed in agriculture. Where as it is 66% in the case of males. In the Mid-term appraisal of the 10th Plan Govemment of India has proposed a strategy for solving the unemployment programme as below.

(1) Special emphasis to promote public investment in rural areas for absorbing unemployed labour force for asset creation.
(2) Identification of reforms in the financial sector to achieve investment targets in the Small and Medium Enterprises (SME) sector.
(3) Large scale employment creation in the construction sector, especially for the unskilled and semi-skilled.
(4) Necessary support to services sectors to fulfill their growth and employment.

Inter State Migration of Labour Force

19.5 During the last decade the flow of migrant workers from Kerala to other States was very high. Most of the migrant workers are skilled labours. The migration of skilled women workers from Kerala to outside was also very high even though sufficient accommodation and basic needs were not available in the work places. In industries like fish processing, in Maharashtra and Gujarat, women were recruited in batches from Kerala. Inter State flow of migrants from Kerala during 1999-2000 is given in Table 19.1.

Table 19.1
Inter State Flow of Migrants from Kerala (1999-2000)

Sl. No.	State	Persons (Nos.)	Percent
1	*2*	*3*	*4*
1	Tamil Nadu	311800	36.69
2	Karnataka	211900	24.94
3	Maharashtra	169800	19.98
4	Andhra Pradesh	40400	4.75
5	Madhya Pradesh	20300	2.39
6	West Bengal	18100	2.13
7	Uttar Pradesh	11400	1.34
	Other States	66100	7.78
	All India	**849800**	**100**

Source : NSSO Report

19.6 Due to higher rate of wages in Kerala labours are arriving to Kerala from various states. Flow of labours from other states are continuing through contract work also. It is also observed that most of the contract employers are not providing adequate basic needs to workers. As the state Government is serious about workers welfare and social justice, the State Government is interfering in reported cases to ensure the basic needs of the workers. State Government enforces employment control and service guide lines (Act 1996) of the Construction Workers and issued detailed guidelines as per requirements. The summary of the detailed guidelines issued recently are as follows:

(1) Working hours should be restricted to eight hours a day.
(2) There should be a break of at least 30 minutes during intervals.
(3) Extra money should be given for extra work.
(4) One paid holiday should be granted every week.
(5) Nothing less than the minimum wages should be paid.
(6) Salary notice featuring the wage rate and the date of salary, in both English and the language understood by the employees, should be exhibited. A copy of the notice should be given to the labour inspector.
(7) Muster roll and other registers should be kept.
(8) All migrant labourers should be provided with a photo identity card.
(9) Labourers should be provided with water, shelter and latrine facilities as per law. Men and women should be provided separate bathrooms.

19.7 Since certificates are essential at present for obtaining employment even to the daily waged labours, the State Government evolved a methodology for testing the skill of such labourers and issuing authentic certificates. It provides much help to those skilled labourers for seeking employment even abroad and earn foreign currency. The details of skilled non-certified technicians identified in various trades in Kerala through the survey conducted by the department mentioning their skill/trades are given in the Table 19.2.

Table – 19.2

Skilled non-certified technicians in the State on various trades

Sl.No.	Trade	Number of Non Certified Technicians	
		Total	Below 40 Years
1	2	3	4
1	Electrician	49625	34635
2	Plumber	33320	22050
3	Carpenter	122120	71400
4	Mechanic Petrol/Diesel	34300	19740
5	Mason	138060	97700
6	Cutting and Tailoring	172170	99670
7	Welder	50630	32980
8	Painter	33320	22050
9	RAC Mechanic	18740	13910
10	Wiremen	41850	25120
	TOTAL	**6,94,135**	**4,39,255**

19.8 The department identified 8 ITIs for conducting such tests for various skills. The details are given in the Table -19.3.

Table – 19.3

ITIs and skill to which tests were conducted

Sl.No.	Name of ITI	Skill
1	Dhanuvachapuram, TVM.	Carpenter, Welder, Plumber
2	Chackai, Thiruvananthapuram	Motor Mechanic Diesel Mechanic, MRAC, Electrician.
3	Kollam (W)	Cutting and Tailoring
4	Chandanathope, Kollam	Painter, Electrician, Wireman
5	Kalamassery	Mechanic Petrol/Diesel, Electrician, Wireman, RAC Mechanic.
6	Kozhikode	Electrician, Carpenter
7	Malampuzha	Carpenter, Welder, Plumber, Wiremen
8	Kannur	Electrician, RAC Mechanic, Diesel Mechanic.

19.9 The skills of the technicians are evaluated under the direct supervision of the Director, Employment and Training and the certificate of "State Council for Vocational Training" is issued to the skilled labourers after assessing the following aspects.

1) Quality of work
2) Performance speed.
3) Optimum consumption of materials.
4) Familiarity in using tools and equipment.
5) Awareness of technolngical development.

Unemployment

19.10 Current daily status unemployment rate among the youth (15-29) in the case of both rural and urban areas is higher in Kerala than any other state in India (Appendix-19.1) This is true for both males and females. The unemployment rate in Kerala increased from 15.51 per cent in 1993-94 to 20.97 per cent in 1999-2000. During the same period the unemployment rate in India increased from 5.99 per cent to 7.32 per cent. It is seen that the incidence of unemployment

measured by the current daily status is the highest in Kerala compared to other states in India. Unemployment in rural and urban areas according to male and female is given in Table – 19.4

Table 19.4
Current Daily Status Unemployment Rate among Youth(15-29) – India & Kerala

(%)

Particulars		India	Kerala
1		2	3
Rural			
	Male	11.1	32.3
	Female	10 6	45.8
	Total	11.0	36.3
Urban			
	Male	14.7	26.6
	Female	19.1	50 4
	Total	15 4	34 3

19.11 The number of work seekers in the live register of Employment Exchanges in Kerala decreased from 40.04 lakhs in 2003 to 37.56 lakhs in 2004 registering a decrease of 6.2 per cent. The number of work seekers below SSLC constituted 18 per cent of the total work seekers in 2004 as against 26 per cent during 2000. While the number of work seekers below SSLC decreased by 9.8 per cent during 2004, the work seekers with educational qualification SSLC and above decreased by only 5.4 per cent. The number of work seekers in the live register of Employment Exchanges in Kerala as on December 31st of the years is given in Table 19 5

Table-19.5
Work Seekers in the Live Register of Employment Exchanges

(lakhs)

Sl.No.	Year (at the end of December)	Below SSLC		SSLC & above		Total work seekers	
		Persons	Growth rate(%)	Persons	Growth rate(%)	Persons	Growth rate(%)
	1	2	3	4	5	6	7
1	2000	9.52	5.3	32.63	8.9	42 15	8.1
2	2001	9.67	1.6	34.64	6.2	44.31	5.1
3	2002	7 12	-26.4	29.68	-14.3	36.80	-16.9
4	2003	7.46	4.8	32.58	9.8	40.04	8.8
5	2004	6 73	-9.8	30.83	-5.4	37.56	-6.2
6	June-2005	6.54	-2.8	31.32	1.6	37 86	0.8

Source: Directorate of Employment

19.12 The number of work seekers according to the level of education for the period 1996-2004 is given in Appendix-19.3. The share of work seekers below SSLC is decreasing and the share of work seekers having higher educational qualification is increasing. The share of work seekers having educational qualification SSLC and above to total work seekers increased from 75 per cent in 1996 to 83 per cent in 2004.

19.13 The share of work seekers with various levels of education is given in Table 19.6. The employment seekers consists of 17.92 per cent below SSLC, 59.18 per cent SSLC, 14.9 per cent PDC or equivalent, 6.38 per cent graduates and 1.62 per cent post graduates. It shows that the

share of employment seekers below PDC has decreased while the share of employment seekers with qualification above PDC has increased.

Table 19.6
Share of Employment Seekers according to Level of Education – Kerala (1996 & 2004).

Sl.No.	Level of Education	Share (Per cent)	
		1996	2004
1	2	3	4
	Below SSLC	25.01	17.92
2	SSLC	60.35	59.18
3	PDC or equivalent	8.75	14.90
4	Degree	4.93	6.38
5	Post Graduate	0.96	1.62
	Total	**100.00**	**100.00**

19.14 The number of graduates registered in employment exchanges stood at 2.68 lakhs in 2003. It has come down to 2.39 lakhs in 2004 and again to 2.32 lakhs in June 2005. The number of work seekers with postgraduate degree decreased from 0.61 lakh in 2003 to 0.60 lakh in 2004 and it was 0.56 lakh upto June 2005

19.15 There has been very high growth in the number of professional and technical work seekers in Kerala. In 2004, the number of professional and technical work seekers were 1.76 lakhs out of 37.56 lakh total work seekers. The share of professional and technical work seekers increased from 3.92 per cent in 1996 to 4.7 per cent in 2004. The growth of work seekers of medical and engineering graduates are shown in Fig 19.1 & Fig.19.2

Fig.19.1

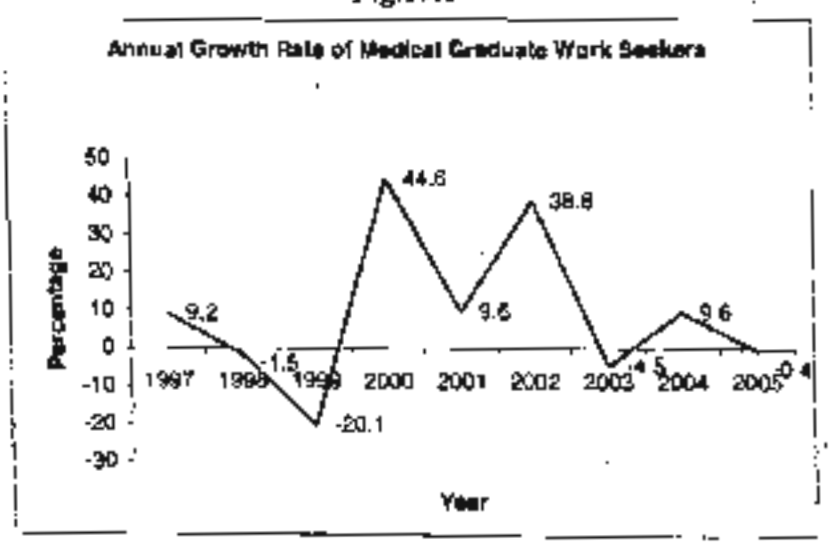
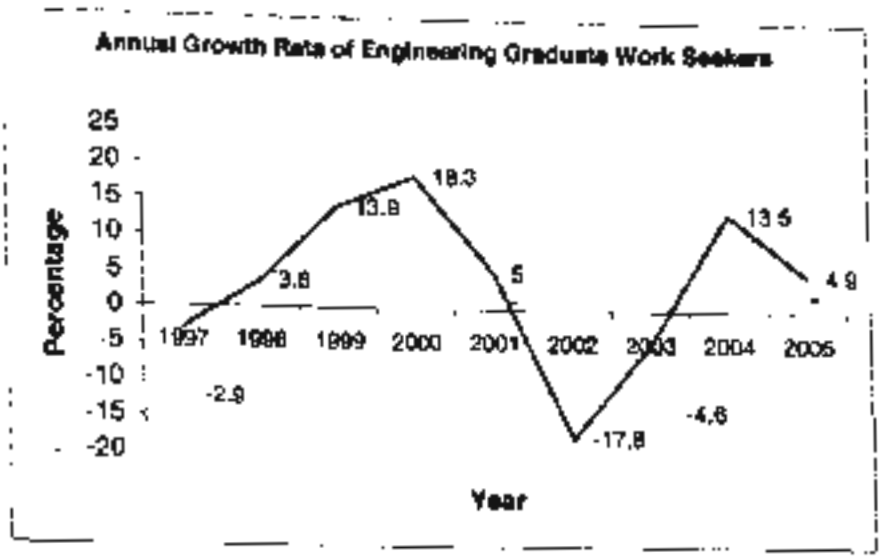


Fig 19.2



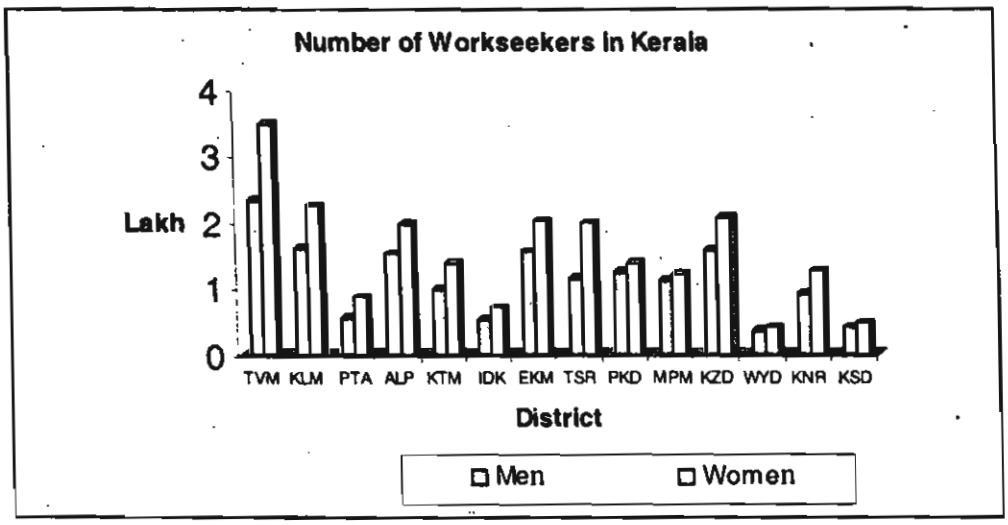
19.16 The number of professional and technical work seekers are given in Table 19.7 ITI certificate holders constitutes 67 per cent and Diploma holders form 24% of total technical and professional work seekers. The employability of the technically qualified workers need to be improved.

Table 19.7
Share of Professional and Technical Work seekers in Kerala

Sl.No.	Education	Share (per cent)		Work seekers
		1996	2004	2004
1	2	3	4	5
1	Medical Graduates	1.53	2.21	3910
2	Engineering Graduates	5.64	5.22	9213
3	Diploma holders in Engineering	22.15	24.08	42539
4	ITI Certificate holders	69.67	67.1	118518
5	Agricultural Graduates	0.98	0.94	1662
6	Veterinary Graduates	0.03	0.45	796
	Total	**100**	**100**	**176638**

19.17 A peculiar feature of Kerala's unemployment situation is that women outnumber men in seeking employment through employment exchanges. This is reflected in all the 14 districts in Kerala. Out of the total number of 37.24 lakh job seekers in June 2005, women are 21.41 lakhs. (See Fig.19.3)

Fig.19.3



19.18 Thiruvananthapuram District ranks first in the number of work seekers in general category and Ernakulam district in professional category. As on 31.3.2005 , the total number of work seekers in Thiruvananthapuram District is 5.80 lakh of which 3.47 lakh are women and 2.33 lakh are men. Kollam district stands second with 3.85 lakh job seekers. Out of which 2.25 lakhs are women and 1.60 lakhs are men. The lowest number of work seekers are in Wayanad and Kasaragod Districts. In Wayanad, there are 0.76 lakh work seekers, whereas in Kasaragod the number is 0.88 lakh. Details of district wise distribution of work seekers are given in Appendix 19.5

Unemployment Assistance

19.19 Government of Kerala has introduced an unemployment assistance scheme in 1982 for the unemployed. As per the Kerala Panchayat Raj Act 1994 and Municipalities Act 1994, the unemployment assistance schemes has been transferred to the Local Government. Invitation of applications for unemployment assistance, processing of applications after the scrutiny of Employment Officers, sanctioning and distribution of unemployment assistance are vested with the Local Governments. The amount of unemployment assistance is allotted to the Employment Department and the department distributes the amount to Local Governments. The annual family income of the applicant should not be above Rs.12,000 and personal income shall not exceed Rs.100 per month. The candidates should have passed S.S.L.C. and possess three years registration seniority after attaining 18 years of age. The SC/ST and Physically Handicapped candidates should have appeared the S.S.L.C. examination. The Physically Handicapped candidates need a registration seniority of two years after attaining 18 years of age. The monthly rate of unemployment assistance is Rs.120. There are 387370 beneficiaries under the scheme. During 2004, an amount of Rs.7398.43 lakh was disbursed to 3.87 lakh persons and Rs. 10243.38 lakh to 3.45 lakh persons during 2005.

Kerala State Self Employment Scheme for the Registered Unemployed(KESRU)

19.20 A Self employment scheme called KESRU is being implemented since March, 1999. All literates and registered unemployed candidates within the age group of 21 to 40 years are eligible to apply under the scheme if their annual family income is below Rs. 24,000 and individual income is below Rs. 500 per month. The maximum loan amount admissible is Rs. 100000 depending upon the requirement of the project. Two or more persons can join together and avail the loan facilities. Twenty per cent of the loan amount is given as subsidy. During 2004, an amount of Rs.50.0 lakhs was disbursed to 734 persons and Rs.16.85 lakhs to 238 beneficiaries

during 2005. With proper linkages with financial institutions, this scheme can be expanded considerably.(Appendix-19.6)

Employment

19.21 The employment in Kerala is estimated at 89 lakhs accounting for 2.64 per cent of India. The employment in Kerala during 1993-94 to 1999-2000 registered a growth rate of only 0.07 percent as against a growth rate of 1.07 per cent for India. State wise employment scenario is given in the Appendix – 19.7.

Employment in the Organised Sector

19.22 In India, the number of persons employed in the organised sector during 1994 was 273.7 lakhs out of the total of 3744.5 lakh persons employed. In 2000, it increased to 281.1 lakh persons constituting 7 per cent of the total 3970 lakh persons employed. In March 2002, the number of persons employed in the organised sector was 272.1 lakh and it decreased to 270 lakh in March 2003. The details of organised sector employment are given in Appendix -19.8. Employment of women in the orgainsed sector (both public and private) as on March 2002 is 49.35lakhs constituting 18.1 per cent of the total organised sector employment in the country. Their number increased to 49.58 lakhs in March 2003.

19.23 The organised public and private sector together employ 11.46 lakh workers in Kerala which constitute 4.2 per cent of the total employees in the organised sector in India. The private sector accounts for 46.25 percent of the employment in the organised sector in Kerala as against 31.19 per cent in India. Organised nature of the traditional industries like cashew, handloom and coir may be the reason for higher share of private organised sector employment. Details are given in Table 19.8.

Table 19.8

Employment in Organised (Public & Private) Sector – India & Kerala- 2003

Particulars		India (lakhs)	Kerala (lakhs)	Share of Kerala (Per cent)
Public Sector	Male	158.75	4.29	2.7
	Female	29.05	1.9	6.5
	Total	185.80	6.19	3.3
Private Sector	Male	63.57	2.65	4.2
	Female	20.64	2.65	12.8
	Total	84.21	5.30	6.3
Total	Male	220.32	6.93	3.1
	Female	49.68	4.53	9.1
	Total	270.0	11.46	4.2

19.24 The share of female employees in the organised sector in Kerala is about 40 per cent as against 18 per cen at all India. In the private sector share of female workers is 50 per cent in Kerala but less than 25 per cent in India. The predominance of women workers in traditional industries like cashew and coir is the reason for more female workers in the private sector.

Table – 19.9
Share of female employees in the organised sector – India & Kerala (2003)

Sl.No.	Sector	Percentage of Female Employees	
		India	Kerala
1	2	3	4
1	Public Sector	15.64	30.69
2	Private Sector	24.51	50.00
	Total	**18.40**	**39.53**

19.25 In Kerala, the total employment in the organised sector which has been increasing marginally since 1996 started declining from 2000. (Appendix 19.9) Total number of persons employed in the organised sector in December 1996 was 1175711 persons. Of the total 615201 persons employed in the public sector during December 2004, 78348 were Central Government employees. 279595 were State Government employees, 230794 were Quasi Government employees and 26464 were Local Government employees. Details on public sector employment are given in Table 19.10. District-wise employment in public and private sectors in Kerala from 2000 to 2005 are given in the Appendix 19.10.

Table 19.10
Employment in Public Sector in Kerala

Year (at the end of December)	Central Govt.	State Govt.	Quasi Govt)	Local Bodies	Total
1	2	3	4	5	6
1997	99333	275947	223261	23434	621975
1998	103265	291256	224712	24551	643784
1999	102185	292527	226710	22505	643927
2000	101908	292950	231363	25020	651241
2001	97115	294469	227745	26341	645670
2002	83496	289473	238242	26785	637996
2003	80979	272483	238568	27233	619263
2004	78348	279595	230794	26464	615201
3/2005	76789	279914	231326	26833	614862

Source: Directorate of Employment

19.25 The EMI data in Table 19.11 gives the sector-wise distribution of employment over the last three decades.

Table 19.11
Employment in Public and Private Establishments in Kerala as on 31st March

Sl. No	Industry	Number of Persons Employed						
		1971	1981	1991	2001	2003	2004	2005
1	2	3	4	5	6	7	8	9
1	Agriculture and allied Industries	92055	103145	104727	108966	110072	97713	85178
2	Mining and Quarrying	610	1340	3548	3571	3515	3080	11645
3	Manufacturing	188924	323359	307038	321903	298695	310720	254398
4	Construction	23562	25170	19327	25242	27544	26387	26081

5	Electricity, Gas, Water & Sanitary Services	11850	16349	26642	26526	21526	22420	22148
6	Trade, Restaurants & Hotels	23083	13676	21946	25580	31502	29566	31263
7	Transport, Storage & Communication	54212	74422	97299	104596	102322	101656	102584
8	Financing, Insurance, Real Estate & Business Services		47779	78739	86320	88846	86661	96531
9	Community, Social & Personal Services	307470	409358	488598	538990	527777	526220	509845
Total		701766	1017298	1147864	1241694	1211399	1204423	1139773

Source: Directorate of Employment and Training

Placement through Employment Exchanges

19.26 As on December 2003, the number of persons registered in employment exchanges across the country was 414 lakhs. The number of persons registered in the Employment Exchanges in India stood at 409 lakhs in July 2004. The Special Employment Exchanges for the physically handicapped registered 1292 persons in July 2004 of which 199 persons were placed in jobs. The number of handicapped applicants on the live registers of these Exchanges at the end of July 2004 is 1.12 lakhs. Number of Employment Exchanges, registration, placement, vacancies notified etc. are shown in Table 19.12

Table 19.12
All India Employment Exchange Statistics: All categories

Year	Employment Exchanges (No)	Registration ('000)	Placement ('000)	Vacancies notified ('000)	Submission made ('000)	Live Register ('000)
1	2	3	4	5	6	7
1998	945	5851.8	233.3	358.8	3076.6	40089.6
1999	955	5966.0	221.3	328.9	2653.2	40371.4
2000	958	6041.9	177.7	284.5	2322.8	41343.6
2001	938	5552.6	169.2	304.1	1908.8	41995.9
2002	939	5064.0	142.6	220.3	1748.8	41171.2
2003	945	5462.9	154.9	256.1	1917.3	41388.7

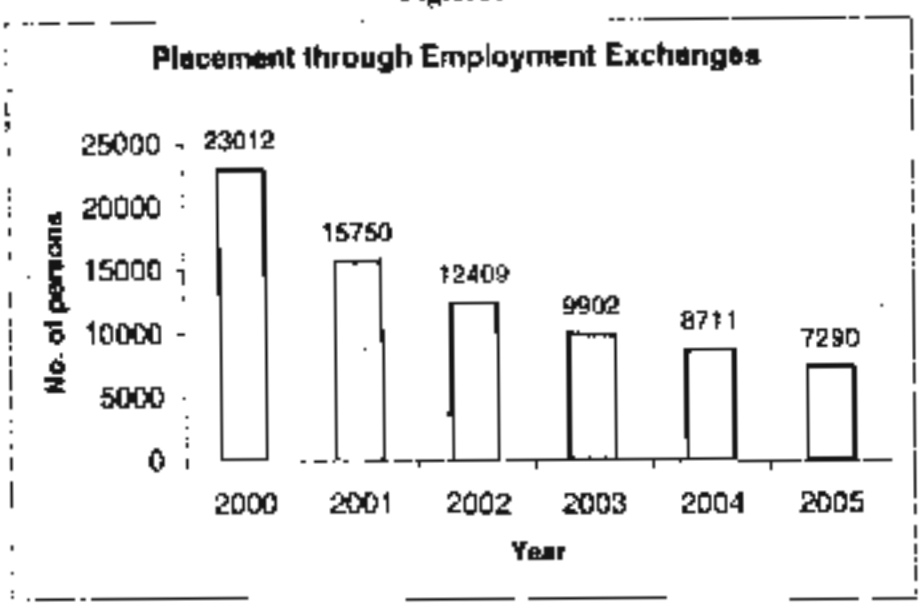
19.27 About 10 per cent of employment seekers in the live register of Employment Exchanges in the country are in Kerala. More than 6 per cent of the placements through Employment Exchanges are also from Kerala. Kerala accounts for about 9 per cent of total Employment Exchanges in India.(See Table 19.13).

Table 19.13
Placement through Employment Exchanges – India & Kerala (2003)

Sl.No.	Particulars	India (lakhs)	Kerala (lakhs)	Share of Kerala
1	2	3	4	5
1	Employment Exchanges	945	85	8.99
2	Employment seekers in the live register	413.89	40.04	9.67
3	Placement through Employment Exchanges	1.59	0.10	6.0

19.28 In Kerala total placement has been declining from 2000 onwards. Total placement through Employment Exchanges in 2003 was 9902 and 8711 in 2004. In 2000 it was 23012. As per data available till June 2005, total placement is only 7290 .(See Fig.19.4) The monthly average number of employers using Employment Exchanges during 2004 was 225. The number of placements through Employment Exchanges and the average number of employers using Employment Exchanges are given in Appendix 19.12.

Fig.19.4



Migration

19.29 Till the beginning of World War II, Kerala was a net in-migration state, as it attracted labour force and traders in large numbers from the neighbouring area, mainly the Madras Presidency. Kerala's transition to a net out-migration state was during the second World War II, when a large number of youth were recruited from the state for war related jobs to other parts of India and even to foreign countries like Burma, Malaya and Singapore. Since independence, Keralites have migrated to almost all countries. However, large scale emigration to the Gulf countries began in the 1970s consequent to the oil boom. According to the Housing and Employment Survey conducted by the Directorate of Economics & Statistics in 1980, 5.1 lakh Keralites migrated outside the state and out of these 2.1 lakhs were to foreign countries. The 1992/93 Survey shows the number of Kerala migrants to Gulf countries at 6.41 lakh and to other foreign countries at 0.27 lakh.

Box 19.1

The majority of Kerala emigrants work for more than 8 hours per day and more than one tenth, work for about 10 to 14 hours per day

19.30 According to a study by Centre for Development Studies (CDS) on migration entitled "Kerala Gulf connections", in 1995 the total number of emigrants from Kerala was estimated at 13.6 lakhs. Between 1988-92 and 1993-97 the number of emigrants increased by 120 percent.

Arab Countries of the Middle East were the destination of 95% of the emigrants with Saudi Arabia alone accounting for nearly 40%.

19.31 According to a study entitled as "Report on Activity Status of Migrants and Returnees" conducted by the Department of Economics & Statistics in 1999, about 13.84 lakh Keralites are staying outside India. It is more than 4.4% of the people permanently residing in the state. Out of the total 13.84 lakh persons residing abroad, 11.40 lakhs are employed and the remaining 2.44 lakhs are their dependents. 80.33% of the employed migrants have no technical qualification and 91.34% are employed in private sector.

19.32 Emigration of Keralites remains strong, with a latest study conducted by CDS in 2004 showing that the number of emigrants went up by 35 percent in last five years from 13.6 lakhs in '1999 to 18.4 lakhs in 2004.

19.33 The study shows that among the emigrants from Kerala, Muslims constituted 43.7 percent. Hindus stand next with 31.2 percent and Christians with 25.1 percent. The rate of growth in migration was highest among the Christians at 53.9 percent while it was 17.3 percent among Muslims. The female migration had gone upto 16.8 percent in 2004 compared to 9 percent in 1999.

19.34 The study further shows that migration to the Gulf Countries which was 95 percent of the total migration went down to 90 percent. The migration to the USA, European countries and Africa went up from 5 percent in 1999 to 10 percent in 2004. Among the Gulf Countries, UAE replaced Saudi Arabia as the most preferred destination.

Box 19.2

Major problems faced by emigrants are non-payment of salaries, denial of wages and non-wage benefits stipulated in work contracts, refusal to release passport and non-payment of air-ticket fare for return to Kerala

Foreign Remittances

19.35 India received US$ 21.7 billion as remittances by Indian workers abroad. India the highest recipient of remittances, accounted for 9.32 per cent of the total world remittances. The increase in remittances reflect substantial welfare gains for emigrants and their families.

19.36 According to the CDS study in 1999, the total cash remittances received by Kerala households during the 12 month period in 1998 was Rs. 35,304 million. The cash remittances alone constituted about 9.3% of the SDP. In the early 1990's remittances to Kerala economy had assumed a significant share of State income which ranged between 17% during 1991-92 and 24% during 1997-98 with an average of 22% for the second half of the 1990s. The large increase in rupee terms is also due to the sharp depreciation in the value of the rupee vis-a-vis the US dollar from Rs. 17 at the beginning of the decade to over Rs.48 at the end of the decade. The state thus benefited significantly from the liberalization of the exchange rate.

19.37 The latest study by CDS in 2004 shows that the remittances by the emigrants went up by 35 percent in 5 years from Rs.13652 crore in 1999 to Rs.18465 crore in 2004. The per capita remittance is Rs.5678 during 2004(Rs.473 per month). The study also find that 17.6 percent of

house holds in the state had at least one emigrant. The district-wise remittance figure during 2004 showed that Thrissur has the largest remittance of Rs.3234 crore followed by Malappuram (Rs.2892 crore) and Thiruvananthapuram (Rs.1927 crore).

Return Emigrants

19.38 A sizeable number of people return to the State. According to the study "Activity Status of Migrants and Returnees" by the Department of Economics and Statistics in 1999, there are 5.43 lakh returnees. The maximum number of returnees, that is 90688 are in Malappuram district followed by Kollam. The reasons for return to home land are sent back(16.8%), ill health(16.31%), retrenchment(14.94%), no life security(13.25%), re-migration for better job(7.07%), retirement(4.33%), bad climate(2.08%) etc. According to Kerala Health Service Department's Report on Migration, 7.5 lakh migrants are stated to have returned home. CDS study puts it as 7.4 lakh in 1999 and 8.9 lakh in 2004. District-wise details of emigrants and return emigrants are given in Table 19.14

Table 19.14

Emigrants per 100 Households and Return Emigrants – 2004

Sl.No.	District	Emigrants		Emigrants per 100 Households		Return Emigrants	
		2004	1999	2004	1999	2004	1999
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	168046	130705	21.5	19.9	103059	118878
2	Kollam	148457	102977	24.4	18.4	69314	74106
3	Pathanamthitta	133720	97505	44.3	33.1	83502	54537
4	Alappuzha	75036	62870	15.2	13.2	43109	34572
5	Kottayam	106569	35494	24.0	9.1	28368	18164
6	Idukki	7880	7390	2.9	2.9	3766	5017
7	Eranakulam	121237	103750	16.9	17.0	74435	45028
8	Thrissur	178867	161102	27.2	25.6	86029	116788
9	Palakkad	177876	116026	32.6	21.8	55008	39238
10	Malappuram	271787	296710	45.0	49.2	141537	123750
11	Kozhikode	167436	116026	28.6	22.0	109101	60910
12	Wayanad	7704	4552	4.4	2.9	3852	3327
13	Kannur	202414	88065	43.2	19.0	45394	28263
14	Kasaragod	71449	38747	30.6	19.1	47468	16667
	Total	1838478	1361955	26.7	21.4	893942	739245

19.39 Most of the returnees are from Saudi Arabia followed by UAE. As regards the age group of returnees, about two third of them are less than 49 years of age. Hence majority of the returnees are in need of employment or economic activity. Sector – wise present employment of returnees is that the highest percentage are engaged in self employment in non-agricultural sector (31.2%) followed by other organised sector (17.90%) and other activities (46.40%). The details are shown in Table 19.15

Table 19.15
Sector wise percentage of employment of Returnees

Sl.No.	Sector	Percentage
1	Government / Semi Government	03.10
2	Co-Operation	00.90
3	Other organised	17.90
4	Self employed in Non Agriculture	31.20
5	Political and social Activity	00.50
6	Other Activities	46.40
	Total	100.00

Source: Directorate of Economics & Statistics

Placement through ODEPC

19.40 The Overseas Development and Employment Promotion Consultants Ltd (ODEPC) was incorporated in 1977 with the main objective of promoting employment in foreign countries. As part of diversification, ODEPC started travel agency business also. The authorised share capital of the Company is Rs. 1 crore and paid up capital is Rs.65.79 lakhs. During 2004-05, the Company earned Rs.31.27 lakh profit after taxes and proposed dividend of 16% on its paid up share capital.

19.41 ODEPC is the first and the only recruiting agency in the Govt. sector deploying Indian manpower to foreign countries. Till 2005, the company could deploy 4314 personnel to various foreign countries like Saudi Arabia, UAE, Qatar, Oman, Bahrain, Kuwait, Libya, Singapore, Malaysia, Brunei, Cyprus, Sri Lanka etc. As on 31.10.2005, 170 persons were deployed; of them 125 are to Saudi Arabia, 21 are to Sri Lanka, 10 are to UAE, 9 to Oman and 5 to Malaysia. Out of these 170 persons, 113 were nurses, 27 doctors, 8 technicians, 11 para medical, 8 Salesman, 2 guards, and 1 Marketing Manager. The turn over of travel division was Rs.213.91 lakh during 2003-04 and it increased to Rs.254.37 lakh during 2004-05.

NORKWA

19.42 The Non-Resident Keralites' Welfare Agency, NORKWA was set up in 1998 for addressing important issues connected with NRKs such as rehabilitation of returnees, rendering assistance in the field of education, welfare, health care, housing etc. The primary objectives of the Department of NORKA are ensure the welfare of NRKs, redress their grievances, safeguard their rights, rehabilitate the returnee migrants and facilitating NRK investments in the State.

CHAPTER - 20

HUMAN DEVELOPMENT AND SOCIO-ECONOMIC WELL BEING IN KERALA.

Human Development aims at ensuring and enlarging human choices, which lead to equality of opportunities for all people in the society and empowerment of people so that they participate in - and benefit from - the development process. This can be achieved by expanding choices of all people in society, both men and women, particularly the poor and the vulnerable. The most critical ones are to lead a long and healthy life, to be educated and to enjoy a decent standard of living. Additional choices include political freedom, guaranteed human rights and self respect. Human development can also be viewed as the protection of the natural systems in which all life depends and of life opportunities of future generations.

Box - 20.1

The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little

Source:- Human Development Report-2005(UNDP)

20.2 Human Development is not only the goal of a human society, but also a development paradigm to be adopted to achieve this goal. Human Development cannot be achieved only by promoting health and nutrition or education and literacy or welfare of people through scattered programmes. It requires a development path or development strategy which is conducive to the development of human capabilities and opportunities.

20.3 According to the Human Development Report (2005) published by United Nations Development Programme (UNDP), India has consistently improved on human development from and is grouped among the countries with medium human development. .

20.4 The global position on human and Gender development of certain countries during 2002 and 2003 are listed in Table 20.1

Table -20.1

India's Global position on Human and Gender Development

Sl. No	Country	HDI		HDI Rank		GDI		GDI Rank	
		2002	2003	2002	2003	2002	2003	2002	2003
1	2	3	4	5	6	7	8	9	10
1	Norway	.956	.963	1	1	.955	.960	1	1
2	Australia	.946	.955	3	3	945	954	3	2
3	Sri Lanka	.721	.751	96	92	738	.747	73	66
4	China	.745	.755	94	85	.741	.754	7	64
5	Indonesia	.692	.697	111	110	.685	.691	90	87
6	**India**	**.595**	**.602**	**127**	**127**	**.572**	**.586**	**103**	**98**
7	Pakistan	.497	.527	142	135	471	.508	120	107
8	Bangladesh	.509	.520	138	139	.499	.514	110	105
9	Nepal	.504	.526	140	136	.484	511	116	106
10	Mozambique	.354	.379	171	.168	.339	.365	139	133
11	Niger	.292	.281	176	177	.278	271	144	177

Source: Human Development Report (UNDP) 2004 & 2005.

20.5 The Table shows that India's position on human development as on 2003 is 127 which is the same as that in 2002. In the case of Gender Development Index, the position slightly improved from 103 in 2002 to 98 in 2003.

20.6 The following four indices are used for the measurement of human development

1. Human Development Index (HDI)

HDI is the summary measure of the average achievement in a country or a geographic entity in terms of three basic dimensions of human development, viz;

a) A long and healthy life, as measured by life expectancy at birth
b) Knowledge as measured by adult literacy rate and gross enrolment rate
c) A decent standard of living as measured by GDP per capita.

2. Gender - related Development Index (GDI)

GDI measures achievements in the same basic capabilities on HDI, but takes note of inequality in achievement between men and women.

3. Gender Empowerment Measures (GEM)

GEM as a devise to measure the participation of men and women in economic and political life and in decision making. While GDI focuses on expansion of capabilities, GEM is concerned with the use of those capabilities to take advantage of the opportunities in life.

4. Human Poverty Index (HPI)

Human Poverty Index was introduced by UNDP in 1997. In 1998 they splitted it into HPI-1 and HPI-2. HPI-1 is relevant for developing countries like India and it measures deprivation in the three basic dimensions of human development. First is vulnerable to death at a relatively early age as measured by the probability at birth of not surviving to age 40. Second is knowledge - exclusion from the world of reading and communication - measured by adult literacy rate. Third is lack of access to overall economic positioning as measured by the percentage of population not using improved water resources and the percentage of children under five who have under weight. HPI-1 for developing countries is given in Table- 20 . 2. India ranked 58 with percentage value 31.3.

Table -20. 2

Human Poverty Index for developing countries (HPI-I)

Sl. No.	Name of country	Value (%)	Rank
1	Uruguay	3.6	1
2	Chile	3.7	2
3	Costarica	4.0	3
4	China	12.3	27
5	Srilanka	18.0	42
6	**India**	**31.3**	**58**
7	Pakistan	37.1	68
8	Nepal	38.7	74
9	Bangladesh	44.1	86
10	Niger	64.4	103

Source: Human Development Report 2005 (UNDP)

Population Trends.

Box -20.2
Population and Demography

Population and demography in a society are closely linked with its status of human development. This is because, population stabilization achieved through healthy demographic transition, reflects good health and good nutritional status of the population. It also reflects satisfactory care of mothers and good child health. Lastly and most importantly, it reflects gender equality and women's empowerment.

Source - Gujarat Human Development Report 2004

20.7 According to 2001 Census, the total population of Kerala is 31.84 million against the national population of 1027.02 million that is, 3.10 % of the population of India. The growth rate of population which was 2.3% during the period 1961-71 declined to 1.3% during 1981-91 and to 0.91 % during 1991-2001. This is the lowest among the major Indian States, followed by Tamil Nadu. The decline in growth rate was contributed partly by decline in fertility and partly by net migration.

20.8 The population growth varies significantly within Kerala. The districts of Malappuram and Wayanad recorded highest growth rate. On the other hand, Pathanamthitta district recorded the lowest growth rate in Kerala. Pathanamthitta is also one among the bottom ten districts in India by percentage decadal growth during 1991-2001. Table-20.3 shows the bottom ten states in India by percentage decadal growth.

Table - 20.3
Bottom ten districts in India by percentage decadal Growth

Sl. No.	District	State/UT	Percentage decadal growth
1	Mamit	Mizoram	-3.50
2	Central	Delhi	-1.91
3	New Delhi	Delhi	2.47
4	Almora	Uttaranchal	3.14
5	Sindhudurg	Maharashtra	3.55
6	**Pathanamthitta**	**Kerala**	**3.72**
7	Garhwalt	Uttaranchal	3.87
8	Kolkota	West Bengal	4.11
9	Sivaganga	Tamil Nadu	4.32
10	Theni	Tamil Nadu	4.33

Source: Census, 2001.

Sex Ratio

20.9 Sex ratio, the number of women per 1000 men, reflects the status of women in a society. Women are biologically stronger sex, and hence enjoy a higher survival rate than men. On an average, the life expectancy of women is five years more than men. India has the enviable distinction of having one of the lowest sex ratios in the world. In 2001 Census there are 1058 females per 1000 males in Kerala as against the all India average of 933 females per 1000 males. With regard to juvenile sex ratio in the age (0-6) Kerala's performance is not so impressive. During 1991 and 2001 the juvenile sex ratio were 958 and 963 respectively registering a small

increment of 0.53%. Table-20.4 shows the details regarding the juvenile sex ratio of 15 states and all India average during the Census periods, 1991 and 2001

Table - 20.4
Juvenile Sex Ratios in 15 Major States of India, 1991 and 2001

Sl. No.	Name of State	Sex Ratios in Age 0-6		Change from 1991-2001
		1991	2001	
1	Andhra Pradesh	975	964	-11
2	Assam	975	964	-11
3	Bihar	953	938	-15
4	Gujarat	928	878	-50
5	Haryana	879	820	-59
6	Karnataka	960	949	-11
7	**Kerala**	**958**	**963**	**5**
8	Madhyapradesh	941	929	-12
9	Maharashtra	946	917	-29
10	Orissa	967	950	-17
11	Punjab	875	793	-82
12	Rajasthan	916	909	-7
13	Tamil Nadu	948	939	-9
14	Uttar Pradesh	927	916	-11
15	West Bengal	967	963	-4
	India	**945**	**927**	**-18**

Source. Provisional Population Totals, Census of India, 2001.

Best States in India to Live

20.10 By considering eight parameters such as agriculture, industrial environment, consumer market, health, education, law and order, infrastructure and budget and prosperity, India Today conducted a study among the states in India. The States are ranked as per study are given in Table-20.5

Table - 20.5
Rank position of the Best States in India to Live

Sl. No.	Name of State	Rank		Change
		2004	2005	
	Big States			
1	**Punjab**	1	1	0
2	**Kerala**	2	2	0
3	Himachal Pradesh	3	3	0
4	Tamil Nadu	4	4	0
5	Haryana	5	5	0
6	Maharashtra	6	6	0
7	Gujarat	7	7	0
8	Karnataka	8	8	0
9	Uttaranchal	9	9	0
10	Jammu & Kashmir	10	10	0
11	Andhra Pradesh	11	11	0
12	Rajasthan	13	12	+1
13	West Bengal	14	13	+1
14	Madhya Pradesh	12	14	-2

15	Chattisgarh	16	15	+1
16	Assam	15	16	-1
17	Uttar Pradesh	17	17	0
18	Orissa	18	18	0
19	Jharkhand	19	19	0
20	Bihar	20	20	0
	Small States			
1	Goa	4	1	+3
2	Delhi	2	2	0
3	Pondichery	1	3	-2
4	Mizoram	3	4	-1
5	Sikkim	5	5	0
6	Arunachal Pradesh	6	6	0
7	Manipur	8	7	+1
8	Nagaland	7	8	-1
9	Tripura	9	9	0
10	Meghalaya	10	10	0

Source: India Today, Specialissue, August 2005.

20.11 As per the Table Kerala ranked next to Panjab followed by Himachal Pradesh and Tamil Nadu. Among small states, Goa topped the list followed by Delhi and Pondicherry.

20.12 Score and Rank of various Indicators in Human Development of different States in India are given in Appendix- 20.1.

Composite Index

20.13 Considering 39 variables such as growth in Net domestic product, per capita net income, literacy status, Enrolment rate, Work seekers, Population, Sex Ratio, IMR, MMR, Health indicators, Agriculture, Industries, Infrastructure, Water Supply, Banking etc and standardising them, Composite Index is calculated as an average of these variables. Table-20.6 shows the Composite Index with rank of the fourteen districts in Kerala arrived by the Institute of Monitoring Economic Growth, Thiruvananthapuram. Palakkad is ahead of other Districts in development growth during the last decade with an index of 56 followed by Malappuram (52) and Kottayam (50). Alappuzha recorded the lowest index of 41.

Table - 20.6

Composite Index - Raking of Districts by Development

District	Composite Index	Rank
Palakkad	56	1
Malappuram	52	2
Kottayam	50	3
Thrissur	49	4
Thiruvananthapuram	48	5
Kasaragod	48	6
Kollam	47	7
Wayanad	44	8
Pathanamthitta	44	9
Kannur	44	10
Ernakulam	44	11
Idukki	42	12
Kozhikode	42	13
Alappuzha	41	14

Source: District Development Index - 2004, Institute of Monitoring Economic Growth, TVPM.

Box - 20.3

- Kerala is the HEALTHIEST State in the country
- It is also the State with the greatest IMPROVEMENT in health care
- Kerala is also the most EFFICIENT spender among all states.

Source:-India Today special Issue, August 2005

Education

20.14 Education holds the key position in human development. Education is considered to be basic human capability as well as tool of empowerment. Educaion, particularly elementary education is therefore viewed as an important input in the development of a society.

20.15 Though education means much more than ability to read, write and count, total literacy, ie; basic ability to read, write and count is an important objective of any national educational system. The indicators of education are literacy level, enrolment rate and dropout rate.

Box No. 20.4
Widening Horizon

"I am learning how to read, so that I can read my own destiny"
"I am learning how to write, so that I can write my own destiny"
"I am learning how to count, so that I can keep an account of my rights"

Source: Ministry of Human Resource Development (1993)

20.16 According to a study conducted by India Today, the ideal Education Index is defined as "atleast four teachers per 100 students, 100% primary school completion by age 10 and a female - male student ratio of one". Table-20.7 shows the Index and Rank of big States in India in respect of primary education. Himachal Pradesh stands first in primary education followed by Kerala, Uttaranjal and Tamil Nadu. Bihar continued to be in the last place. In the case of small states, Sikkim is continued in the top followed by Mizoram and Goa.

Table - 20.7
Primary Education - Score and Rank

Sl No	Name of State	Score		Rank		Change of Rank
		2004	2005	2004	2005	
	Big States					
1	Himachal Pradesh	3.85	4.26	2	1	+1
2	Kerala	3.87	3.81	1	2	-1
3	Uttaranchal	2.95	3.27	5	3	+2
4	Tamil Nadu	3.27	3.11	3	4	-1
5	Maharashtra	3.24	3.06	4	5	-1
6	Assam	2.36	2.84	10	6	+4
7	Punjab	2.79	2.79	6	7	-1
8	Jammu & Kashmir	2.65	2.75	7	8	-1
9	Karnataka	2.57	2.69	8	9	-1
10	Orissa	1.65	2.41	13	10	+3

11	Andhra Pradesh	2.19	2.37	18	11	+7
12	Gujarat	2.32	2.33	11	12	-1
13	Haryana	2.41	2.25	9	13	-4
14	West Bengal	2.16	2.18	12	14	-2
15	Madhya Pradesh	1.64	1.83	14	15	-1
16	Rajasthan	1.19	1.75	16	16	0
17	Chattisgarh	1.51	1.75	15	17	-2
18	Jharkhand	0.86	1.48	18	18	0
19	Uttar Pradesh	0.98	1.28	17	19	-2
20	Bihar	0.72	0.64	20	20	0
	Small States					
1	Sikkim	5.46	5.86	1	1	0
2	Mizoram	5.34	5.63	2	2	0
3	Goa	4.39	5.57	3	3	0
4	Pondicherry	4.10	5.00	4	4	0
5	Nagaland	3.90	4.25	6	5	+1
6	Manippur	3.94	4.16	5	6	-1
7	Tripura	3.25	3.88	8	7	+1
8	Meghalaya	2.89	3.31	9	8	+1
9	Delhi	3.36	3.07	7	9	-2
10	Arunachal Pradesh	2.63	2.84	10	10	0

Source: India Today, Special Issue, August 15, 2005.

Enrolment rate.

20.17 Enrolment of students in schools depicts the current flow of education. Enrolment of boys and girls in schools is given in the Table-20.8

Table -20. 8

Enrolment of Boys and Girls in Schools (Std. 1 to 10)

Year	Total	Boys	Boys (%)	Girls	Girls (%)
1960-61	3270301	1778010	54.37	1492291	45.63
1970-71	4795532	2551644	53.21	2243888	46.79
1980-81	5602953	2896774	51.70	2706179	48.30
1990-91	5901101	3012308	51.05	2888795	48.95
2000-01	5219052	2660898	50.98	2558154	49.02
2003-04	4894005	2493124	50.94	2400881	49.06
2004-05	4842015	2466408	50.94	2375607	49.06

Source: 1) Directorate of Economics and Statistics
2) Directorate of Public Instruction.

20.18 During 1960-61 to 1990-91 there was an increasing tendency on the enrolment of students in the schools. Since then the enrolment is decreasing . However the percentage enrolment of girls in different years has been increasing . The gross enrolment ratio of students in different states of India is given in Appendix 20.2.

20.19 The Gender Parity Index in enrolment for India as a whole is 0.89 in primary classes and 0.79 in upper primary classes. This indicate that boys out number girls both at the primary and upper primary levels of education. Kerala has a Gender Parity Index (in enrolment) 0.97 in Primary Classes and 0.92 in Upper Primary Classes. The southern states of India have very high Gender Parity Index in enrolment. Bihar has the lowest Gender Parity Index of 0.74 among the Indian States.

Teacher Pupil Ratio.

20.20 Teacher pupil ratio (number of students per teacher up to high school level) is one of the indictors used for measuring the quality of school education. In Kerala teacher pupil ratio is 31 in 1991-92 which declined to 28.3 in 2003-04 and still declined to 27.71 in 2004-05. The improvement in the ratio is due to decline in the school going population in the state. The proportion of female teachers is also an indicator of progress in school education. The total number of teachers from lower primary level to high school during 2004-05 is 174758, of which 120976 (69%) are female teachers.

Drop Out

20.21 The drop out rates of LP students, UP students and High School students in the year 2003-04 are respectively 0.86%, 0.79% and 1.84%. The overall drop out rate in Kerala during the year is 1.15 per cent. The drop out ratio of students in the 14 districts of Kerala is depicted in Table 20.9. The lowest drop out rate is recorded in the upper primary classes and highest in High Schools. Among the 14 districts in Kerala, the lowest drop out is recorded in Pathanamthitta district and highest in Wayanad district.

Table - 20.9

District wise/ Stage wise Drop out ratio in schools (2003-04)

SL No	Name of District	LP Stage			UP Stage			High School			Total Drop out (%)
		Enrolment	Drop out	% of Drop out	Enrolment	Drop out	% of Drop out	Enrolment	Drop out	% of Drop out	
1	Thiruvananthapuram	165960	1755	1.06	138165	688	0.50	146957	1143	0.78	0.79
2	Kollam	127850	543	0.42	111950	593	0.53	117379	1424	1.21	0.72
3	Pathanamthitta	56842	282	0.50	49204	159	0.32	57805	227	0.39	0.41
4	Alappuzha	95968	335	0.35	83490	439	0.53	93387	1383	1.48	0.79
5	Kottayam	97811	381	0.39	78900	255	0.32	84823	1240	1.46	0.72
6	Idukki	55123	894	1.61	44446	484	1.09	42797	1343	3.07	1.89
7	Ernakulam	143423	1596	1.11	121097	1.02	0.91	128255	2742	2.14	1.34
8	Thrissur	176360	835	0.47	140202	1184	0.84	141155	2682	1.90	1.03
9	Palakkad	172283	2035	1.18	135670	1709	1.26	140782	3280	2.33	1.57
10	Malappuram	291982	2058	0.70	236726	1247	0.53	234265	3651	1.56	0.91
11	Kozhikode	173983	1743	1.00	146384	1799	1.23	152016	2530	1.66	1.29
12	Wayanad	52330	1217	2.32	38172	674	1.77	38314	1263	3.30	2.45
13	Kannur	143524	908	0.63	119418	766	0.64	123171	3643	2.96	1.38
14	Kasaragod	74936	1223	1.65	58718	735	1.25	61591	2288	3.71	2.18
	Total	1827765	15805	0.86	1502542	11834	0.79	1563698	28839	1.84	1.15

Source: Directorate of Public Instructions.

Health

20.23 Health is defined by the World Health Organisation (WHO) as "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". Better health status of the population leads to reduce mortality and higher life expectancy as well as decline in infant and child mortality. With increase in chances of child survival, fertility rate tend to decline, leading to lowering of population growth rates. Thus, better health status leads to demographic transition, steadying the population growth rate essential for sustainable development. The different factors affecting health status are:

1) Poverty, food security, food pricing and malnutrition.
2) Environmental Pollution and degradation
3) Occupational health problems

4) Reproductive health problems
5) Household economy and wages
6) Economic development, represented by per capita income, urbanisation and industrialisation.
7) Social developments
8) Prices of private health care systems
9) Public health care delivery system.

Some health indicators of Kerala and India during 2004 are depicted in Table - 20.10.

Table - 20.10
Health Indicators - Kerala & India - 2004

Health Indicator		Kerala	India
Birth Rate (per 1000 population)		16.70	24.80
Death Rate (per 1000 population)		6.30	8.00
Infant Mortality Rate (per 1000 population)		11.00	60.00
Maternal Mortality Rate (per 1000 population)		0.30	4.37
Total Fertility Rate (per woman)		1.99	3.30
Couple Protection Rate (%)		72.10	
Expectation of Life at Birth	Male	71.67	64.10
	Female	75.00	65.80
	Total	71.00	64.80

Source: Directorate of Health Services.

Birth rate

20.23 The birth rate in Kerala during 2004 is 16.70 per 1000 population whereas the national average is 24.80 per 1000 population.

Maternal Mortality Rate

20.24 The maternal mortality rate is defined as the number of maternal deaths occurred per thousand live births and still births. The maternal mortality rate in Kerala during 2004 was 0.30 per 1000 population as against the all India rate of 4.37 during the same period.

Death Rate

20.25 The death rate in Kerala is below the national average and still lower than the major States in India. During 2004 the death rate in Kerala was 6.3 against national average of 8. In the rural and urban areas of Kerala the death rate were 6.4 and 6.1 respectively. The corresponding national averages were 8.7 and 6 respectively. The Table-20.11 shows the death rate of major states in India during 2003. The female death rate is the lowest in Kerala than that in other major states of India. The death rate is higher in Madhya Pradesh followed by Orissa. Death rate in urban area of the most states in India is lower than that in the rural area.

Table - 20.11
Death Rate by Sex and Residence, 2003.

Sl. No	Name of State	Total			Rural			Urban		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
1	Andhra Pradesh	8.0	8.9	7	8.8	9.9	7.8	5.4	6	4.8
2	Assam	9.1	9.2	9.1	9.5	9.5	9.5	5.9	6.5	5.3
3	Bihar	7.9	7.6	8.2	8.1	7.8	8.4	6.0	5.8	6.2
4	Gujarat	7.6	8.3	6.9	8.2	9.0	7.4	6.3	6.8	5.8
5	Haryana	7.1	8.0	6.0	7.3	8.4	6.1	6.2	6.7	5.5
6	Karnataka	7.2	7.9	6.5	7.8	8.7	7.0	5.6	6.0	5.2
7	Kerala	6.3	7.2	5.5	6.4	7.3	5.5	6.1	6.8	5.5
8	Madhya Pradesh	9.8	10.2	9.3	10.4	10.8	9.9	7.1	7.5	6.8
9	Maharashtra	7.2	7.7	6.7	8.2	8.7	7.6	5.6	6.1	5.0
10	Orissa	9.7	10.3	9.1	10.2	10.8	9.6	6.3	7.1	5.3
11	Punjab	7.0	7.6	6.4	7.3	8.0	6.7	6.0	6.5	5.4
12	Rajasthan	7.6	8.2	6.9	7.9	8.5	7.2	6.2	6.8	5.6
13	Tamil Nadu	7.0	8.1	7.0	8.5	9	8.1	5.6	6.4	4.8
14	Uttar Pradesh	9.5	9.7	9.4	10.1	10.2	9.9	7.0	7.0	6.9
15	West Bengal	6.6	7.2	6.0	6.8	7.4	6.1	6.2	6.7	5.6
	All India	8.0	8.4	7.5	8.7	9.1	8.2	6.0	6.4	5.4

Source. SRS Bulletin, April 2005.

Infant Mortality Rate

20.26 Infant Mortality Rate (IMR) is the number of infants died before attaining age one per thousand live births It reflects the extent of health services available in the State, especially access to institutional care and availability of skilled attention at the time of delivery According to UNDP Report, 2005 the Infant Mortality Rate (IMR) is higher for United States than for many other industrial countries. Malaysia - a country with an average income one quarter of the US - has achieved the same infant mortality rate as the US. UNDP pointed out that the IMR in urban area of Kerala is lower than that for African American in Washington. The Infant Mortality Rate of Kerala during 2003 is 11 per 1000 live births and is the highest among the big states in India, followed by Maharashtra (42) and Tamil Nadu (43) The national average is 60 per 1000 live birth. The IMR by sex and residence of big states in India during 2002 and 2003 is given in Table 20.12.

Table - 20.12
Infant Mortality Rate of Bigger States in India 2002 and 2003.

Sl. No	Name of State	2002			2003		
		Male	Female	Person	Male	Female	Person
1	Andhra Pradesh	71	35	62	59	59	59
2	Assam	73	38	70	69	65	67
3	Bihar	62	50	61	59	62	60
4	Gujarat	68	37	60	54	61	57
5	Haryana	64	51	62	54	65	59
6	Karnataka	65	25	55	51	52	52
7	**Kerala**	**11**	**8**	**10**	**11**	**12**	**11**
8	Madhya Pradesh	89	56	85	77	86	82
9	Maharashtra	52	34	45	32	54	42
10	Orissa	90	56	87	82	85	83
11	Punjab	55	35	51	46	52	49
12	Rajasthan	81	55	78	70	81	75
13	Tamil Nadu	50	32	44	44	41	43

14	Uttar Pradesh	83	58	80	69	84	76
15	West Bengal	52	36	49	45	46	46
	All India	-	-	-	**57**	**64**	**60**

Sources: 1) SRS Bulletin, April 2005.
2) Economic Survey 2004-05.

Longevity

20.27 The general health status of the population can be understood from the level of life expectancy at birth. Kerala's life expectancy at birth during 2004 is 71 years (71.67 years for male and 75 years for female). During the same period, India's life expectancy at birth is estimated at 64.80 years (64.10 years for male and 65.80 years for females) (Table - 20.10)

Fertility trends

20.28 Fertility in Kerala started declining since 1960's. The total fertility rate (TFR), which is defined as the number of children born to a woman if she follows the current fertility pattern in her reproductive life. It is a better and standardised indicator for assessing the fertility trends. In Kerala the TFR was 5.6 per woman in the 1950's, which declined to 1.99 per woman in 2004. In India the TFR was 6.3 per woman in 1950's and declined to 3.30 per woman in 2004 (Table-20.10).

Couple Protection Rate

20.29 Couple protection rate is the percentage of newly married women aged 15-49 using of family planning methods. In 2004 it was 72.10 in Kerala.

20.30 The ranked position of the 20 major states in the case of Primary health is given in the Table - 20.13. Kerala's achievement in Primary health care has remained unrivalled for decades. Himachal Pradesh stands second followed by Tamil Nadu and Karnataka.

Table - 20.13
Position of 20 Major States on Primary Health.

Sl. No	Name of State	Score		Rank	
		2004	2005	2004	2005
1	**Kerala**	**2.97**	**2.62**	**1**	**1**
2	Himachal Pradesh	2.34	2.40	2	2
3	Tamil Nadu	1.95	2.13	3	3
4	Karnataka	1.86	1.90	5	4
5	Jammu & Kashmir	1.93	1.85	4	5
6	Maharashtra	1.59	1.78	7	6
7	Punjab	1.72	1.62	6	7
8	Gujarat	1.46	1.45	9	8
9	Andhra Pradesh	1.37	1.43	10	9
10	Uttaranchal	1.50	1.29	8	10
11	West Bangal	1.15	1.27	11	11
12	Rajasthan	0.88	0.87	12	12
13	Orissa	0.59	0.80	16	13
14	Madhya Pradesh	0.55	0.74	17	14
15	Assam	0.59	0.70	14	15
16	Jharkhand	0.37	0.67	19	16

17	Haryana	0.79	0.66	13	17
18	Uttar Pradesh	0.46	0.45	18	18
19	Chattisgarh	0.59	0.44	15	19
20	Bihar	0.30	0.37	20	20

Source: India Today, Special Issue, August 2005.

Morbidity

20.31 The National Sample Survey in 1973-74 reported that Kerala's morbidity was one of the highest in India. They reported that, Kerala's morbidity rate was 71 per thousand persons in the case of acute illness and 83 per thousand persons in the case of chronic illness. During 1995-96 the National Sample Survey in their 52nd round reported that 77 per thousand persons are in one of the acute illness and 35 per thousand with chronic illness. These reports indicate that Kerala has the highest rates of morbidity among the major states of India. This is because of better reporting of illness by literate or due to high prevalence of diseases. Change in life style may also be one of the reasons. Also the high morbidity rate in Kerala is as a result of decline in mortality rates.

Box - 20.5

HIV/AIDS generates multiple human development reversals

Falling life expectancy is one indicator capturing the impact of HIV/AIDS. But the epidemic is generating multiple human development reversals, extending beyond health into food security, education and other areas.

HIV-affected households are trapped in a financial pincer as health costs rise and incomes fall. Costs can amount to more than one-third of household income, crowding out spending in other areas. In Namibia and Uganda studies have found households resorting to distress sales of food and livestock to cover medical costs, increasing their vulnerability. Meanwhile, HIV/AIDS erodes their most valuable asset: their labour. In Swaziland maize production falls on average by more than 50% following an adult death from HIV/AIDS.

Beyond the household, HIV/AIDS is eroding the social and economic infrastructure. Health systems are suffering from a lethal interaction of two effects: attrition among workers and rising demand. Already overstretched health infrastructures are being pushed to the brink of collapse. For example, in Cote d'Ivoire and Uganda patients with HIV-related conditions occupy more than half of all hospital beds.

HIV/AIDS is eroding human capacity on a broad front. Zambia now loses two-thirds of its trained teachers to HIV/AIDS, and in 2000 two in three agricultural extension workers in the country reported having lost a co-worker in the past year.

The spread of AIDS is a consequence as well as a cause of vulnerability. HIV/AIDS suppresses the body's immune system and leads to malnutrition. At the same time, nutritional deficiencies hasten the onset of AIDS and its progression. Women with HIV/AIDS suffer a loss of status. At the same time, gender inequality and the subservient status of women are at the heart of power inequalities that increase the risk of contracting the disease. Violence against women, especially forced or coercive sex, is a major cause of vulnerability. Another is women's weak negotiating position on the use of condoms.

Source :- Human Development Report (UND ; 2005

Poverty

Box - 20.6

"Recall the face of poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him . Will he gain anything by it? . Will it restore to him a control over his own life and destiny?. In other words, will it lead to self-reliance for the hungry and spiritually starving millions? Then you will find your doubts and your self melting away"

- Mahatma Gandhi

20.32 Poverty is defined as the inability to achieve minimally adequate levels of consumption. Incidence of poverty is calculated as a proportion of total population living below poverty line. Kerala has made substantial progress in reducing the incidence of both rural and urban poverty in the past decades. The Table 20.14 shows that till 1973-74 the incidence of poverty in Kerala - both rural and urban - was higher compared to national average. During that period the combined head count index of poverty in Kerala was 59.79 against the national average of 54.88. But from 1983-84 onwards the things changed and the relative position of Kerala dropped below the Indian average. Both rural and urban poverty in Kerala declined during the last four decades. The head count ratio of Kerala during 1999-2000 is stood at 12.72 which is far below the national average of 26.30. Table-20.14 shows the head count index of poverty in major states of India during 1973-74 and 1999-2000.

Box -20. 7

"Hunger is actually the worst of all weapons of mass destruction, claiming millions of victims every year. Fighting hunger and poverty and promoting development are the truly sustainable way to achieve world peace..... There will be no peace without development ,and there will be neither peace nor development without social justice"

Source:--Human Development Report-2005(UNDP)

Table - 20.14
The Head Count Index of Poverty of Major States In India during 1973-74 and 1999-2000

Sl. No	Name of State	1973-74			1999-2000		
		Rural	Urban	Combined	Rural	Urban	Combined
	Big State						
1	Jammu & Kashmir	45.51	21.32	40.83	3.97	1.98	3.48
2	Punjab	28.21	27.96	28.15	6.35	5.75	6.16
3	Himachal Pradesh	27.42	13.17	26.39	7.94	4.63	7.63
4	Haryana	34.23	40.18	35.36	8.27	9.99	8.74
5	**Kerala**	**59.19**	**62.74**	**59.79**	**9.38**	**20.27**	**12.72**
6	Gujarat	46.35	52.57	48.15	13.17	15.59	14.07
7	Rajasthan	44.76	52.13	46.14	13.74	19.85	15.28
8	Andhra Pradesh	48.41	50.61	48.86	11.05	26.63	15.77
9	Karnataka	55.14	52.53	54.47	17.38	25.25	20.04
10	Tamil Nadu	57.43	49.40	54.94	20.55	22.11	21.12

11	Maharashtra	57.71	43.87	53.27	23.72	26.81	25.02
12	West Bengal	73.16	34.67	63.43	31.85	14.86	27.02
13	Uttar Pradesh	56.53	60.09	57.07	31.22	30.89	31.15
14	Assam	52.67	36.92	51.21	40.04	7.47	36.09
15	Madhya Pradesh	62.66	52.65	61.78	37.06	13.44	37.43
16	Bihar	62.99	52.96	61.91	44.30	32.91	42.60
17	Orissa	67.28	55.62	66.18	48.01	42.83	47.15
	All India	**56.44**	**49.01**	**54.88**	**27.09**	**23.62**	**26.10**

Sources: 10th Five Year Plan 2002-07 Vol. III, State Plans, Planning Commission, GOI

Box-20.8
Old-age Worries in Kerala

The Need assessment study of the Elderly people in Kerala carried out by the Directorate of Economics and Statistics in 2002 indicates that there are 50,000 households in the state were old age persons (60+) are staying alone. The scenario regarding the old-age persons referred in the Study Report is summarised below:

- There are 26.2 lakh old-age persons, constituting 9 per cent of the population
- There are 21.6 lakh houses with old-age persons, which constitute about 32 per cent of the total households.
- Out of the 69 lakh households in the state at least 15 lakh (21.7%) are headed by aged persons.
- Pathanamthitta is the most grayed district in the state with 40 percent of houses having old-age persons.
- Wayanad district turns out to be the youngest district having 21 percent of houses with old-aged
- The gender profile of the old-age population is 47.5 percent for males and 52.5 per cent for females
- The sex ratio for old age population is 1106 females for thousand males as against 1058 for the general population.
- Households having senior citizens with either son or daughter abroad constitute 10.35 per cent.

The major issues concerning the old-aged in the state as elucidated in the Report include; lack of acceptance by family members, feeling of lonliness, economic instability, change of lifestyle, forced shift away from native place, lack of involvement in family matters and decision making, health problems, feeling of insecurity, aversion to the option of depending on others for a living etc

Source. Development Digest, Kerala State Planning Board, April-September 2004.

Disability

20.33 Every society has a section of people who suffer from some kind of physical or mental disabilities, which may be congenital, acquired or result from the process of ageing. According to 2001 Census, total disabled persons in Kerala was 8.61 lakh of which 4.58 lakh are males and 4.03 lakh are females. The district wise details are given in the Appendix - 20.3

Box - 20. 9

If human development is about expanding choice and advancing rights , then violent conflict is the most brutal suppression of human development .The right to life and to security are among the most basic human rights. They are also among the most widely and systematically violated. Insecurity linked to armed conflict remains one of the greatest obstacles to human development. It is both a cause and a consequence of mass poverty . As the UN Secretary General has put it . "humanity cannot enjoy security without development or development without security , and neither without respect for human rights."

Source: Human Development Report (UNDP), 2005.

20.34 The total crime in the state under Indian Penal Code (IPC) and Special Local Laws (SLL) during 2003 and 2004 are 139878 and 156135 respectively registering an increase of 11.62% over the previous year. The percentage of crime under SLL to the total crimes is showing an increasing trend. In 1997 the contribution of crimes under SLL to the total crimes was 12.74% but increased to 33.37% in 2004. The year-wise total number of crimes under IPC and SLL is depicted in Table - 20.15

Table - 20.15
Details of cases under IPC and SLL in Kerala

Year	IPC	SLL	Total	% to total	
				IPC	SLL
1997	92523	13507	106030	87.26	12.74
2000	99033	23529	122562	80.80	19.20
2001	103847	31598	135445	76.67	23.33
2002	104200	34954	139154	74.88	25.12
2003	98824	41055	139878	70.65	29.35
2004	104025	52110	156135	66.63	33.37

Source: State Crime Records Bureau, Thiruvananthapuram

Crime Rate

20.35 The crime rate under IPC and SLL are shown in Table-20.16. The total crime rate increased for about 38.6% in 2004 over 1997. The percentage of crime rate under IPC to the total shows a decreasing trend, while that of SLL shows increasing trend during the period 1997 - 2004. At the same time the total crime rate under SLL increased by 262% in 2004 over 1997.

Table - 20.16
Crime Rate under IPC and SLL in Kerala

Year	Estimate mid-year population (lakh)	Crime rate		Total	% to total	
		IPC	SLL		IPC	SLL
1997	308.03	300	44	344	87.21	12.79
1998	310.82	299	51	350	85.43	14.57
1999	313.65	301	57	358	84.08	15.92
2000	316.50	313	74	387	80.88	19.12
2001	319.38	325	99	424	76.65	23.35
2002	321.39	324.22	108.76	432.98	74.88	25.12
2003	324.41	304.63	126.55	431.18	70.65	29.35
2004	327.47	317.66	159.13	476.79	66.62	33.38

Source: State Crime Records Bureau, Thiruvananthapuram

Atrocities Committed against Women in Kerala.

20.36 The total number of atrocities committed against women in 2003 and 2004 are respectively 7228 and 7681, registering an increase of 6.27%. In this period rape, molestation, kidnapping, eve-teasing and cruelty by husband or relatives increased respectively by 21.83%, 16.08%, 39.22%, 95.59% and 9.97%. At the same time dowry death during this period decreased by 6.06%. The details from 1991 to 2004 are given in Table-20.17. The total number of atrocities against women increased from 1867 to 7681 during the period 1991-2004 whereas cruelty by husband or relatives contributed substantially from 237 to 3222

Table - 20.17

Atrocities Committed against Women in Kerala (1991 - 2004)

Offences	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Rape (376 IPC)	211	227	211	197	266	389	588	539	423	552	562	409	394	469
Molestation (354 IPC)	560	523	468	639	810	1166	1561	1773	1643	1695	1942	2123	1947	2260
Kidnapping & Abduction (363 to 369, 371 to 373 IPC)	99	86	85	120	110	140	160	130	123	84	97	91	102	142
Eve-teasing (509 IPC)	5	1	5	3	14	40	70	96	50	69	81	102	68	133
Dowry death (304 B IPC)	13	12	8	9	21	25	25	21	31	25	27	17	33	31
Cruelty by Husband or Relatives (498 A IPC)	237	290	380	551	787	1079	1675	2125	2488	2418	2561	2836	2930	3222
Other IPC cases against women	733	939	737	986	1305	2122	3727	2739	2985	2773	2171	1833	1754	1413
State Total	1867	2078	1894	2445	3313	4970	7306	7473	7743	7621	7441	7501	7228	7681

Source: State Crime Records Bureau, Thiruvananthapuram.

Crimes against Children

20.37 The number of crimes committed against children reported during 2001 was 247. It increased to 361 (46%) in 2004. The highest increase was in rape cases. There were 64 rape cases in 2001 as against 159 in 2004 registering an increase of 148.44 per cent. The number of cases registered on the charge of procuring minor girls increased from 4 in 2001 to 20 in 2004. On the other hand kidnapping and abduction of children decreased from 91 in 2003 to 74 in 2004. The details are given in the Table - 20.18.

Table - 20.18

Crime against Children

No.	Nature of Crime	2001	2002	2003	2004
1	Murder				
	a) Infanticide	1	3	-	2
	b) Other Murder	75	63	31	49
	Total (Murder)	76	66	31	51
2	Rape	64	54	148	159
3	Kidnapping and abduction	28	31	91	74
4	Exposure and abandonment	9	9	1	-
5	Procurement of minor girls	4	6	7	20
6	Child Marriage Restraint Act	3	6	-	1
7	Other Crimes	63	68	48	56
	Total	**247**	**240**	**326**	**361**

Source: State Police Department

Suicides by Causes in Kerala.

20.38 The total number of suicides due to different causes during 2003 was 9438, which decreased to 9053 in 2004. There was a decline of 4.08% over the previous year. The number of suicides due to bankruptcy or sudden change in economic status also decreased in 2004 by 12.86% over the previous year. But number of suicides due to unemployment increased from 130 in 2003 to 219 in 2004 (68.46% increase). The total number of suicides due to illness of various kind during 2003 and 2004 are 2738 and 2821 respectively. Suicides by causes in Kerala during 2003 and 2004 are depicted in the Table 20.19.

Table - 20.19

Suicides by Causes in Kerala during 2003 & 2004

Sl. No	Causes	2003	2004
1	Bankruptcy or sudden change in economic status	1019	888
2	Suspected/Illicit relation	8	9
3	Cancellation/non-settlement of marriage	55	51
4	Not having children (Barrenness/Impotency)	35	39
5	Suicide due to illness		
	(i) Aids/STD	16	2
	(ii) Cancer	42	86
	(iii) Paralysis	44	30
	(iv) Insanity/Mental illness	1352	1381
	(v) Other prolonged illness	1284	1322
6	Death of dear person	76	90
7	Dowry dispute	10	15
8	Divorce	8	11
9	Drug abuse/addiction	158	80
10	Failure in examination	88	71
11	Fall in social reputation	92	14
12	Family problems	2027	2028
13	Ideological causes/Hero worshipping	0	2
14	Illegitimate pregnancy	4	6
15	Love affairs	100	90
16	Physical abuse (Rape, Incest etc.)	0	3
17	Poverty	13	6
18	Professional/Career Problem	29	19
19	Property dispute	29	9
20	Unemployment	130	219
21	Causes not known	1343	1189
22	Other causes	1476	1393
	State Total	**9438**	**9053**

Source: State Crime Records Bureau, Thiruvananthapuram

Infrastructure Indices

20.39 Considering the percentage of households with electricity and LPG, percentage of villages connected with pucca road, per capita road length, per capita bank branches, density of post offices and tele-density, the big states in India are scored and ranked in the Table - 20.20. In 2005, Punjab scored 3.77 and ranked first in the list followed by Himachal Pradesh 3.22 and Maharashtra 2.89. Kerala scored 2.56 and stands in the sixth place. Kerala slightly bettered its position from 7th place in 2004 to 6th place in 2005.

Table - 20.20
Infrastructure Indices - Score and Rank of Biggest States in India - 2004 & 2005

Name of State	Score		Rank	
	2004	2005	2004	2005
Punjab	3.00	3.77	1	1
Himachal Pradesh	2.83	3.22	2	2
Maharashtra	2.55	2.89	3	3
Haryana	2.31	2.85	6	4
Uttaranchal	2.33	2.80	4	5
Kerala	**2.17**	**2.56**	**7**	**6**
Gujarat	2.32	2.53	5	7
Jammu & Kashmir	1.80	2.40	10	8
Tamil Nadu	1.99	2.29	8	9
Karnataka	1.91	2.23	9	10
Andhra Pradesh	1.71	2.20	11	11
Rajasthan	1.28	1.49	12	12
Madhya Pradesh	1.27	1.44	13	13
West Bengal	0.94	1.08	14	14
Assam	0.82	1.02	15	15
Uttar Pradesh	0.78	0.97	17	16
Chhattisgarh	0.78	0.92	16	17
Orissa	0.66	0.75	18	18
Jharkand	0.50	0.59	19	19
Bihar	0.20	0.30	20	20

Source. India Today. Special Issue, August 2005.

Road and Motor Vehicles

20.40 The total road length in Kerala during 2004-05 increased to 154679 kms from 145704 kms in the previous years, registering an increase of 6.16%. Road density in Kerala increased from 374.9 kms/100 sq.km in 2003-04 to 398 kms/100 sq.km in 2004-05. Also the length of road per lakh population is increased from 462.6 km to 485.77 km during the same period.

20.41 The number of motor vehicles having valid registration as on 2004-05 is 31.22 lakh against 27.92 lakh in the previous year. These shows that newly registered vehicle during the year is 3.30 lakh (10.55%). Kerala has 9806 vehicles per lakh population and 8034 vehicles per 100 sq. km in the year 2004-05 against 8769 vehicles and 7184 vehicles in the previous year.

20.42 The number of road accidents happened per day during 2004-05 is 112 against 110 in 2003-04. The number of persons killed/injured per day during 2004-05 is 140 against 137 in 2003-04.

Consumption of Electricity

20.43 Electricity is an important component of the infrastructure development and is essential for the rapid growth of agriculture and industrial sectors of the economy. The installed capacity in Kerala during 2004 was 2614.22 MW and in 2005 it is 2617.22 MW, by adding only 3 MW during the one year period. The per capita consumption of electricity during 2005 is 400 KWh against 386 KWh in 2004 registering 3.63 per cent increase over the previous year.

Growth of telecom net work

20.44 The communication facilities are growing very fast in Kerala. The total number of telephones in Kerala is 69.10 lakh. Out of this, 27.74 lakh are mobile connections. BSNL itself has given about 35.60 lakh landlines. Kerala has the highest tele-density in the country. All the village panchayats in this state are within 3 kms of a digital exchange. Twenty per cent of its population has telephones against the national average of 9.17 per cent and still more than the World average of 15 per cent. But total internet connections in the state is only 2.5 lakh (of which 2 lakh services were provided by BSNL). Whereas there are 392 lakh internet connections in the whole country. Mobile phone and landline penetration in Kerala is given in the Table 20.21. The telecom infrastructure details are depicted in the Box - 20.10.

Table - 20.21

Mobile Phone and Land line Penetration in Kerala, October 2005.

Type of Phone	Name of Company	Numbers
Mobile Phone	Idea Mobile	545406
	BPL Cellular/Hutch	370565
	Bharat Cellular	332126
	BSNL	670083
	Reliance	720719
	Tata	135376
	Total - Mobile Phone	**2774275**
Land Line	BSNL	3560000
	Others	575725
	Total - Landline	**4135725**
	Grand Total	**6910000**

Source; IT Department, Thiruvananthapuram.

Box - 20.10

Telecom Infrastructure In Kerala

General Features

- Highest tele-density in the country
- 2.5 lakh internet connections (Total number of internet connections in the country is 392 lakh as on March 2005)
- 100% of the telephone exchanges are digital
- 100% of the telephone exchanges are networked through OFC to the NIB
- All village Panchayats are within 3 kms of a digital exchange
- 20 per 100 as against the national average of 9.17 per 100 have telephones,
- World average is only 15%
- Kerala's rural tele-density is 9.6% against the national average of 1.75%
- Total number of telephone connections in Kerala is 69.10 lakh
- 27.74 lakh mobile phone connections and 41.36 lakh land lines (as on 10/2005).

Source: IT Department, Thiruvananthapuram

CHAPTER 21

INFORMATION TECHNOLOGY

Information technology and the ability to use it is increasingly being considered as the critical factor in generating and accessing wealth, power and knowledge and, therefore, societal welfare.

21.2 "Information technology, in all its various incarnations and with all its sophisticated apparatus, has become so pervasive, and so all-encompassing, that it has truly become the fourth critical resources required to create a product or service-joining capital, labour and raw material".

21.3 The Indian export-oriented software industry, one of the most successful sectors of the country's economy, could achieve what it did because it has been exploiting the global imbalances in the availability of knowledge workers around the world. That India could emerge as a world leader in the business of outsourcing is essentially because India could leverage its greatest resource, a vast pool of English – speaking, talented Science and Engineering graduates.

21.4 Few regions in the developing world are as ready to embrace IT technology at the grass-root level as is Kerala.

- Highest literacy and highest exposure to the different media; what the industry needs most is what the State has the most of, namely educated men and women seeking white collar jobs.
- Highest proportion of citizens living outside the State and being exposed to the best from the latest in terms of products, services, technologies and life styles leading to strong 'demonstration effects' on those living in the State.
- High degree of awareness of and willingness to adopt the latest; high tolerance for cultural diversities.
- A society which gives the highest premium to education and is willing to invest heavily for acquiring marketable skills.
- Most of the infrastructural requirements for the proliferation of Internet, the next frontier of growth in the IT sector, are already in place. No other major State in the country has such an extensive fibre optic network as does Kerala. This network which reaches right down to the block level, along with the digital exchanges most of which have ISDN capability represent a formidable backbone for the making of a fully networked intelligent State. With the commissioning of the two submarine cable landings at Cochin, Kerala has emerged as a major telecom gateway for the country.

21.5 Bold and imaginative policy initiatives are a pre-condition for exploiting the emerging possibilities. The Government of Kerala has already taken several steps in this direction:

- Technopark – Thiruvananthapuram India's first world-class, world –scale IT campus.
- IT Park of KINFRA at Cochin
- Akshaya programme of Kerala IT Mission
- E-governance initiatives of the State Government like FRIENDS

Promoting IT in Kerala: Key Considerations

21.6 The ICT policy needs to distinguish between ICT as a production sector and ICT as an enabler of socio – economic development.

21.7 The service sector and, within it, e-governance offers the immediate and largest growth opportunity. Stimulating this market should be the first action point in the State's IT strategy.

21.8 For successful e-Governance implementation the preconditions to be fulfilled include creation of applications and content; availability of adequate access to Internet by the population; having minimal IT literacy; and, above all, ensuring Government's commitment to the success of the programme.

21.9 The strategy for promoting ICT as a production sector- comprising ITS, ITES and Hardware sectors – involves creating infrastructure, human capacity and urban amenities, including life style options.

21.10 ITES sector, with a great potential for absorbing graduates in large numbers, requires pro-active response with specific reference to addressing the issue of training. Attempts by companies (from outside the state and also the few ones within the state) to recruit from within the State to positions in this industry have been disappointing. Only a dismally small fraction met the requirements due to the absence of language, communication and soft skills among majority of the candidates who applied for such positions.

21.11 The opportunity for training people for ITES businesses, especially Call Centers has attracted many training companies into the market. Establishing standardization and evolving guidelines for such training activities based on worldwide standards need to be facilitated. Schemes may be formalized for certification of personnel at agent – level as well as at the supervisory – level so that skilled manpower is available to the industry. These certification schemes need to be extended to other ITES areas also like GIS, HR, data entry/data conversion etc.

21.12 The kinds of skills, mostly behavioral, to be developed are communication, team building, leadership, personality development etc. The Government has only to play the role of a facilitator for private initiatives to enter this field.

Box 21.1
E-Governance Achievements

The year 2004-05 has been a period where Kerala's position in the IT sector was promising and now this is on a steady growth path. In the e-governance front, achievements include India's first fully computerized Panchayath, India's first fully computerized Collectorate, FRIENDS initiative to serve 35 lakh families, significant development in local language computing etc.

21.13 Kochi is one of India's 2nd tier cosmopolitan cities and is fast emerging as a unique IT destination. Kochi was ranked number two in a report by NASSCOM on the country's Super ITES destinations and number three in a study of cities ideal to do business. Kochi is directly connected by two submarine cables and satellite gateways, which in fact are used to support cities

including Bangalore. This clear telecom infrastructural advantage leads to better reliability and reduced tariffs.

21.14 Kochi after its major attraction of Infopark, is now all set to start the project for the Smart City Project of Dubai Internet City. This project offers to over 33,000 employment opportunities within ten years.

21.15 The State has made substantial progress in 'ICT for Development' sector in terms of investments, infrastructure development and employment generated in the sector through focused initiatives. The major initiative in this sector is 'Akshaya', which is set to be rolled – out to reach all 64 lakh families of the State (presently being rolled – out in seven districts), first Citizen's Call Centre in the country etc., are the glowing examples

21.16 Another point worth to be noted in this context is the spurt in the use of computers and Internet in the State. There has been a surge in the sale of PCs and accessories in the State (assembled PC segment/ Indian brands/MNC brands) with the increased emphasis given to the e-governance sector and also to the fact that the PC is now being considered as an aid for education and entertainment by household users. As per the findings of a recent survey by MAIT (Manufacturers' Association in IT), the sale of hardware is growing in the State. It will also be worthwhile to note that at present there are about seven Internet Service Providers in the State, which is double of what was available about four years' back.

21.17 Overall, the investments in ICT sector in the State cover five major categories namely,

- Physical and Information Infrastructure
- Industry (Hardware & Software)
- Training & other services
- E-governance
- ICT for Development

1. Physical and Information Infrastructure

21.18 A Kerala State Wide Area Network (KSWAN) having the following components is being set up.

- State Information Infrastructure with Data Centres
- District Level Connectivity
- Block Level Connectivity
- Rural Connectivity Infrastructure

State Information Infrastructure (SII)

21.19 Government of Kerala has already implemented a State Information Infrastructure (DIAMOND), with financial support from Government of India. As part of the project, a State Information Backbone has been set up which links Thiruvananthapuram, Kochi and Kozhikode The free bandwidth (2 Mbps each) provided by the private service providers (Reliance, Bharti and Asianet), in return to the Right-of-Way given to them has been aggregated at the Data/Network centres These centres function on a 24x7 basis and have server banks to cater to any IT needs of Government departments/organizations.

21.20 A 5000 sq. ft State E-Governance Data Centre has been set up at Thiruvananthapuram consisting of multiple servers, storage/backup facilities etc. in a very highly secured environment.

The Data Centres in Kochi and Kozhikode not only ensure necessary redundancy but also caters to the networking needs of various Government departments/ agencies located across the State. Government Departments can share/co-locate servers at the Data Centre; also the servers can be remotely managed from the departments. These facilities help in huge savings in capital investment for individual departments. Wireless link has already been established between the SII and almost all the major buildings which house Government offices in Thiruvananthapuram.

District Level Connectivity

21.21 Government of Kerala has already initiated a project connecting all the District Headquarters to the Network Centres of the State backbone. Video conferencing between the districts and the Secretariat /Public Office / Vikas Bhavan/Advocate General's Office/Kerala House will be one of the major applications that will run in this infra-structure.

Block Level Connectivity

21.22 Further, the Government is in advanced stages of planning and implementation of the Kerala State Wide Area Network with financial support from the Government of India. Kerala State Wide Area Network (KSWAN) envisages connecting all block headquarters to the State Information backbone and State Data centre through two Mbps link.

Rural Connectivity Infrastructure

21.23 Rural Connectivity infrastructure based on Wireless technology covering 3,500+sq. kms in Malappuram has already been implemented. This is considered to be the biggest IP based outdoor network in the world. All Police Stations in the district are already connected to this network. Government is also planning to connect all KSEB offices, Revenue Offices and Agriculture Offices to this network. For ensuring access to ICT enabled services in every Panchayath, the Government has implemented the Akshaya e-Kendra project in Malappuram District as a pilot project and is currently implementing the same to cover every panchayath in the seven district of the state, to address the issue of the last mile access, in partnership with individual entrepreneurs from respective localities

Technopark

21.24 Technopark campus was conceived as an integrated IT environment with all necessary basic and enhanced infrastructure facilities that the industry need. Government have exempted the campus from many clearances and the only approval needed from the State is the clearance from Chief Electrical Inspectorate regarding power safety. Technopark acts as a single point contact for most of the Government of India clearances and approvals. Technopark got ISO 9001: 2000 certification in 2004 for establishing and maintaining a quality system for creation and marketing of infrastructure and support services for IT campus. Technopark is the first service organization which has been awarded CMMI level 4 certification by the Carnegie Mellon University, USA in 2004.

21.25 Today the campus is host to about 84 international and domestic companies with an investment of Rs. 634.25 crores. Last year the exports from Technopark crossed Rs.350 crores and the employment is about 10,000 and the number of trainees is about 1500 in the TCS training facility.

21.26 During the year 2004-05 acquisition of land was carried out for further expansion of the existing campus. Eighty-six acres of land has already been acquired and the proceedings for taking advance possession are in progress. The process of acquisition of the balance land of 100 acres in the same area along the N.H Bye -pass will be completed within six months time.

Box 21.2
TECHNOCITY

Technopark is planning to acquire 500-600 acres of land near Pallippuram on both sides of NH 47 for establishing the new campus of Technopark. This is named as Technocity, which was announced by Chief Minister of Kerala. This is also included in the CM's One-Year Action Plan and also in the 10-point programme announced for the development of the State by the Hon. President of India

21.27 So far Technopark has constructed 12,12,000sq.ft area for industrial modules and another 6,00,000 sq ft is under construction. As on March, 2005, 54.45 acres of land is on long lease to ten companies in the existing campus and most of them have constructed own buildings in the campus to the extent of 2,01,700 sq.ft area. Apart from the industrial modules Technopark created 1,41,500sq.ft of built up space for other purposes like Park Centre, Restaurant, Guest House, Club House and Technomall

21.28 The total investment of Rs. 634.25 crores by private companies was registered at Technopark and this would be reclassified as hardware Rs. 12.00 crores, software Rs. 582.25 crores and others Rs. 40 crores, the details are given in Table 21.1.

Table 21.1
Turnover of the Companies in Technopark in the year 2004-05

(Rs.crores)

Particulars	Foreign	NRI	Domestic	Total
Software	338.93	140.25	103.07	582.25
Hardware	12.00	0.00	0.00	12.00
Others	0.00	0.00	40.00	40.00
Total	350.93	140.25	143.07	634.25

Source: Technopark, Thiruvananthapuram

Box 21.3
Technopark Special Economic Zone (SEZ)

The new campus of Technopark (86 acres) is declared by central government as a Special Economic Zone. As and when the acquisition process of additional 100 acres is completed, this will also be added to the Special Economic Zone.

21.29 Technopark has established a Technology Business Incubator (TBI) with funding from Department of Science & Technology, Government of India. The project involves identifying the business opportunities in advanced technology in association with NGOs and professional associations, impart training in specific technology skills, undertake entrepreneurship development activities, offer assistance in building SMEs and micro enterprises through the concept of technology and Business incubation.

21.30 In Bangalore IT.com 2004 exhibition, the State has showcased its strength in infrastructure, Technopark in Thiruvananthapuram, the Infopark in Kochi, various e-governance initiatives undertaken including the flagship Akshaya Project, and the IIITM–K. British Insurance & Financial Company Allianz Cornhill have set up their 500 seater BPO at Technopark recently. Technopark participated in CeBIT in March 2005 held at Hanover in Germany which is the world's largest IT /ITES exhibition.

Infopark, Kochi

- The 92 acre Park currently has a built up area of 3.5 lakh sq.ft
- Major companies Wipro, OPI, ACS, IBS & TCS commenced operations in Infopark bringing the total number of companies to 35
- 1400 employees are currently engaged in Infopark facilities
- Total investment of the companies is Rs. 80.43 crores
- Total export from Infopark companies is Rs. 32.00 crores

Box 21.4
Major Companies in Infopark

1. Tata Consultancy Services
2. Wipro Ltd.
3. Affiliated Computer Services of India
4. IBS Software Services
5. Ind-Sigma Infotech
6. Charter BPO Solutions
7. Vanilla Networks
8. Calpine Technologies
9. OPI Global
10. Amlaki Information System

Smart City Project

- The Government of Kerala has signed a MoU with Dubai Technology & Media Free Zone Authority for setting up a 300 acre self-contained IT township in Kochi.
- Once fully operational, the 'Smart City' would be one of the leading IT parks in India.

2. IT Industry (Hardware & Software)

Information Technology Enabled Services (ITES)

21.31 Around 40 'Spoken English' trainers were engaged for short-term assignments (for a total of 7300 man-hours, with remuneration of Rs. 150/- per hour) for taking 'Spoken English' programmes at the Industrial Training Institutes (ITIs) in Kerala. Around 3000 students of the 31 Government ITIs in Kerala were given training in English communication skills, with special emphasis on Spoken English. The physical achievements are given below:

- Eighty per cent of the students, who underwent the Call Centre training at the ITES Habitat Centre, Kochi got placement in reputed organizations.
- A diagnostic test by the British Council was organized at Malappuram for the Higher Secondary & College Teachers. The selected 43 teachers are going to be trained by British Council authorized trainers, so as to equip them to take-up the Business English

Certification (BEC) Examination conducted by the Cambridge University, United Kingdom. This program is expected to enhance the communication skills of the teachers in Malappuram & hence the same is expected to reflect to some extent in the student community of that district.

2. E.Governance

21.32 Kerala has been selected as the Second Best State in India in the implementation of e-governance. The award instituted by Indiatech Foundation was declared at the Telecom India 2005 Seminar in Mumbai. Details of Investments in E-governance are given in the Table 21.2.

Table 21.2
Investments in E-governance

E. Governance	No. of Centres	Investment
FRIENDS	14 HQs	Rs. 4.5 crores
Department Computerisation	11 Departments	Rs. 200 crores
Secretariat WAN	Government Secretariat	Rs. 8 crores

FRIENDS

21.33 'FRIENDS' (Fast Reliable Instant Efficient Network for Disbursement Services) is a "Single Window Mechanism" where citizens have the opportunity to pay all taxes and other financial dues to Government. FRIENDS seek to extend the benefits of full-fledged computerization of individual departments to the citizens, even before the whole backend computerization is completed. The salient feature of the project is the effective integration of IT and logistics for citizen services. Payments to departments / organizations under the Government of Kerala & Government of India like KSEB / KWA / Local Bodies /Civil Supplies /Revenue/Motor Vehicles/Universities/BSNL can be made in the FRIENDS centres.

21.34 The project was launched in Thiruvananthapuram in June 2000. It is now operational in 14 district Head Quarters of the State. The Centres work from 9.00 AM to 7.00 PM on all days including Sundays, except national holidays. The counters are equipped to handle around 1000 types of bills (in various combinations) originating from various departments. The overall investment in FRIENDS Centres amounts to Rs. 4.50 Crores. Each FRIENDS centre has multiple counters and the citizens can remit any payment at any counter. FRIENDS' collection and transaction is increasing day – by day as the public acceptance to the project is found to be growing, as shown in Table 21.3

Table 21.3
Collection & Transaction of FRIENDS

(Rs. Crores)

Year	2000-01	2001-02	2002-03	2003-04	2004-05
Collection	5.30	52.30	106.20	158.80	202.00
Transaction	1237.09	10269.19	20238.11	26680.71	34001.81

21.35 Government is considering a proposal for replicating the FRIENDS Janasevana Kendram as sub-centres at the municipality / block levels. The existing FRIENDS centres situated at district headquarters could function as the district co-ordination centres for each sub centres. While it is felt that the centres need to be replicated right up to the Panchayath level against the

larger e-governance road map of the State constituting the Kerala State Wide Area Network, Akshaya Project etc. the present proposal is to replicate FRIENDS up to the block level.

E-payment facility (E-pay)

21.36 E-pay is an on-line bill payment facility introduced by Government of Kerala through Akshaya e-kendras as an extension of FRIENDS project in Malappuram district during August 2004. Presently, facility for remitting KSEB and BSNL (mobile and landline) bills are available in e-pay facility. Internet banking facility of State Bank of India is being used for transferring funds. The details of the bills remitted by Akshaya entrepreneurs are communicated to KSEB/BSNL through the Malappuram FRIENDS Centre. At present 162 e-payment centres are functioning in Malappuram district.

21.37 Plans to deliver other services offered by FRIENDS Janasevana Kendrams/certain private sector services, which are of high demand among general public etc. through e-pay, are on the anvil. Till the end of September 2005, an amount of Rs. 2.75 crores was collected resulting from nearly one lakh transactions. The facility will be extended to other Akshaya Centres being established in seven districts of the State, as part of 2nd phase of Akshaya roll-out.

Other Major e-governance Projects

Citizens Call Centre

21.38 The Citizen Call Centre, first of its kind in the country, set – up in the State Capital, provides information on transactions pertaining to various Government Departments which are required by common citizens, over telephone. The information, which can be ascertained, includes details of Government schemes/programmes/ entitlements/welfare benefits etc. Modalities of accessing such entitlements/benefits etc., procedures for availing such benefits & receiving various kinds of certificates (Eg.: - nativity, caste, transfer of residence etc.) can be had from the Citizen Call Centre by dialing the telephone No. 155300. The Call Centre is equipped with full-fledged data base having details of more than 200 Government processes and with key search facilities incorporated in the software for speed access.

Information Kerala Mission (IKM)

21.39 IKM seeks to computerize and establish a statewide network connecting State Planning Board & its 14 District Offices, Directorate of Panchayath & its 14 District Offices, Directorate of Urban Affairs & its 3 Regional Offices, 1219 local bodies and to develop a mechanism for the regular monitoring of the plan implementation and targets achieved by the local bodies over the network. The project is the single largest computerization programme for local bodies involving deployment of software developed in an Indian language in the country. IKM has successfully implemented Jansevana Kendras in all Municipalities, has piloted the Panchayath Computerisation projects in two Panchayaths, Vellanad and Talikkulam, by making them the first 'Computerized Panchayaths in the country. IKM is also implementing another project called the 'Hospital Kiosks' connecting all hospitals of the five cities of the state with the respective Corporation offices for on-line registration of birth and death.

Secretariat WAN

21.40 Government has decided to set up a Secretariat Wide Area Network (Sec. WAN) connecting the Secretariat, Secretariat Annex, Vikas Bhavan and Public Office Complex located in Thiruvananthapuram. At present, there are 1400 computers (approx) installed in the Secretariat, out of which about 500 Nos. works in the networked environment. It is planned to enhance this facility up to 3000 Nos.. in the final phase. The tele printer system for connectivity of the Secretariat to all the District Headquarters, Advocates General's Office and the office of the Special Representative in New Delhi has already

been replaced by a network of computers at all these locations, called 'Internet Based Messaging System'.

Knowledge Archive System for Secretariat (K-BASE)

21.41 Effective knowledge management solution is also planned by the implementation of Knowledge Archive System (K-BASE) in the Government Secretariat. Main objectives of K-BASE include the creation of knowledge repositories for effective decision support system, improve the speed/ transparency/ objectivity/consistency in decision making and to provide public access to important Acts, Rules and Orders of the Government.

ICT for Development

IT @ School

21.42 The project aims at imparting computer education to high school students for qualitative improvement in the conventional learning systems and also to equip teachers to use computers as an educational tool. This project is now being implemented in all high schools of the State of Kerala. Already 2,776 modern computer labs have been set-up in high schools (Government, aided & un-aided) as such 99% of the high schools in the State now have a computer lab of their own. About 50% of the high school teachers in the State have already been given basic training. It is now a compulsory subject from standard 1 to 10. The project also has an effective supply chain management solution for the management of text book inventory, updating SSLC data base and messaging systems between 54 offices. IT@ School project also using the facilities of 'Edusat' for promoting e-learning.

Karshaka Information Systems Services and Networking (KISSAN)

21.43 Indian Institute of Information Technology and Management Kerala (IIITM – K) is the implementing agency of the project. KISSAN has a digital studio, which has already published more than100 hours of Video, a web interface to establish linkages with market/suppliers/experts/institutions and a Call Centre to provide services to farmers. KISSAN is now rolled –out to grass – root level using the Akshaya Network.

E-Krishi

21.44 The vision of the project is to establish a networked farmers community throughout Kerala who have access to information on market demand, prices, good agricultural practices, quality agricultural inputs etc. supported by a technology enabled robust transaction platform that facilitates all their offline activities. Key components of the Platform include:

- Aggregation of responsive farmer community about 50,000 in number, cultivating priority crops as determined by the market demand
- Enrollment of buyers/exporters in key markets including manufacturers in processing industries
- Enrollment of agricultural input providers, seeds, plants, fertilizers, pesticides, technology/methodology providers /consultants, test –laboratories and so on
- Establishment of a robust IT-enabled platform where the members can seek information, transact & make or receive electronic payments

Collaborative Content Management

21.45 Akshaya e-Kendras in the community space and IT @ School project covering the schools is expected to bring in demand for large amounts of content. The Collaborative Content Management platform envisages teachers/experts or those who have access to educational contents, upload educational materials, explanatory examples, teacher notes etc, for use by the

schools or member student community. The platform shall offer facility for collaborative content management.

Tele-medicine

21.46 The vision of the project is to establish a networked Public Healthcare Program and Telemedicine system in the state. It is proposed to pilot a program in Malappuram where intranet connectivity on wireless has been already established as a part of the Akshaya Project.

Education Grid

21.47 This initiative is to link 30 colleges and helps both teachers and students to design and share scarce educational resources and upgrade standards of instruction.

Indian Institute of Information Technology and Management – Kerala (IIITM-K)

21.48 IIITM-K's temporary premises were established in a rented space of 10000 sq.ft of Technopark and equipped with state-of-the-art systems, network and servers with quality Internet connectivity. Classes for the post graduate Diploma in IT are being conducted. Since that time the institute has come a long way with several innovative programmes and projects of great significance to the future of Kerala and India as a whole. It is now well recognized as a premier institute of IT at the PG level both within the State and in the rest of the country. The Institute has succeeded very well with all its first three batches fully placed in leading IT companies like TCS, Infosys, Wipro, Mind Tree, IBM, GE, PCS, Zensar, Tata Elxsi, Accenture, Interra IT, Siemens, Oracle, VMOKsha, VFortress, Aendoes, Huawei, Calsoft, Caritor and several others. The kind of education provided here has helped several of its graduates in the IT industry in rising faster in their career.

21.49 The major features of instruction are to expose the students to real world scenario and professional situations and the high technology learning ambiance. The Institute has close rapport with several leading IT industries, premier institutions like IITs, IIMI, NITS, major universities and Key departments under Central Government like MHRD. Department of IT, Agriculture etc. It is also involved in national efforts in areas related to Education, Agriculture, Health and IT. The Institute on its own initiative with support from concerned State departments has launched the key Education Grid, Karshaka Information Systems, Services and Networking (KISSAN – Kerala), the Police Portal for community interaction and some other smaller ones.

Software Technology Parks of India - Thiruvananthapuram (STPI –T)

21.50 Since then the Software Technology Parks of India, Thiruvananthapuram, came into existence 336 companies have been registered and 120 companies are exporting software regularly. The total export during 2004-05 is for Rs. 300 crores which is 38% higher than the previous year. The STP scheme is a 100% export oriented scheme for the development and export of software. Because of the very low investment requirement (Rs. 5 lakhs) and incubation facility in the STPI –T Complex it has been on of the most favorable locations for the small and medium level export oriented companies.

21.51 During 2004-05 TCS, one of the major software exporting units in the country started their operation from Infopark, Kochi. Forty-six companies have been registered under STPI–T during 2004-05 and most of them have projected exports on ITES in addition to exports of computer software. It has also started net working station at Kinfra Park, Kochi for providing Data Com Services to the Software exporting units operating at Kochi. The software exports from STPI–T units for the last five years is given in Figure 21.1.

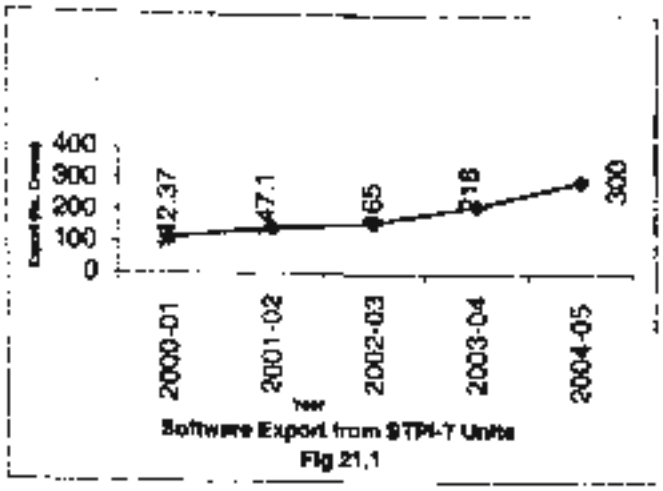


Fig 21.1

Police Portal

21.52 Community interaction portal of the Thiruvananthapuram City Police to identify the problems of crime and disorder has already been launched.

Achievements under IT

- Malappuram – India's first e-literate district
- Chamravattom India's first e-literate village
- Vellanad and Talikkulam : India's first and second fully computerized Grama Panchayaths
- Akshaya wireless network in Malappuram –World's biggest IP based network
- Palakkad – India's first fully computerized District Collectorate
- State with 99% of its high schools have modern Computer Labs
- First state to use 'Edusat' for on-line learning solutions
- Information Kerala Mission – Single largest computerisation programme for Local Bodies and deployment of software developed in an Indian language in the country
- First state to have Citizen's Call Centre on Government related details
- First Technology Park in India to achieve CMMI level 4

CHAPTER 22

LOCAL GOVERNMENTS AND DECENTRALISED DEVELOPMENT

The State Government started decentralised planning through the Local Governments in 1996-97 based on the Kerala Panchayat Raj Act 1994 and the Kerala Municipality Act 1994. Amendments have been made to the Act in 1996, 1999, 2000 etc and the Panchayat Raj Institutions which were dependent to State Government have become more independent and powerful in many respects. On the whole the people in the rural and urban areas, who were alienated from the development process until 1995-96 started to feel the privileges of democracy, and started to participate in grama sabhas/ ward sabhas- forums of decision making in area development. Over and above, a public awareness on the different aspects of development planning, project preparation, details on PWD schedule of rate etc. could be brought in among a wide range of people in the rural and urban areas. Kerala State is going to complete 10 years of Panchayat Raj and during these 10 years Local Governments have achieved substantial progress in all aspects.

Tenth Plan and Kerala Development Plan

22.2 In 2001, Government took a number of steps to strengthen and institutionalise Panchayat Raj in the State in keeping with the objectives of the Constitutional amendments and the original Kerala laws. In 2002-2003, under the Tenth Plan, the Decentralisation programme was renamed "Kerala Development Plan".

22.3 The three main thrusts of the Kerala Development Plan were (i) institutionalisation and building sustainable capacity in PRIs; (ii) catalysing economic development through PRIs; and (iii) improving the quality of services, particularly in health and education. In the ninth plan, PRIs prepared annual plans. In the tenth plan, they prepare five year plans that allow them greater room for long term planning with an emphasis on development.

22.4 A program of institutional development is being carried out with emphasis on updating of records, completion of asset registers, preparation of road registers, preparation of benefit registers, increasing local resource mobilisation through taxes, user charges and contributions, developing innovative means of financing through taxes, community contributions and borrowings, establishing performance standards for institutions and officers, reducing waste and leakage and improving the quality of mandatory functions of Grama Panchayats and Municipalities.

22.5 Five-year plans are developed for watershed management, poverty alleviation, women component plan, special component plans for SC/ST and the special group plan for destitutes, handicapped, aged and children. Actions are taken to address issues relating to the development of transferred farms, better implementation of village water supply schemes, maintenance of street lights, improving standards and services for health and education, independent monitoring and social audit of plan implementation, computerization, transfer and placement of staff, strengthening the administrative capacity of PRIs and strengthening accounting systems and audit.

22.6 The Tribal Sub Plan component of the Annual Plan for the year 2001-02 was taken back from PRIs and placed at the disposal of the Director ST Development Department. From 2003-04

onwards as part of empowering of Tribals within the Local Government system, 50% of TSP funds were allotted to LSGIs. The planning process for TSP has been restructured and new guidelines issued. Hamlets are the unit and the general body of the hamlet called 'Oorukoottam' has been significantly empowered for the preparation and implementation of their plan. A special TAC was also set up at the district level under the District Collector for the appraisal of plans of TSP projects of LSGIs.

22.7 A major shift under TSP is the condition that atleast 50% of the fund should be earmarked for providing a package of care services to the poorest of the poor identified by the Oorukoottams on the basis of transparent criteria.

22.8 It was in the Tenth Plan the concept of Anti Poverty Sub Plan was introduced as a part of LSG Plan. As part of this initiative, specific projects for destitutes are also being prepared (Ashraya Projects). The Kudumbasree program has considerably strengthened poverty alleviation efforts of the State integrated with PRIs. The Tenth Plan insists that the LSG's should earmark 5% of the plan allocation for the benefit of children, disabled and the aged. A number of steps have also been taken under the Modernization of Government Program to strengthen PRIs to improve the quality of services delivered by PRIs

Plan Assistance under the Tenth Plan

22.9 The plan assistance for PRIs during the Tenth plan was substantially larger than under the Ninth plan. Provision of funds by the State Government to PRIs increased significantly in the Tenth Plan, across the three tiers and for each tier of Panchayat, as shown in Table 22. 1

Table 22.1
Plan Outlay and Release to LSGs

(Rs. crore)

Year	State Plan --Budgeted Outlay			State Plan - Revised Outlay*	Release to LSGs	Per centage
	State	LSGs	Per centage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1997-98	2855.00	749.00	26.23	2698.66	745.20	27.61
1998-99	3100.00	950.00	30.65	3039.09	910.33	29.95
1999-00	3250.00	1020.00	31.38	3107.45	830.50	26.73
2000-01	3535.00	1045.00	29.56	2493.25	761.38	30.54
2001-02	3015.00	850.00	28.19	2260.00	657.05	29.07
2002-03	4026.00	1342.00	33.33	3425.00	1058.26	30.90
2003-04	4430.25	1317.00	29.73	3796.23	1438.15 @	37.88
2004-05	4800.00	1350.00	28.13	3913.57	1163.72	29.74
2005-06	5369.81	1375.00	25.61	-	-	-

** Approved by Planning Commission*

@ Includes Rs.335 crore re-allocated to LSGs consequent to the closure of PD accounts as on 09.07.2003.

Source: Outlay - State Planning Board

Release - IKM (1997-98 to 2003-04) *DPOs (2004-05)*

22.10 There was also a significant increase in the amount of funds released to Grama Panchayats.

- Rs.1399.56 crores was provided to Grama Panchayats in the first three years of the Ninth Plan.
- As against this, Rs.2276.20 crores has been provided to Grama Panchayats in the first three years of the Tenth Plan.

The percentage of Plan funds provided to Block Panchayats during the Ninth and Tenth Plan did not change significantly 4.05% of the State's Ninth Plan was provided to Block Panchayats in the Ninth Plan and 4.19% has been provided to Block Panchayats in the Tenth Plan. However, there was an increase in the amount of funds provided to Block Panchayats in the Tenth Plan.

- Rs.358.41 crores was provided to Block Panchayats in the first three years of the Ninth Plan.
- Rs.466.05 crores has been provided to Block Panchayats in the first three years of the Tenth Plan.

More funds were released to District Panchayats in the Tenth Plan than in the corresponding period of the Ninth Plan even though the percentage of plan funds provided to District Panchayats declined slightly from 4.26% to 3.48%.

- Rs.376.48 crores was released to District Panchayats in the first three years of the Ninth Plan.
- Rs.387.52 crores was released to District Panchayats in the first three years of the Tenth Plan.

The percentage of fund released to Municipalities during the Ninth Plan (2.36%) and Tenth Plan (2.43%) are virtually the same. However, there was an increase in the amount of funds provided to Municipalities in the Tenth Plan.

- Rs.209.17 crores was released to Municipalities in the first three years of the Ninth Plan.
- Rs. 270.25 crores was released to Municipalities in the first three years of the Tenth Plan.

Funds released to Corporations also increased in the Tenth Plan as against the Ninth Plan although the percentage of Plan funds provided did not change substantially (1.61% in the Ninth Plan and 2.33% in the Tenth Plan).

- Rs.142.41 crores was provided to Corporations in the first three years of the Ninth Plan.
- Rs.260.11 crores was provided to Corporations in the first three years of the Tenth Plan.

BOX 22.1

Changes in the powers of PRIs under the Tenth Plan - Kerala Development Plan.

Some changes have been made as part of larger processes for Governmental policy change unrelated to PRIs and other changes have been made to strengthen and institutionalize PRIs. Two changes to the powers of PRIs have been made during the Tenth Plan. They are

(1) Minor Irrigation was redefined and as such irrigation project with an ayacut upto 15 ha. are considered as a Minor Irrigation work

(2) During Ninth Plan DRDA's were merged with District Panchayat and orders were issued accordingly. During Tenth Plan DRDA's are permitted to act independently.

22.11 On the basis of experience gained and lessons learned, certain modifications were made in the sectoral allocations ceiling, plan preparation process, vetting of plans, Technical Approval etc. during the 10th plan. A comparative picture of the above particulars during 9th plan and 10th plan is given in boxes (22.2, 22.3, 22.4, 22.5)

BOX 22.2

Sectoral Allocation Ceiling during 9th and 10th Plans

Ninth Plan	Tenth Plan
A. Panchayat	**A. Village Panchayat/Block Panchayat**
i. Productive sector – 40% (Minimum)	I. Productive Sector – 30% (Minimum)
ii. Infrastructure – 30% (Maximum)	II Infrastructure – 30% (Maximum)
B. Municipalities	**B. District Panchayat**
i) Productive Sector – 20% (Minimum)	I. Productive Sector – 25% (Minimum)
ii) Infrastructure – 35% (Maximum)	II. Infrastructure – 30% (Maximum)
iii) Slum improvement – 10% (Minimum)	**C. Municipalities/Corporation**
	I. Productive Sector – 10% (Minimum)
	II. Infrastructure – 50% (Maximum)
	III. Slum improvement – 10% (Minimum)
	• Atleast one third of the plan grant under productive sector in the general sector should be earmarked for schemes of rain water harvesting, roof water harvesting in public buildings, rehabilitation of water bodies.
	• RIDF is given to District and Block Panchayat as part of gram-in-aid.
	• Plan for children, disabled and aged – 5% of the total plan allocation
	• Assistance to co-operatives and charitable societies are restricted upto 2004-05. During 2005-06 producers societies are given assistance based on norms.

BOX 22.3
Plan Preparation Process during 9th and 10th Plans

Ninth Plan
Task Forces.

- Task Forces for each sector
- Mandatory Task Forces
  - i) Women Development
  - ii) SC/ST Development and
  - iii) Co-operation.
- 10 to 12 members.
- Chairman-preferably elected representative
- Vice-Chairman - subject expert – preferably a member of the voluntary Technical Corps.
- Convenor – implementing officer or an officer from related Government Department.
- Joint Convenor – Local resource person.
- 30% of the members shall be women.
- Population proportion of representation of SC/ST.
- 4 general body meeting of the Task Forces.

Tenth Plan
Working Groups

- Working groups for each sector
- Mandatory Working Groups

1. Water-shed Management including agriculture and allied sector.
2. Animal Husbandry and related sectors.
3. Local Economic Development other than agriculture including local industries, facilitation of private and community investment.
4. Poverty Reduction.
5. Development of Scheduled Castes.
6. Development of Women and Children.
7. Health, Water Supply and Sanitation.
8. Education.
9. Infrastructure.
10. Social security including care of the aged and disabled.
11. Development of Scheduled Tribes (if the Panchayat have allocation on TSP).

- Chairman – elected member.
- Vice-Chairman – Expert in the Sector.
- Convenor – Senior most official transferred to the LSG in that sector.
- At least one member from CDS be included.
- SC Promoters be included.
- Working Group have the power to co-opt members as well as set up Task forces to perform assigned functions.
- Quorum of the Working Group is 4 members including the mandatory presence of the convenor.

As part of Tenth Five Year Plan LSG's have to prepare;

1) Vision Document.
2) Development Report – Updating.
3) Reform Plan.
4) Benefit Register.

BOX 22.4
Vetting of Plans

Ninth Plan	Tenth Plan
Voluntary Technical Corps/Plan Appraisal Teams	**Technical Advisory Committees (TAC's)**
• Service of retired technical experts and professionals were utilised as volunteers to appraise the projects.	• Experts from professional colleges, academic institutions, public/private sector organisations, NGOs, Bankers and from among retired personnel and practitioners as members. The TAC's should have sub groups for different sectors.
• Block Level Expert Committees for scrutinisation of Grama Panchayat Plans. Chairperson – a Senior non-official member of VTC. • Convener – Secretary, Block Panchayat.	• Block Level Technical Advisory Committee (BLTAC) for scrutinisation of Grama Panchayat plan. • Chairman - Decided by District Planning Committee • Convenor and Secretary - Secretary, Block Panchayat
• District level Expert Committee for Block Panchayat and District Panchayat. • Chairperson – District Collector. • Convenor – District Planning Officer. • Municipal Level Expert Committee for Municipalities • Chairperson – a Senior non-official member of VTC. • Convener Senior District level Officer.	• District Level Technical Advisory Committees for Block Panchayats, District Panchayats, Municipalities and Corporations. • Chairman – District Collector • Convenor and Secretary – District Planning Officer
• Corporation Level Expert Committee for Corporation Plan. • Chairperson a Senior non-official member of VTC. • Convenor Senior District level Officer.	• Chairperson of BLTAC and Chairperson and Convenors of Sub group of TAC both Block and District level be decided by DPC.
• Quorum of subject committee is two members and presence of the mandatory member is essential.	• Quorum of the Committee is decided by the DPC and it should not be less than three (in case of sub groups)

BOX 22.5
Technical Approval

Ninth Plan Expert Committee		Tenth Plan Technical Committees.	
• Grama Panchayat • Block Panchayat	Block Level Expert Committee (BLEC)	• Grama Panchayat • Block Panchayat	Block Level Technical Committee (BLTC)
• District Panchayat	District Level Expert Committee (DLEC)	• District Panchayat	District Level Technical Committee (DLTC)
• Municipality	Municipal Level Expert Committee (MLEC)	• Municipality	Municipal Level Technical Committee (MLTC)
• Corporation	Corporation Level Expert Committee (CLEC)	• Corporation	Corporation Level Technical Committee (CLTC)

Box 22.6
Study on Ten Years of Panchayat Raj in Kerala by State Planning Board has made several recommendations as follows, for strengthening the PRIs.

1. Enhancing the Autonomy and freedom of PRIs.
2. Simplifying the frame work for planning, budgetting project implementation and fund release.
3. Making District Planning Committees more effective
4. Strengthening Grama Sabhas, enhancing people's participation in Panchayat Raj and strengthening Accountability of PRIs.
5. Strengthening capacity and effectiveness of Panchayat Raj Institutions.
6. Ensuring Effective Accounting and Audit.
7. Strengthening Panchayat finances.
8. Enhancing PRIs role in economic development and poverty alleviation.
9. Improving productive sector performance.
10. Improving project implementation and Maintenance.
11. Incentives for Own Resources Mobilisation.

Box. 22.7

Ten Years of Panchayat Raj in Kerala - A Rapid assessment study by State Planning Board - Summary of Results of Opinion Survey of Elected Panchayat Officials

Questionnaires were sent to all 17098 Panchayat Raj/Nagarapalika Institution's elected members. Out of them 10422 members responded (60.9%). These included Block Panchayats (68%) District Panchayats (51%), Corporation (20.8%), and Municipalities (45%).

Out of the total respondents 1315 (12.6%) were SC and 175 (1.7%) ST. 8932 (85.7%) were from the general category. Male respondents were 6319 (60.6%) and female 4103 (39.4%) respectively.

In Block Panchayat 42% were female respondents while in Grama Panchayat they were 38.9%.

The broad feedback obtained from elected panchayat officials may be summarized as follows.

1.Areas in which change is required:

1. The participation of APL families and women in Grama Sabhas should be enhanced. 76% of the respondents felt that participation in Grama Sabhas is either declining (51%) or remaining unchanged (25%). 65% of respondents felt that APL participation is most inadequate; 28% felt that participation of women is most inadequate; and 6% felt that the participation of SC/ST is inadequate.
2. An overwhelming number of participants feel that existing project Proforma and related documents should be simplified.
3. The majority feel that technical scrutiny is only partially effective or is ineffective and feel that the procedures for obtaining TS are either unsatisfactory or only partially satisfactory.
4. An overwhelming number feel that sectoral allocations are not helpful in attaining developmental needs and should be allowed to be varied by region.
5. The strongest consensus is that powers and responsibilities of PRIs should be increased.

2. Areas in which there is need for improvement in current arrangements:

1. Participation in Grama Sabha meetings is low, with the majority of elected officials having attended only 1 Grama Sabha/Ward Sabha meeting in 2004-2005.
2. The participation of APL population in Grama Sabhas/Ward Sabhas is declining most; followed by that of women and SC/ST.
3. Block/District Panchayat members are not participating adequately in the meetings of Grama/Ward Sabhas.
4. Officers of transferred institutions participate in Grama Sabhas/Ward Sabhas, although such participation needs improvement.
5. Discussions in the development seminars should be made more useful.
6. The majority felt that cooperation of officers of transferred institutions should be improved.

7. The process of project preparation should be improved.
8. Availability of transferred officers and their services should be improved.
9. The majority felt that DPCs functioning does not need change, although the largest number of respondents feel that DPCs should be made more effective.
10. Technical Advisory Committees are only either partially effective, or are ineffective.
11. Panchayati Raj activities over the past ten years have only been partially effective in poverty reduction in their locality, have only partially helped reduce backwardness and have only partially contributed to income and employment generation.

3. Areas in which current arrangements and implementation are largely satisfactory:

1. Grama Sabha meetings are generally held 3 or more times a year.
2. Group discussions in the Grama Sabhas/Ward Sabhas are effective or at least partially effective Grama Sabhas/Ward Sabhas are involved in Plan formulation and implementation and do so well or at least partially well. NHGs are functioning satisfactorily in Grama Sabhas/Ward Sabhas and are strengthening Grama Sabhas/Ward Sabhas.
3. The process of submitting plan documents before the DPCs is satisfactory.
4. Technical Sanctions are being satisfactorily issued by Technical Committees. Services of experts in the Technical Advisory Committee are either effective or at least partially effective. Only some 30% support Technical Sanctions being provided by officers.
5. Women component plans are implemented effectively or at least partially effectively. SCP/TSP schemes are effectively implemented, although a larger number feel that these schemes are ineffective compared to the number that feels the women sub-component plans are not well executed. Schemes for disabled/elderly and children are effectively implemented, although a larger number feel that these schemes are ineffective compared to the number that feels the women sub-component plans are not well executed (at the same level of dissatisfaction as SCP/TSP plans).

The ability of PRIs to raise their own resources has increased in the last ten years.

Box 22.8

Evaluation Study on Decentralisation Experience of Kerala conducted by Programme Evaluation Organisation, Planning Commission, Government of India

Programme Evaluation Organisation, Planning Commission, Government of India conducted an evaluation of the experience of Kerala in decentralised planning during the Ninth Five Year Plan

The major findings of the study are the following:

- The productive sector projects of Local Self Governments (LSGs) did not develop into a comprehensive plan, due mainly to the inadequate capacity of LSGIs.
- In the productive sector neither departmental projects nor GP projects shows much household level impact whereas the stand-alone GP level projects in the service sector laid considerable impact.
- The share of productive sector in the total plan expenditure declined from 8th to 9th Five Year Plan and further drastically in the 10th Five Year Plan.
- About 65% of the selected beneficiaries felt that the response of both GP and departmental officials towards people's needs improved after Decentralisation.
- Thoroughly inadequate provision for maintenance of assets, lack of stakeholder participation therein and inadequate follow-up upon project execution resulted in sub-optimal utilization of plan assets.
- About 96% of the respondent heads of households were aware of the conduct of Grama Sabhas (GSs) in their villages; awareness level went up with level of education, whereas attendance in Grama Sabhas did not.
- Though vast majority of the people attended GSs exclusively with an eye on individual benefits, a lesser, but visible proportion of GS attendance was based on its development agenda.
- The degree of articulation of the disadvantaged sections (women and BPL) in Grama Sabhas was in no way less than that of the better-off sections.

The evaluation study among other suggestions concludes that; effective decentralised planning urgently calls for vertically and horizontally integrated plans at different tiers, comprehensive umbrella plan at the district level, merger of all developmental functions at each LSGI level and strengthening of Grama Sabhas and their sub-systems.

Box 22.9

Planning and Implementation of Projects in Village Panchayats-Study by Dr.B.A.Prakash, Department of Economics, University of Kerala-main findings.

With the introduction of Decentralisation, a good number of functions have been transferred to local governments. There was no corresponding improvements in the administrative set up and increase in the number of staff. The functions of those departments having local level offices shall be implemented by those departments. The Panchayats shall be strengthened with more staff and administrative set up be improved.

- The panchayats shall give priority to its mandatory functions. Maintenance of assets of panchayats shall also be given priority.
- Distribution of pension by the panchayats has affected the smooth functioning of panchayats. In order to relieve the panchayats from doing this duty, it shall be entrusted to some other existing agency or new agency created for the purpose.
- Importance shall be given for the development of infrastructure and other components that will help to develop Industry, Agriculture, and Social Service Sectors. Programmes that will help to generate employment, training programmes and basic infrastructure development which will improve the conditions of the poor and weaker sections of the society shall also be given priority.
- Discourage individual benefited schemes. Instead of schemes for distribution of benefits, implement development schemes.
- Projects shall be implemented in time bound manner without launching at the fag end of the year. Arrangements shall be made to implement 50% of the project during the first half of the financial year and the next 50% during the second half of the year.
- Projects intended to be implemented during a particular year shall be got prepared, scrutinized, approved in all respects and made ready for implementation during the previous year itself. So that the Local Governments will get one full year for implementation.
- KSEB, KWA, KSHB etc shall give top priority in implementation of the projects entrusted by village panchayats. Special direction shall be issued in this regard to these Semi-Government Agencies.

22.12 As recognition to the efforts at Decentralisation Kerala has been selected for the Rs. 5 crore award by the Union Government for best performance in Panchayat Raj. Karnataka stands second and Sikkim third.

Box 22.10

Kerala – The Best Performing Panchayat Raj System in the Country

Kerala has been selected for the Rs. 5 crore Award instituted by the Union Ministry of Panchayat Raj, in recognition of its initiative to ensure the participation of all sections of people in planning, decision making, generating resources and ensuring transparency and accountability to the village community. The award has been instituted by the Union Government to emphasis the role of State Governments in promoting Panchayat Raj in their respective states and to rank the states in terms of their compliance with the relevant provisions of the Constitution.

The major criterion for selecting the state according to the Judging Committee, include timely conduct of elections, extent of devolution of functions, funds and functionaries, steps taken to facilitate proper functioning of grama sabhas and effective participation of marginalised sections

The state can use 30 per cent of the award amount for promoting and strengthening the Panchayat Raj Institutions, creation of state level training infrastructure and infrastructure for e-governance. Out of the balance amount 70% should be handed over as awards to the Local Governments in the state as per the following standards.

i. Ten Grama Panchayats, Rs.200 lakh minimum @ Rs. 20 lakh per panchayat.
ii. Two Intermediate Panchayats, Rs.80 lakh minimum @ Rs. 40 lakh per Panchayat
iii. One District Panchayat @ Rs. 70 lakh

Local Governments - Sector-wise Performance During 2004-05

22.13 Funds to the Local Governments are given in three streams; General, SCP and TSP. An analysis of category wise expenditure shows that the percentage of expenditure under general sector is 82.32 of the plan outlay. In the case of SCP and TSP, the per centage of plan expenditure is only 72.99 and 71.16 respectively. Sector wise distribution of plan grant of Local Governments in the Annual Plan 2004-05 is given in Appendix 22.1. Category wise outlay and expenditure of Local Governments during 2004-05 are given in Table 22.2

Table 22. 2

Category –wise Performance of Local Governments during 2004-05

(Provisional)

(Rs. Lakh)

Sl.No.	Category	Plan Assistance to Local Governments	Total Plan Expenditure	Percentage of Plan expenditure to release
1	2	3	4	5
1	General	87803.38	72281.84	82.32
2	SCP	24556.37	17926.15	72.99
3	TSP	4012.25	2855.01	71.16
	Total	**116372.00**	**93063.00**	**79.97**

Source : DPOs

22.14 One of the important features of Local Government Plan is that it contains several Component Plans and Sub Plans Special Component Plan for Scheduled Castes, Women Component Plan for women, Tribal Sub-Plan for Scheduled Tribes, Anti poverty Sub Plan for the poor and weaker sections, and projects prepared for the Physically Challenged, Aged and Children are the various Sub Plans prepared by the Local Governments and included in their plans.

22.15 Distribution of SCP Grant by Local Governments and its sector wise distribution during 2004-05 is given in Table 22.3

22.16 Distribution of TSP Grant by Local Governments and its sector wise disribution during 2004-05 is given in Table 22. 4

22.17 Distribution of Women Component Plan Grant by Local Governments in the Annual Plan of 2004-05 is given in Table 22. 5

22.18 Distribution of Plan Grant by Local Governments for children, Aged and physically and mentally challenged persons in the Annual Plan 2004-05 is given in Table 22.6

Table 22. 3

Local Government wise and Sector wise Distribution of SCP outlay during the Annual Plan 2004 – 2005 (Provisional)

(Rs. in lakh)

Sl No	Type of Local Government	Productive Sector	Service Sector	Infrastructure Sector	Projects not included in Sectoral division	Total (3+4+5+6)
1	2	3	4	5	6	7
1	District Panchayat	389.98	3424.83	1118.07	14.76	4947.64
2	Block panchayat	277.92	3476.14	1067.99	12.09	4834.14
3	Municipality	89.46	1525.29	440.95	5.79	2061.49
4	Corporation	30.97	934.75	529.89	3.20	1498.81
5	Grama Panchayat	1185.77	11903.97	3274.49	67.36	16431.59
	Total	**1974.10**	**21264.98**	**6431.39**	**103.20**	**29773.67**

Source . Information Kerala Mission

Table 22. 4

Local Government wise and Sector wise Distribution of TSP outlay during the Annual Plan 2004 – 2005 (Provisional)

(Rs. in lakh)

Sl No	Type of Local Government	Productive Sector	Service Sector	Infrastructure Sector	Projects not included in Sectoral division	Total (3+4+5+6)
1	2	3	4	5	6	7
1	District Panchayat	98.83	1137.33	94.26	0.00	1330.42
2	Block Panchayat	41.77	959.04	45.19	0.50	1046.50

3	Municipality	0.00	51.41	9.98	0.00	61.39
4	Corporation	0.00	0.00	0.00	0.00	0.00
5	Grama Panchayat	120.12	2288.76	163.72	5.58	2578.18
	Total	**260.72**	**4436.54**	**313.15**	**6.00**	**5016.40**

Source : Information Kerala Mission

Table 22. 5

Local Government wise and Sector wise Outlay for Women Component Plan in the Annual Plan 2004 – 2005 (Provisional)

(Rs. lakh)

SlNo	Type of Local Government	General	SCP	TSP	Total (3+4+5)	Percentage to Total Plan Grant
1	2	3	4	5	6	7
1	District Panchayat	485.39	393.29	185.71	1064.39	7.27
2	Block Panchayat	576.29	314.20	19.05	909.54	6.45
3	Municipality	486.32	174.30	0.00	660.62	6.11
4	Corporation	328.13	27.69	0.00	355.82	4.09
5	Grama Panchayat	4467.01	1270.76	111.24	5849.01	8.52
	Total	**6343.14**	**2180.24**	**316.00**	**8839.37**	**7.56**

Source . Information Kerala Mission

Table 22.6

Local Government wise and Sector wise outlay for Children, Aged and Physically and mentally challenged persons in the Annual Plan 2004-2005(Provisional)

(Rs. Lakh)

Sl No.	Type of Local body	General	SCP	TSP	Total (3+4+5)	Percentage to Total Plan Grant
1	2	3	4	5	6	7
1	District Panchayat	421.17	197.00	5.25	623.42	4.26
2	Block Panchayat	1275.11	113.11	12.70	1400.92	9.94
3	Municipality	728.73	24.42	1.50	754.65	6.98
4	Corporation	457.75	10.86	0.00	468.61	5.39
5	Grama Panchayat	5181.40	454.23	35.59	5671.22	8.26
	Total	**8064.16**	**799.62**	**55.04**	**8918.82**	**7.63**

Source : Information Kerala Mission

Local Government-wise Performance under General Sector, SCP and TSP during 2004-05

22.19 Among the Local Governments, both Urban and Rural, the Village Panchayats have achieved the highest expenditure of 83.35 % to the outlay released. Municipalities and Block Panchayats achieved 81.32 % expenditure.

22.20 Local Government-wise comparison of plan expenditure to released amount during 2003-04 and 2004-05 shows that, the achievements of Grama Panchayats, Block Panchayats and Municipalities was higher than District Panchayats and Corporations. The Table 22.7 shows the Local Government-wise release and expenditure of plan amount during 2003-04 and 2004-05

TABLE 22.7

Local Government-wise Release and Expenditure during 2003-04 and 2004-05 (Provisional)

(Rs. crore)

Tier-wise Local Governments	2003-04			2004-05		
	Release	Expenditure	Percentage	Release	Expenditure	Percentage
1	2	3	4	5	6	7
1. Grama Panchayats	813.03	804.48	98.95	657.28	547.86	83.35
2. Block Panchayats	189.96	182.11	95.91	158.01	128.50	81.32
3. District Panchayats	200.93	156.05	77.66	162.50	113.44	69.81
4. Municipalities	129.87	121.50	93.56	103.47	84.14	81.32
5. Corporations	104.36	81.63	78.22	82.46	56.69	68.75
Total	**1438.15**	**1345.85**	**93.58**	**1163.72**	**930.63**	**79.97**

Source : Information Kerala Mission
2004 –05 Expenditure, DPOs

22.21 Difficulties of LSGs in getting familiarised with the new reforms like introduction of Bill System, disbursement of outlay in monthly installments etc. contributed to slow pace of achievement during 2004-05 compared to 2003-04.

TABLE 22.8

Sector – wise Expenditure of Local Governments during 2003-04 and 2004-05

(Percentage)

Sl. No.	Type of Local Body	Productive Sector		Service Sector		Infrastructure Sector		Projects not classified		Total	
		2003-04	2004-05	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
	1	2	3	4	5	6	7	8	9	10	11
1	Village Panchayat	19.58	21.78	45.97	45.41	27.69	19.03	6.76	13.75	100	100
2	Block Panchayat	17.69	10.35	45.11	49.80	27.44	19.11	9.76	20.75	100	100
3	District Panchayat	23.59	13.95	50.76	57.66	25.07	26.91	0.59	1.48	100	100
4	Municipality	6.69	7.58	40.16	44.38	48.65	40.11	4.50	7.94	100	100
5	Corporation	2.60	7.51	46.25	38.02	48.22	42.26	2.33	12.21	100	100
	Total	17.68	17.18	46.47	46.77	30.33	23.24	6.53	12.82	100	100

Source : Information Kerala Mission

22.22 The Table 22.8 shows a comparison of sector-wise percentage of expenditure during 2003-04 and 2004-05 between different Local Governments. Most of the Local Governments spent more in service sector followed by infrastructure sector. The percentage of expenditure in the productive sector by all the local governments is very low. Against the State average of 17.18 % in productive sector it is very low at 2.6 % in Corporations during 2003-04 and 7.5 % during 2004-05. There is a category of projects, which are not classified. No Local Government has spent the stipulated minimum expenditure in the productive sector as per the guidelines.

Physical Achievements 2004-05

22.23 The Government departments and agencies prepare development plans and projects giving importance to financial planning although the physical aspect is more relevant. In the case of development plans and projects formulated by Local Governments, they are need based and beneficiary oriented and the output and other benefits are immediately felt by the people using the services of the assets created or assistance received. Physical achievement of Local Governments during the year 2004-05 in selected sectors are analysed below:-

22.24 In agriculture more than 2.5 lakh households were given pesticides and planting materials under integrated agricultural development programme. Under the programme "Removal of Deceased Coconut Tress" 1.59 lakh diseased coconut tress have been removed and replaced with coconut seedlings. In Animal Husbandry 1.10 lakh poultry/egg-rearing units were started and 0.12 lakh cattle sheds were constructed. Assistance was given for starting 2792 industrial units, 3316 micro enterprises and 25930 self employed units. Computer training was given to 80986 persons. 49650 new houses were constructed. Details of other physical achievements of Local Governments during 2004-05 are furnished in Appendix 22.2.

22.25 During 2004-05 in the service sector 3409 drinking water projects were completed. New buildings were constructed to 102 schools. 737 Anganwadies and 124 Hospitals and assistance was provided to purchase 214 ha of land. Similarly 226 solid waste disposal projects were started.

Box 22.11

Gender Analysis of Select Gram (village) Panchayats Plan – Budgets in Thiruvananthapuram District, Kerala

Major policy suggestions of the UNDP study on Gender –Analysis of select Grama Panchayats Plan – Budgets in Thiruvananthapuram District conducted by Smt. Mridul Eapen, Associate Fellow at the Centre for Development Studies, Thiruvananthapuram, Kerala.

" First and foremost, high social indicators of development for women such as literacy and health do not imply gender equitous relations; conscious attempts have to be made to address women's subordination through a more appropriate allocation of resources and awareness raising, geared towards changing the extant patriarchal values.

While this was attempted in the Ninth Plan decentralised framework, the conflictual aspect of a planning process, which consciously attempted to transform gender relations, was not emphasised. Gender is about unequal power relations between men and women deriving from the social division of labour. Any attempt to upset the relationship would involve conflict in prioritization and an attempt towards consensus in favour of status

quo; innovative projects would be scuttled and projects relating to women's practical needs, end up as stereotyped women's projects or as 'women beneficiaries' in common schemes.

The capability/availability of resource persons and experts to effectively intervene from a gender perspective was a critical limitation. Special efforts to bring women into the facilitative structures as 'Key Resource Persons' (KRPs) or 'District Resource Persons', (DRPs) which would have helped discussions on gender in the working group, formulation of projects to enhance women's occupational mobility and strengthen the gender strategy, were not very successful. Only 17-19 percent of resource persons were women, against a proposed 1/3rd of a total of about 400 KRPs and 11,000 DRPs (Issac and Franke 2000). The fact that SHGs under Kudumbasree can have only women below the poverty line, has discouraged participation of the non-poor women in the gram sabhas among whom would be the professionals and those with a university education who could have assumed the role of 'Experts'.

That gender sensitisation was not deep enough is evident from the fact that the main problem lay in the difficulty of translating innovative ideas into concrete projects for women to achieve greater gender justice. A 'gender analysis framework' is essential to sort out this problem although obstacles may still remain due to entrenched social norms and practices regarding gender roles, which make attitudinal changes difficult. Moser's framework (1993) has become familiar and is user friendly, based primarily on the distinctive gender roles and needs and balancing of roles by women. We felt that this could have been adopted to formulate projects, at least under the WCP.

While the burden of the double/ triple role of women was part of gender discussions, which in fact affected the elected representatives themselves in constraining their participation in the gram sabhas, projects and programmes continued to make the usual assumptions about the family, its structure and gender division of labour. Women's role in the "reproductive" economy was taken for granted, where all adjustments would be made. Attempts to enhance women's participation in the planning process, was through the formation of neighbourhood groups, which would allow women to combine outside activities with household work. Similarly it was advocated that WCP projects should be organised and implemented through SHGs. While certain income generating activities undertaken by SHGs could be located at a distance from their residence, the general tendency was to engage in tasks which would enable women to be in the vicinity of the household thereby perpetuating their 'invisibility'. This certainly constrained married women in their choice of work.

Tied to this was the fact that there was an almost exclusive focus on women, in practice. The social structures/institutions that subordinate them were matters acknowledged largely in principle. An attempt to assess whether an institution like the PHC had undergone a transformation with its transfer to an empowered local body, threw up disappointing results. While improvements in infrastructure had occurred, there was hardly any visible attempt to alter the approach to women. Despite the women being very articulate in their demands, its impact on the functioning of the PHC was minimal.

Given the fact that earnings from employment created through SHGs are very small, ranging from Rs 500 to Rs. 1000 per month, these can be sustained only if much greater planning of such micro-activities is undertaken in terms of nature of activity, and technical/marketing issues. The absence of a sustained stream of imaginative projects for

the income generation linked SHGs is quite evident. There appears to be no collective discussion on the different activities each SHG could undertake and how each would ultimately link to the panchayat's area development plan based on needs and resources. The need to mesh the GP (and other local bodies) plans with the larger State plan, was recognised and appeared to have occurred without much special effort, given the nature of allocations at the GP level.

However, details regarding sub-sectors within broad sectors had not been worked out, for instance activities of SHGs, which has resulted in too many micro efforts, dissipating their total impact. This does throw up the question once again of what should be done at what level of governance. This needs a thorough review.

Nonetheless, the strength of the WCP, in particular the SHGs, lies in the fact that a State-wide mobilisation of women exists, albeit only of women below the poverty line, which can be geared up to take on developmental activity at the local level. The enthusiasm with which these women come to gram sabha/development seminar meetings is proof of their desire to improve their situation and that of their family. We can only conclude by stating that the potential of decentralised governance including budget making, for redressing gender inequality is enormous. It needs to be deepened, bringing in a gender analysis framework, a lesson learnt from our experience and emphasising the need to change attitudes, embedded in extant institutions, which continue to disadvantage women. The biggest challenge to gender sensitisation of plan budget making at the panchayat level is building up the capability of practitioners to approach the issue within a gender analysis framework, Moser's (1993) being a useful one, which provides the tools for integrating gender into all types of interventions and to confront power relations in social and public institutions"

ASRAYA- The Destitute Plan

22.26 Asraya is the first integrated programme for tackling the problems of the poorest of the poor who live at the margins of the economy, society and polity without a voice or the power of choice, with no capabilities to access entitlements-the really 'excluded'. It originated from the realization that even in a State like Kerala, the benefits of Anti-Poverty policies and programmes do not reach the absolutely poor, who constitute only about two percent of the population.

Features of the Programme

- It is a sub-programme of Kudumbashree, the highly successful anti-poverty mission-mode programme implemented through community based organizations of Kudumbashree - i.e., 159739 Neighbourhood Groups (NHGs) at the local level, 14103 Area Development Societies (ADSs) at the Village Panchayat/Municipal Ward level and 1050 Community Development Societies (CDSs) at the level of the Village Panchayat/Municipality, with this three-tier network organization including every poor family in the State, each family being represented by a women having a total membership of 32.02 lakh.
- These CBO identify the poorest of the poor using socially accepted objective
- indicators of poverty.
- The Village Panchayats and Municipalities are the real planners and implementers of this project with Government playing the role of an active facilitator.
- After transparent identification, participatory plans are prepared for each destitute family on the basis of close interaction with the family members and on-site verification of details.

The plans are implemented by converging services and resources from different sources including PDS, Special Nutrition, Health, Remedial Education, Pensions, Basic Minimum Services, Skill Development etc. Gaps are filled up with funds from Panchayats and Municipalities with the State share being limited to 25% of the project cost or Rs.10 lakh whichever is lower.

The entire programme is monitored regularly. The destitute families would be taken care of till they achieve a minimum standard of life. Thus Asraya is not a one-time assistance but is a promise of continuous support till the objective is realized

22.27 Now the programme is under implementation in 389 Village Panchayats and in 4 Municipalities. It is proposed to extend it to all the 999 Village Panchayats, 53 Municipalities and 5 Corporations. Projecting the investment requirements from the running projects it is calculated that for the scaling up of the project Rs.402.63 crore would be required.

22.28 As of now, there is no scheme akin to Asraya in the whole country targeting the poorest of the poor. Thus, Asraya is a pioneer, developing a model, which can be adapted by the rest of the country.

AKSHAYA-Computer Literacy Programme

22.29 The pilot project Akshaya implemented in Malappuram to 'Bridge the Digital Divide' was inaugurated by His Excellency Dr. A.P.J. Abdul Kalam, President of India on 18th November 2002. To name a few within the short span of pilot implementation, Akshaya has won prestigious awards and recognition-finalist of Stockholm Challenge Award, Data Quest award, Grand Prix electronic Award. Further Akshaya project has been awarded the Golden Nica of Prix Arcs Electronica, Austria in the digital community category. The prize money was Rs.5.37 lakh. Akshaya is among the six winners selected from 2975 entries from 71 countries.

22.30 The Project Akshaya is envisaged to achieve the following basic Feature:

- Providing basic skill set to common people (e-literacy training)
- Ensuring sustainable access points for ICT services (e-centres)
- Extending/Facilitating locally relevant contents & delivery of services to the people

22.31 As stated above the objectives of the project are not only to impart e-literacy training but also to enable the citizens to use the e-centers for various ICT enabled services by intervening in their day-to-day life. For this purpose Akshaya entrepreneurs, who are the major driving force behind the project, have to be updated continuously regarding the technological developments and ICT reforms in the Government Sector. Since 'nurturing' is an inevitable component for development of small entrepreneurship, follow-up phase interventions are vital to ensure the very existence and growth of e-centres and an essential prerequisite for the successful implementation of Akshaya.

22.32 In the 2nd phase the project has been rolled out in 7 districts, namely, Kasargod, Kannur, Kozhikode, Thrissur, Ernakulam, Pathanamthitta and Kollam.

22.33 It is decided to roll out Akshaya to the remaining 6 districts covering the entire state of Kerala by 2007.

Table 22.9
Details of Applications Received for setting up Akshaya e-centres during the II Phase

Sl. No.	Name of District	Total Centres (Nos)	Application Received (Nos)	Entrepreneurs Selected (Nos)
1	Kollam	168	2155	168
2	Pathanamthitta	130	1083	107
3	Ernakulam	261	1913	240
4	Thrissur	240	2026	234
5	Kozhikode	176	2270	176
6	Kannur	217	1475	203
7	Kasargod	137	1042	132
8	Thiruvananthapuram-Vengannoor Panchayat	4	33	4
	Total	**1333**	**11997**	**1264**

Formation of New Grama Panchayats

22.34- Eight Grama Panchayats have been newly created bifurcating eight other panchayats. Those Grama Panchayats with more than 50,000 population and more than 30 sq. kms. of geographical area were bifurcated into two Grama Panchayats. Thus the total number of Grama Panchayats in the State are 999. The details of bifurcated and newly formed Grama Panchayats are furnished in Box 22.12

BOX 22.12
Formation of New Grama Panchayats

Government of Kerala vide Order No. GO (P) No. 215/2005/LSGD dated 23.7.2005 has created 8 New Grama Panchayats, thereby increasing the number of Gram Panchayats in the State to 999. The Grama Panchayats with a population of more than 50,000 and having an area of more than 30 sq.km are bifurcated. Chirakkara, Kummil, Koruthode, Devikulam, Thenkara, Muthuvalloor, Kaladi and Kattippara are the 8 newly formed Grama Panchayats bifurcating the existing Grama Panchayats of Chathannur, Kadakkal, Mundakkayam, Munnar, Mannarkkad, Checkode, Thavannur and Thamarasseri respectively. The Area and Population of Bifurcated/ New Grama Panchayats are given below.

Sl. No	Bifurcated/New Panchayats	Block to which belong	Dist. To which belong	Area (Sq. KM)	Population (2001 Census)			
					General	SC	ST	Total
1	Chathanur *	Ithikkara	Kollam	17.76	25034	3821	.	28855
2	Chirakkara @	Ithikkara	Kollam	16.00	18653	4168	3	22824
3	Kadakkal *	Chadayamangalam	Kollam	29.30	26964	3527	2	30493
4	Kummil @	Chadayamangalam	Kollam	19.60	17349	2372		19721
5	Mundakkayam *	Kanjirappally	Kottayam	42.67	30483	4543	1852	36878
6	Koruthode @	Kanjirappally	Kottayam	39.00	12206	2689	1370	16265
7	Munnar *	Devikulam	Idukki	187.00	15532	20706	2233	38471

8	Devikulam @	Devikulam	Idukki	215.00	13716	15802	216	29734
9	Mannarkkad *	Mannarkkad	Palakkad	31.02	22659	3204	28	25891
10	Thenkara @	Mannarkkad	Palakkad	32.36	23416	2875	199	26490
11	Cheekkode *	Areekkode	Malappuram	20.40	26012	2414	3	28429
12	Muthuvalloor @	Areekkode	Malappuram	26.32	19066	3037		22103
13	Thavannur *	Ponnani	Malappuram	25.29	25629	4774		30403
14	Kalady @	Ponnani	Malappuram	16.91	19227	3984		23211
15	Thamarasseri *	Koduvally	Kozhikkode	35.00	28184	3375	25	31584
16	Kattippara @	Koduvally	Kozhikkode	20.17	18568	3521	154	22243

* Bifurcated Grama Panchayats

@ New Grama Panchayats

Local Government Election 2005

22.35 Since the enactment of Kerala Panchayat Raj Act 1994 election to the Panchayat Raj and Nagarapalika Institutions have been conducted at every five year intervals beginning from 1995. Accordingly the third election has been held in September 2005. 20554 representatives were elected to 1223 Local Governments. Local Government-wise number of seats and seats reserved for women, SC and ST are furnished in Table 22.10

Table 22. 10

Local-Government-wise number of seats and Presidentship reserved for Women, SC and ST

Local Government	Seats					President/ Chairman				
	Total	General	Women	SC	ST	Total	General	Women	SC	ST
1. Grama Panchayat	16.39	9106	5705	1750	208	999	594	333	98	11
2. Block Panchayat	2004	1135	694	212	17	152	90	51	15	2
3. District Panchayat	339	196	119	35	4	14	8	5	1	
4. Municipality	[illegible]	1068	604	131	2	53	33	18	4	
5. Corporation	316	196	108	21		5	3	2		

Source Directorate of Panchayats

Decentralisation Support Programme (DSP)

22.36 It is a programme implemented by Government with a view to facilitating the process of institutionalisation of Decentralisation initiatives in Kerala. The Phase I of DSP concentrated in identifying the issues which needed to be addressed to take Decentralisation forward. The emerging issues were categorised into needs, concerns and opportunities Needs related to revamping old administrative operating systems and institutionalizing adhoc procedures. Concerns related to quality of participation, quality of execution of public works, extent of local resource mobilisation, management of institutions and quality of service delivery. Opportunities related to development of outlier groups and participatory poverty reduction.

22.37 DSP Phase II aims to implement the initiatives identified during DSP Phase I within the prescribed time period to strengthen the process of Decentralisation and to provide a frame work for continuing the process. Phase II sought to address the mentioned needs, concerns and opportunities, for which 16 sub-themes were identified under three main Themes given in Table 22.11.

TABLE 22.11
Themes and Sub Themes under DSP

Theme	Sub-Theme
I. Gender Development in Local Self Government Institutions	1. Strengthening Women Component Plan. 2. Capacity building for Gender Planning Gender Budgeting and Gender Auditing.
II Improving the Planning Process in Local Government Institutions for sustainable and equitable management.	1 Planning for sustainable and Integrated Development and Preparation of Comprehensive Planning Manual. 2. Management of Educational Institutions. 3. Action Plan for Local Economic Development. 4 Environmental Audit of Development Schemes. 5 Planning for Disadvantaged Groups. 6 SC/ST Development. 7 Institutional Arrangements for Capacity Building. 8. Criteria for Allocation of Funds. 9 Grievance Handling Mechanisms. 10. Role of NGOs and Civil Society Organisations.
III. Institutional and Staffing Policy	1. Staffing Issues. 2. Multiple Institutions and Schemes.

22.38 Among the Sub-Themes mentioned above, Seven are approved for implementation during the Project Year-I (April 2004 to March 2005) and Four Sub-Themes are approved for Project Year-II.

Capacity Building -Kerala Institute of Local Administration (KILA)

22.39 Kerala Institute of Local Administration (KILA) is an autonomous institute under the Department of Local Self Government, Government of Kerala. KILA is the nodal agency of training, research and consultancy in the area of local governance. Major functions of KILA include training and policy oriented research activities, organizing seminars and work shops and discussion of various issues of local governance and development. Training programmes are conducted not only for the elected representatives and officials in Kerala but also for participants from other states in India and abroad. The ministry of Panchayat Raj, Government of India has initiated steps to declare KILA as a SAARC centre for Local Governance and Development.

22.40 During 2004-05, activities like sensitization of political party leaders, media persons, NGO's, training to NSS programme officers, national and international courses, training in regional languages like Tamil, Kannada, Hindi and Bengali etc. were undertaken.

22.41 Decentralized training system has been established in all the districts of Kerala. Implementing institutions have been identified in 14 districts to facilitate decentralized training programmes at district level KILA has trained a pool of 450 district level trainers to function as extension faculty members KILA offers national and international courses on Decentralisation. To meet the needs of the functionaries from other Indian States, KILA has translated several

documents on Kerala's Decentralisation into English and other regional languages like, Hindi, Tamil, Kannada and Bengali.

22.42 During the year 2005, KILA conducted a two day round table conference of MLAs of the state in strengthening Decentralisation in Kerala. National and International courses in Decentralized Governance and Poverty alleviation also were undertaken National Conference of Ministers and Secretaries of Panchayati Raj is another specialized training programme conducted by KILA during the year.

Information Kerala Mission

22.43 The Information Kerala Mission (IKM) was established in June, 1999. The project was orginated from the idea "Kerala Information Network for Local Bodies". The primary objective of IKM is to have a Plan Monitoring System for the Local Self Government Institutions.

22.44 The basic objective of the Mission is to have :

a. A Connective Networking between State Planning Board, District Planning Office, Directorates, Regional Offices and Local Self Government Institutions.
b. A regular mechanism for monitoring of Plan targets achieved by Local Self-Government Institutions over the network
c. To establish information systems to achieve accountability, transparency and efficiency in the operations of Local Self Government Institutions at various levels
d. Training programme for manpower in the hardware and software sector.
e. An integrated micro level resource based development information system for decentralised planning.
f. Technical support to ensure that the network and applications are operational.

22.45 The major achievements of the Mission is that site readiness has been achieved at 535 Grama Panchayat locations fully and 272 Grama Panchayat locations partially. Connective networking helped to use the SIU for State level reporting of plan from Blocks and Municipalities. The Mission has established a district level pilot project for integrated plan monitoring, DPC strengthening and block level help desks has been initiated. IKM has made efforts for the integration with Akshaya. It also provided a model ready for state level replication.

22.46 The Mission has made tremendous progress in the service delivery sector like Birth/Death Certificate Registration, Residence Certificate, etc. Service delivery sector has been covered by 5 Corporations, 53 Municipalities and 145 Grama Panchayats under the Mission. All the establishment matters of the Corporations and Municipalities has been operated under this system, but only one grama panchayat, Vellanad Grama Panchayat in Thiruvananthapuram District comes under this.

22.47 Mission has conducted orientation classes for 14,457 persons through various workshops. It has trained 8,865 persons on various aspects of computer use, application handling, deployment and implementation of schemes.

22.48 The landmark of the mission is the "Janasevanakendram" - a new model for the alternate service delivery. The general public is highly appreciating the functions of the Janasevana Kendram as it helps them to remit all kinds of fees, rents and taxes of Governmental and public authorities.

22.49 The major accomplishments of the mission can be summed up as:

1. Comprehensive seven volume systems manual on local body systems.
2. Sevana was awarded the CSI-TCS Award 2001 and Certificate by merit by the CSI for the best IT usage.
3. The International Tele-communication Union in the U.N. has short listed the IKM as promising initiative across the globe.
4. Human centred approach to E-governance.
5. Premises Mapping
6. Tax Mapping in LSGIs
7. Hospital Kiosk model for Birth/Death Registration.
8. Citizen Database.
9. Local level statistics.
10. One time accounts updating.

Modernising Government Programme – LSG Initiatives

22.50 The Modernising Government Programme (MGP) was drawn up as part of the government to overhaul and improve its services to the people of the state. The thrust in MGP is to facilitate public servants and elected officials to serve the citizens of Kerala more efficiently, effectively and equitably with greater accountability. One of the five themes identified under MGP is building on Decentralisation for effective, efficient and accessible Local Self Governments. Government approved Detailed Implementation Plans of 33 initiatives under LSGD. Out of these, the following initiatives have been taken up for implementation.

22.51 General Initiatives

1. Spatial Plan with focus on connectivity: To develop a database of roads and a consensus-based plan of development of roads, combining basic principles of spatial planning with the legitimate aspirations and preferences of the people, taking into account resource availability for investment as well as future maintenance costs.

2. Town and Country Planning Legislation: To prepare a draft Bill on Town and Country Planning for Kerala incorporating the best practices in spatial planning adapted to the needs of the rural and urban areas of the State, taking into consideration the issues of environment, sanitation, safety and health, facilitating participatory planning, ensuring services and transparent operationalisation of the provisions with the full involvement of local governments.

3. New Office Management System: To design a simple, transparent, consistent and computable office system for Local Governments and relevant software

4. Management Manuals: To develop management manuals for institutions transferred to local governments

5. Procurement Manual: To design a new Procurement Manual appropriate for use in local governments.

6 Public Works Manual for LSGs: To design new standards and specifications related to Public Works in tune with existing works practice and incorporating different technologies, particularly, appropriate technologies and to design a new Public Works

Manual for local governments that allows community contracting and facilitates social audit.

7 Budgeting and Accounting in LSGs - Preparation of rules and Manuals : To develop budget rules for local governments, to review/refine/supplement existing proposal for Budget Manual for local governments towards making it comprehensive and simple, to develop new forms and registers and to introduce electronic budgeting by linking local governments and treasuries on a pilot basis.

8 Resource Mobilisation by LSGs : To determine through studies a methodology for arriving at the revenue raising potential of local governments, to enable Local Governments to increase their own revenue through rationalisation of assessment methods improving efficiency of collection through simplification, building capacity of personnel in assessment and collection, designing an incentive system for revenue mobilisation and putting in place monitoring and vigilance systems, and to identify new streams of revenue through discussions with Local Governments.

9 Training Needs Assessment for elected members and officials and action plan with resource requirements produced: To make a quick assessment of the experience so far and draw lessons for the future, to assess the training needs of local government functionaries both elected and officials and to develop an action plan for human resource management in local governments.

10 Empowering/enabling Community Development Societies to assist in poverty data base and anti-poverty sub-plan : To create a detailed database on the poor which is validated by the Grama Sabha and accepted by the community and is maintained by the poor themselves, to strengthen the bottom up participatory planning for poverty reduction through the CDS system and institute a community based monitoring of implementation of the anti-poverty Sub Plan and tracking of poverty in general.

11 Social Security System for the destitutes and disabled : To evolve a realistic and sustainable social security system for the destitutes and disabled under the leadership of Local Governments which can be implemented through the net work of neighbourhood groups.

12 Community rehabilitation plans for physically and Mentally Challenged: To prepare an elaborate database on the disability pattern among people at the level of each local government to prepare participatory plan to rehabilitate the disabled under the leadership of the Local Governments with focus on community based initiatives and to establish partnership with NGOs and Philanthropic individuals to run the programmes for physically and mentally challenged.

22.52 **Studies**

1. To formulate the stakeholder needs after field study and consultation with stakeholders and Grama Sabha for developing district level sector plans for health and education.
2. To develop service and performance standards integrated into Citizen Charters.
3. To design systems for monitoring the implementation of decentralized plan programmes and schemes in LSGIs and to assess the effectiveness of reporting systems.

4. To develop indices of performance assessment and to prepare performance assessment manual.
5. To design systems of Social Audit.
6. To design index and benchmark for local government performance.
7. To compile best practices in community contracting-national and international, to design standards and specifications through field study and to identify appropriate technologies.

22.53 **Service Delivery Project**

In addition to the general initiatives and studies detailed above, MGP is implementing a fast track action research project for service delivery improvement in 8 departments including LSGD. The Service Delivery Project (SDP) seeks to improve the quality of services of 2585 institutions selected from the 8 departments. 103 Grama Panchayats, 14 Municipalities and 5 Municipal Corporations have been selected under SDP with a view to making them models in terms of service delivery.

State Finance Commission

22.54 As per Article 243-I of constitution, all the State Governments are supposed to set up their Finance Commissions once in every 5 year. Accordingly the Kerala Panchayat Raj Act 1994 gives provision for the State Government to appoint State Finance Commission in every five years constituting of members not exceeding three including the Chairman. Accordingly Government of Kerala, so far constituted three State Finance Commissions. The first State Finance Commission was constituted in 1994 and the second one was constituted in 1999. The majority of recommendations of these two Finance Commissions have been accepted by Government and they are under implementation. The Third State Finance Commission was set up in 2004 September. The commission submitted its report in November 2005.

BOX 22.13

Decentralisation and Poverty Reduction in Developing Countries

Decentralisation has been advocated by many as an important factor in reducing poverty through broadening citizen participation and improving local governance. Decentralisation and poverty reduction are not directly related. So many variables influence the success of poverty reduction strategies in a decentralized set-up. A study by OECD Development centre looks into the issue and analyse the relationship between Poverty and Decentralisation in developing countries ('Decentralisation and Poverty in Developing Countries, Exploring the impact', OECD Development Center Working Paper No. 236 August 2004). The study covers the following points.

Decentralisation has traditionally been motivated by the following two arguments:

1. Decentralisation can lead to an increase in efficiency.
2. Decentralisation can lead to improved governance.

Increased public participation, improved access to services and a more efficient way of providing public goods at the local level are major components of most anti-poverty programmes. The form and type of Decentralisation in a particular region has its bearing on the success and failure of poverty reduction strategies. Another important factor in this regard is that whether Decentralisation is carried out either by default or by design. Decentralisation by default occurs when governments are forced to decentralize inorder to counter diminishing budgetary resources or to

respond to factors like ethnic diversity. In this case the Government has neither sufficient resources nor power. When Decentralisation is undertaken by design governments have greater ability in undertaking poverty reduction programmes.

Decentralisation has political and economic impact. On the political side Decentralisation is expected to offer citizens the possibility of increased participation in Local decision making processes, from which they have generally been excluded. Improved representation of formerly excluded people in local bodies could give the poor better access to Local Public Services and Social Security Schemes, thereby reducing vulnerability and insecurity. With respect to the economic channel, Decentralisation is expected to have a strong and positive impact on poverty through increased efficiency and better targeting of services. Enhanced efficiency in service provision could directly improve poor people access to education, health, water, sewage and electricity. By delegating power and resources to the local level better targeting of the poor also is possible.

19 countries are taken for an evaluation study. From India 3 states viz. West Bengal, Andhra Pradesh and Madhya Pradesh are taken. Variables such as country background, factors related to the design of the Decentralisation process, transparent and participative process, elite capture and corruption are used for the evaluation study. Based on the performance, countries are grouped into 4 categories namely positive, some what positive, some what negative and negative In the positive performers Decentralisation is found to have had a positive impact on poverty. The process of Decentralisation has generally been supported by sufficient government ability and willingness to carryout reforms, as well as by transparency, participation and policy coherence, while in the case of negative performers Decentralisation has not shown any pro-poor impacts All countries in this category have pursued Decentralisation reforms by default. Among the 3 states taken for the study from India West Bengal is included in the positive performing category on the basis of the following features of Decentralisation.

- Accountability and transparency of Local Governments.
- Increase in participation in political decision making by the poor.
- Reduction in Social Exclusion.
- Provisions for rights of Women, Castes and Tribes in Act
- Decentralisation reform linked to a comprehensive and successful land reform.
- Improved information flow and creation of awareness

Andhra Pradesh and Madhya Pradesh are included in the list of negative performers due to the following reasons;

- Low overall participation rates in Panchayat Raj Institutions.
- Low participation of women
- Limited knowledge about roles and functions and
- Resistance of bureaucracy.

It has been found out that Decentralisation has helped some countries to reduce poverty through increase in participation, decline in Vulnerability, improved access to services but in some of the poorest countries with weak institutions and in post-conflict situations Decentralisation has had negative impacts. The study finds that Decentralisation process is more likely to have a positive impact on poverty if the

central government is committed to the purpose of Decentralisation, involved actors have the capacity to participate in decision making, checks and balances are established at local level to control for rent seeking and corruption and policies are sufficiently coherent with the Decentralisation policy.

Best Practices by Local Governments

22.55 With the introduction of Panchayat Raj and Decentralised Planning, the local governments started thinking of formulating novel schemes. Success stories/Best practices of Local Governments have been reported from many quarters of the state. Some of them are illustrated below.

1. Waste disposal– Vizhinjam Grama Panchayat (Box 22.14)
2. Raising standard of learning – Edakkad Block Panchayat (Box 22.15)
3. Mini Hydro Electric Project – Kuttampuzha Grama Panchayat (Box 22.16)
4. SUBICSHA –Perambra Block Panchayat (Box 22.17)
5. Auto Riksha Driving to SC Women – Alappuzha District Panchayat (Box 22.18)
6. Gas Crematorium – Cheriyanad Grama Panchayat (Box 22.19)

BOX 22.14

Vizhinjam Grama Panchayat – A step Towards Cleanliness

Proper disposal of Waste is highly essential and unavoidable for leading a healthy and proper life. Recent studies reveal that the organic waste has to be disposed of its origin. It is true that a centralized disposal unit is also inevitable where there is no sufficient space for decentralized disposing of organic waste. By introducing the decentralized system, a huge amount of money is now being expended by Local Governments for collection, segregation and transportation. This could be saved. With the help of Bio Methanisation, organic waste can be disposed off at its sources and thereby cooking gas and organic manure can be produced. Through the adoption of this technology, disposing the waste at domestic market, hospital and other public places is possible for which Bio Waste Treatment Biogas plants have to be installed in a decentralized manner. "Kovalam the famous tourist center is situated in Vizhinjam Grama Panchayat. To achieve total cleanliness in Vizhinjam Grama Panchayat and to prevent dumping of waste in public places, domestic bio waste treatment Bio gas plants have been installed at the houses in Grama Panchayat. By functioning these plants, organic waste could be disposed and Biogas generated. Through the use of Bio gas for cooking, shortage of cooking gas (LPG) could be solved.

BIOTECH, Thiruvananthapuram, an implementing agency working directly under MNES, Government of India, has given technical support to these projects as well as financial assistance by way of subsidy from Government of India for the successful implementation of this programme. In the 1st phase BIOTECH has installed 575 numbers of 1 Cum size domestic Biogas plants in selected houses. By installing 575 domestic plants 2.5 tones of organic waste and 5500 liter of wastewater could be disposed of daily. The anaerobic bacteria inside the plant converted the bio waste in to Biogas and Bio manure. The studies conducted by the implementing agency revealed that the gas generated from these 575 plants helped in conserving the LPG gas costing Rs. 22 lakh per year.

The project costing Rs.42.25 lakh included under Kerala Development Plan has been implemented by the Vizhinjam Grama Panchayat. For introducing this project the Vizhinjam Grama Panchayat has spent Rs. 4000 per beneficiary, BIOTECH Rs. 2300 towards subsidy and the rest of Rs. 700 was the contribution of each beneficiary. The project is functioning very well since two years.

Box 22.15

Enhancing Educational Standard - A success story from Edakkad Block Panchayat

It was considered only as an experiment, when the Edakkad Block Panchayat in Kannur District decided to implement a project meant to raise the standard of learning and the percentage of pass of students in the SSLC examination.

The project was started in 2002-03 in association with the Headmasters of the 12 High Schools of the block area, P.T.As, Mother PTA, Other Educational Officers, Officials retired from educational institutions, stake holders in the areas, elected representatives of people etc. A committee of these people was set up. The Head masters selected the students below mediocre level in their studies. They were given special tuition for 40 days. The special classes were arranged on holidays only. The teachers did voluntary job without accepting any allowance. The students attending the classes were given Rs. 3 per head per day during the 40 days for meeting their food expenses. Other expenses connected with the projects were met by the PTAs themselves. Inorder to assess the progress of their study and the benefit they received, examinations were conducted at regular intervals. A one-day workshop for the selected 40 teachers of the 12 high schools was conducted to prepare question papers. Inorder to make the students come out of the exam fear, the service of Psychiatrists was also made available in all the schools for counselling and advice.

With the result of the these concerted efforts of all concerned, the percentage of students passed in the SSLC exam was has gone up from 78 % in 2002-03 to 90% in 2003-04. The achievements made under this project attracted other Local Governments also and was found to be replicated.

BOX 22.16

Urulikuzhi Mini Hydro Electric Project - Kuttampuzha Grama Panchayat

Decentralized Planning has enabled a good number of Local Governments formulate projects aiming to utilize the unexploited natural resources. Urulikuzhi Mini Hydro Electric Project was a multi year project implemented by the Kuttampuzha Grama Panchayat under Kerala Development Plan 2002-03 for electrification of the Mamalakandam ward which is located in the central part of the forest and inhabited by 800 settlers. It takes a journey through forest about 12 Km, from the nearest road but the route to reach this area is a trodden pathway and hence not yet connected under the normal electrification of the Board.

A perennial riverlet viz. Urulikuzhithodu flowing through the Urulikuzhi Watershed has water flow for 10 months in normal season. The waterfall from 100 feet near the Mamalakonam Government Hospital provides scope for generating electricity. The project prepared was to erect a 20 KW generator to produce 2000 Watts power for the surrounding 200 families at a total cost of Rs. 8,50,000/-. The District Planning Committee approved this project to complete during 2003-04. Subsequently this project was revised with a total out lay of Rs. 18.75 lakh during 2005-06 with funds as detailed below:-

Year		Amount (Rs.
2002-03	Grama Panchayat	9,00,000/-
2003-04	"	2,75,000/-
2004-05	"	4,00,000/-
2005-06	Kothamangalam Block Panchayat	3,00,000/-
	Total	**18,75,000/-**

The work was executed by the Beneficiary Committee, which started work in 2003. Till date an amount of Rs. 9,62,900/- was expended for items of works mentioned above. Works for transmission line and house connection are on the verge of completion. Kuttampuzha has proved how a local economic development issue can be solved within the panchayat itself and how it can be done by utilizing unexploited locally available natural resources.

BOX 22.17

SUBICSHA (SUstainable Business development of innovative Coconut based micro enterpriseS for Holistic growth and poverty Alleviation) – A Project by Perambra Block Panchayat

Perambra Block Panchayat in Kozhikode District has implemented a project – a coconut based sustainable business named SUBICSHA (SUstainable Business development of Innovative Coconut based Micro EnterpriseS for Holistic growth and poverty Alleviation)

The Objective

The implementation of the project was started in 2002-03 and the activities in 2003-04. Every year, since the beginning it is getting expanded and diversified products are being introduced. The project has twin objectives, the first one being poverty eradication through women empowerment and the second one is utilization of the locally available coconut, which is abundant in supply and the variety available in that area is of superior quality.

Activities

SGSY Programme earmarks 10% of the total outlay for innovative projects. 'SUBICSHA' was implemented under this category of SGSY programme. Coconuts are collected and distributed to various units working under the projects. All units produced different value added products from coconut, ranging from food products to husk related products and from shell and shell allied products to coconut oil, handy crafts and soap.

Main Features

1. Registered as a company by name SUBICSHA COCONUT PRODUCER COMPANY LTD.
2. Single Commodity (coconut) based project
3. Separate entity and a brand name viz., SUBICSHA
4. Modern Quality Control Lab
5. Leading institutions provided Technological Know-how (IIM- Kozhikkode, Coconut Development Board, National Institute of Technology, KILA, NIRD, CPPRI Mysore, CPCRI Kasaragod, KITCO and Krishi Vigjnan Kendra Peruvannamoozhi are

the major partner institutions in technology transfer and training)

6. Produces a variety of 41 items of value added coconut based products

7. Envisages formation of 700 units of women

8. Started 300 Units and the remaining 400 are under various stages of implementation

9. 7000 women mostly from BPL families get direct employment from this project

10. Commission agents are engaged in marketing the products. Door to door distribution, retail outlets etc. are there to sell the products locally

Project Cost

1.	Government of India share	Rs. 6.05 Crore
2.	State Government	„ 2.01 „
3.	Loan from Bank	„ 4.81 „
4.	Contribution of SHGs	„ 1.14 „
	Total Cost	***Rs. 14.01 Crore***

BOX 22.18

Autorickshaw to Scheduled Caste women-Alappuzha District Panchayat

Alappuzha District Panchayat has started a project with a vision. Selection of beneficiaries with aptitude and skill and distributing assets for earning regular income are the various components envisaged in the Project.

Forty unemployed Scheduled Caste women between the age group 18-35 were selected through an interview which is transparent in all respects. They were given three months training on Autorickshaw driving and enabled them to take driving licenses. Among the license holders 25 beneficiaries were selected and helped them to obtain bank loan @ 7% interest for the purchase of Autorickshaw. Eligible amount of subsidy was also given to the beneficiaries

Financial Components

Sl No.	Items	Cost (Rs.)
1	Training in Driving (40 X 1950)	78000.00
2	Food and T A Expenses (350 X 40 X 3)	42000.00
3	Subsidy @ Rs 20,000 per Person (25 X 20,000)	500000.00
4	**Total Project Cost**	**620000.00**

The fees required to impart training in driving was given in two instalments Rs 1000 was given at the time of training and Rs.950/- was given on receipt of licenses by the beneficiaries.

The District Development Officer for Scheduled Castes implemented the Project under the supervision of District Panchayat The Welfare Standing Committee and the working group monitored the programme All the women are doing the job.

The Features of the Project:

- The Socio-Economic status of 25 Scheduled Caste Women improved
- Poverty is removed from 25 families and the Project enabled them to become self reliant.
- The connected efforts like proper training, issue of license, financial assistance, subsidy etc., have ensured sustainable job to 25 Scheduled Caste Women.
- The District Panchayat could arrange bank loan to the tune of Rs.16 lakh to the beneficiaries

and that too at a low rate of interest (7%) and easy instalments of repayment.

- The District Panchayat could arrange direct dialogue among the beneficiaries, financial institutions, vehicle sellers etc., and therefore there was no middlemen and commission.
- The beneficiaries could directly deal with all concerned and execute documents with all authorities in a transparent manner.
- The amount that could have been given by the Autorickshaw Company by way of commission was adjusted in the price and thereby cost of Autorickshaws could be reduced to that extent.

Transparency, Integration, Vision etc., are there in the Projects and it is a well knit one with all components.

BOX 22.19

Gas Crematorium-Cheriyanad Grama Panchayat

Cheriyanad Grama Panchayat in Alappuzha District is a forerunner among the Local Governments in many respects. As per the Socio-Economic survey conducted in the Panchayat, there are 2642 families having landed property below 10 cents each including 28 Scheduled Caste colonies. These families were not having sufficient land for the cremation of dead bodies. Since it was social problem the Panchayat Committee took it as a challenge to provide cremation facilities.

The Panchayat Committee decided to utilise a plot of 28 cents of land under its possession for the purpose. A project for crematorium at a cost of Rs.18 lakh was prepared and funds were mobilised from three sources - Rs.6 lakh Chengannur Block Panchayat, Rs.4 lakh from Grama Panchayat's plan grant-in-aid and Rs.8 lakh from the award received by the Panchayat for being selected as best Panchayat in the District.

The technical assistance and execution of the Project was by a firm in Ernakulam viz. 'Anijith Marine Engineers". An amount of Rs.12 lakh has so far been spent and crematorium has started functioning. The Panchayat charges Rs 1700 for each cremation and the economically weaker sections are given concession.

The Panchayat has to its credit a good number of such novel and successful projects which are well appreciated and highly praised. The Cheriyanad Grama Panchayat has proved that a dedicated Panchayat Committee can do wonders.

CHAPTER 23

SCIENCE AND TECHNOLOGY

The primary objective of the Kerala State Council for Science, Technology and Environment (KSCSTE) is to implement Science and Technology Programmes to enhance the socio- economic development as well as quality of life and environment of the State. The setting up of the State Council for Science, Technology and Environment is a significant pro-active step taken by the Government to revamp and streamline the science and technology programmes to make them more responsive to the development needs of the State.

23.2 There are six R&D Centres functioning under the umbrella of the Council viz., Centre for Earth Science studies. Rajiv Gandhi Centre for Biotechnology, Kerala Forest Research Institute, Tropical Botanic Garden and Research Institute, Centre for Water Resource Management and Development and National Transportation Planning and Research Centre. A new centre, namely, the Kerala School of Mathematics will be set up under the Council during the year 2005-06. The Council provides financial assistance as block grants under both Plan and Non Plan provisions to the R&D Centres which are constituent units of the Council and also to a few other autonomous institutions, namely Sophisticated Test and Instrumentation Centre, Integrated Rural Technology Centre, Sree Chithra Thirunal Institute of Medical Science and Technology, Malabar Botanical Garden Society etc. to implement programmes and projects relevant to them, for the benefit of the State. In addition, the Council implements a large number of wide ranging programmes for S&T promotion in the State, coordinated at the Head Quarters level and has been able to make significant progress in its short span of existence.

Biotechnology Development

23.3 In order to achieve Kerala vision in Biotechnology, Government have announced the Biotechnology Policy of the State and constituted the Kerala Biotechnology Commission and Kerala Biotechnology Board.. The Commission and the Board are functioning under the Kerala State Council for Science, Technology and Environment. The scheme focused in the following areas:-

- Support to project proposals received from different institutions in Kerala having industrial partners
- Sponsoring high quality post graduate course in Biotechnology in association with CUSAT and Kerala Agricultural University
- Funding suitable industry oriented Biotech Projects.

Kerala School of Mathematics (KSM)

23.4 'Kerala School of Mathematics (KSM)' is being set up as a joint initiative of Department of Atomic Energy (DAE), Government of India and Kerala State Council for Science, Technology and Environment (KSCSTE), Govt. of Kerala. The main purpose of the School is to promote mathematical studies and research in the country in general and the state in particular. The School will be run as a national facility Centre, at the same time contributing to the development of mathematical studies in Kerala. The academic community will comprise of eminent Professors, distinguished Mathematicians, PhD and Post Doctoral scholars. The Campus of the School will have a first rate library, classrooms, conference halls, hostels, guest house, and staff

quarters. The school will function as an Institution of KSCSTE during the financial year 2006-07 onwards.

Performance of the Council

Sastraposhini

23.5 Sastraposhini is a programme aimed towards strengthening of science education in the schools of Kerala. During 2004-2005 model science laboratories were set up in all the 60 government high schools of Palakkad district. Also14 model science laboratories, one in each revenue district, were established as teachers training centers. Fourteen Sastraposhini teachers training centers, one in each revenue districts were established.

Research Fellowships

23.6 The research fellowship scheme is meant to promote research career in science and engineering among bright students. During 2004–2005, fellowships were awarded to eighteen students.

Scheme for the Augmentation of Research & Development (SARD)

23.7 This programme envisages providing financial assistance to strengthen suitable research laboratories in the state. So far, financial assistance is extended to 21 laboratories. During 2004 – 2005, 18 laboratories were augmented.

Environmental Monitoring Project

23.8 The KSCSTE has taken initiatives for developing an environmental monitoring programme in the State, which operates on a regular basis and detects trends before they manifest as disasters.

23.9 During 2004-2005 , Discussions were held with R&D centers, University Departments and other stake holders including NEERI as consultants.

Year of Scientific Awareness (YSA – 2004)

23.10 The main aim of this project was taking science into masses and bringing the masses closer to understanding the gains of science and technology.

23.11 During 2004-2005, as per the guidelines of the scheme, State level Steering Committee and an implementation committee were constituted.The programme has been implemented primarily through thirty six Sasthraposhini schools. Besides, eight other institutions were involved in conducting the programmes at the District level.

State of Environment Report (SoER)

23.12 The Ministry of Environment and Forests, Government of India has launched a scheme during the 10th Five Year Plan to assist State Governments to bring out on a regular basis a status report on the environment in their respective states.

23.13 During 2004-2005 the State of the Environment Report Kerala 2005 has been released on 5th June 2005 by the Hon'ble Chief Minister, Government of Kerala. The report of the II Phase is being worked out.

ENVIS Centre

23.14 ENVIS Centre is meant to create a database on different environment related topics of Kerala by collecting secondary data from Government agencies, R&Dcenters, universities and other NGOs. During 2004-2005, a separate website has been created. Data pertained to coastal

management has been collected and made available in the website. Further, collection of data on other aspects of environment is being carried out.

World Environment Day - 2005

23.15 The World Environment Day 2005, has been celebrated on 5th June, 2005 with lot of activities which include school level competition, lectures, panel discussions etc.

Science Research Scheme

23.16 The programme is aimed to give assistance in the form of grants to Scientists and Technologists working in S&T with particular relevance for scientific/research work to the State of Kerala in the economic and industrial development During 2004-2005, 42 projects were approved.

Seminar/symposia/Workshop and Student Project

23.17 Financial assistance under this scheme is granted to professional bodies/ groups/organization for holding seminars/ Symposia/ Workshops/ Training programmes and student projects of scientific, technological and environmental importance. During 2004-2005,97 applications approved

Patent Information Centre - Kerala

23.18 Patent Information Centre Kerala, working under Kerala State Council of Science, Technology and Environment functions with the objectives to create awareness about IPRs, especially patents in the state of Kerala and neighbouring region of this centre and enable patent searches for the universities, industries, government departments and R&D institutions in the State and around, to analyze the patent information on a regular basis and suggest new programmers for R&D based on such information and to guide the inventors in respect of patenting their inventions.

23.19 During 2004-2005 Patent Information Centre Kerala hosted Seventh All India Interactive Meeting of Patent Information Centres. To create awareness on Intellectual property rights Patent Information Centre, Kerala conducted Workshops on Patent Awareness in different parts of the state

Research and Development Centres

Centre For Earth Science Studies

23.20 CESS undertakes Research and Development in different areas of earth systems studies. The research work includes studies in Paleomagnetism, Natural Hazards, Coastal Zone Management and Use of Resource Studies for Local Planning.

During 2005 Studies/ projects conducted on

- Geodynamics & Crustal evolution (Palaeomagnetism and geochemistry)
- Natural hazard management
- Natural resources management
- Integrated Coastal zone management
- Environmental Studies

Rajiv Gandhi Centre For Biotechnology (RGCB)

23.21 Rajiv Gandhi Center for Biotechnology (RGCB) is Kerala's flagship for Biotechnology Research & Development. Its vision is to translate biotechnology to deliver improvements in human health and well being, safer and more globally competitive spices & nutraceuticals, industrial growth through biotechnology and Human resource development.

23.22 During 2005, Studies/ Research works carried out on

- Molecular Medicine (cancer research, genetics, protein chemistry and medicinal plant biotechnology.)
- Molecular Endocrinology And Reproduction Program (understanding sex hormone action, sperm development and embryo-uterine interactions at the molecular level)
- Molecular Microbiology Program
- Cancer Biology Program
- Neurobiology
- Plant Molecular Biology Program

Centre For Water Resources Development And Management (CWRDM)

23.23 The projects of CWRDM are mainly concerned with surface and groundwater hydrology, soil and water conservation, wetland studies, operational hydrology, and integrated river basin management.

23.24 The major Projects/Programmes taken up during 2005are

- Establishment of a comprehensive data bank on both quantity and quality characteristics of the water resources wealth of Kerala
- River basin level assessment of both surface and groundwater resources of Kerala considering both quantity and quality characteristics
- Sustainable development and management of surface water and groundwater to meet both consumptive uses in irrigation, domestic and industrial sectors and non-consumptive uses in hydropower and inland navigation sectors.
- Impact assessment of water related environmental problems and developing proper management strategies to overcome those problems
- Developing water management strategies for enhancing agricultural production
- Community participation in water resources development activities
- In-service training of professionals working in government departments and institutions coming under water and related land resources sectors
- Infrastructure and human resources development

National Transportation Planning And Research Centre (NATPAC)

23.25 The thrust areas approved by the Research Council of NATPAC for the next 3 to 5 years are (i) Inland Water Transport System, (ii) Road Safety, (iii) Infrastructure development, (iv) Use of locally available and new materials for road construction. The following are the studies/projects/programmes conducted during 2005

- Intelligent Transportation System – A Status Report
- Fare Policy and Pricing of Public Transport Services – A study of stage carriages in Kerala
- Integrated Rural Accessibility Plan – Case Study of Attappady block in Palakkad District

- Traffic Engineering and Management Plan for Selected towns in Kerala
- Socio – economic impact of rural road connectivity programmes in Kerala
- Development of Geographical Information System for the canal system of Kerala
- Policy and Action Plan for Vulnerable Road Users
- Establishing Road Safety Auditing (RSA) System for Kerala
- Study on drunken driving in Kerala
- Study on Integrated development of Rural roads – A case study of Palakkad District

Tropical Botanic Garden Research Institute (TBGRI)

23.26 TBGRI is devoted to conservation and sustainable utilization of tropical plant wealth and is a National Centre of Excellence for in-situ conservation of tropical plants.

23.27 During 2005 Studies/ Research works carried out on

- Plant Biotechnology Division and Bioinformatics
- Standardisation Of Tissue Culture Techniques And Mass Production Of Ornamentals.
- Micropropagation Of Commercially Important Banana
- Protoplast Mediated Genetic Improvement In Some Economically Important Plants
- Induction and phytochemical investigations of normal and hairy root cultures of Decalepis arayalpathra
- Ex-situ Conservation and Sustainable Utilization of Rare, Endemic and High-Value Medicinal plants o southern Western Ghats
- Cultivation of high value medicinal and aromatic plants through conventional and non conventional methods for empowerment of rural women in the selected localities of Kerala
- Microbiology /Phytochemistry /Conservation Biology /Ethnomedicine & Ethnopharmacology Division

Kerala Forest Research Institute (KFRI)

23.28"To become a Centre of Excellence in Tropical Forestry to provide scientific backbone for effective conservation of forest ecosystem and sustainable utilisation of natural resources for ensuring benefits to the society at large " is the Vision of KFRI.

23.29In Kerala Forest Research Institute (KFRI) all the research activities and programmes are undertaken under the following major themes.

- Sustainable Natural And Plantation Forest Management
- Forest Protection
- Forest Ecology &. Biodiversity Conservation
- Biodiversity Evaluation and conservation of Fragile ecosystem
- Forest Utilisation
- Forestry and Human Dimensions
- Forest Information Management System

Regional Cancer Centre , Thiruvananthapuram

23.30 Regional Cancer Centre, Thiruvananthapuram was established in the year 1981 as an institution registered under the TC Literary Sciencefic and Charitable Societies Registration Act 1955. It is one of the Regional Cancer Centres sponsored and formed jointly by the Government of India and Government of Kerala. Patients from all over the state and from adjoining areas are referred to Regional Cancer Centre for treatment. The number of newly registered cancer patients annually comes to 10000.

Existing facilities of RCC

23.31 Existing facilities of RCC are

1. Impatient bed strength is 300
2. For providing special care to incurable patients, a palliative care unit is functioning in the centre
3. The top-floor of the multistoried building is set apart for scientific and research activities. The research laboratories occupy an area of 15000 sq.ft.
4. A library with local area network & digital library with internet access is available.
5. There is an active cancer registration programme, which provides data on cancer pattern and trends which are useful for cancer control activities and cancer treatment
6. With the assistance of Government of India a telemedicine net work had been set up.

Human Resources Development

23.32 Paramedical courses for Cytotechnologists, Cytotechnicians and Nursing Assistants are conducted regularly. Training of medical officers in cancer control activities, Palliative care, Ultra Sonography etc are conducted periodically. Thirty-five research students are now under the guidance of the faculty of the Centre for Ph.D and twenty nine scholars got PhD during the last year.

International/National Recognition

23.33 Regional Cancer Centre, Thiruvananthapuram has won appreciation from National and International Institutions as may be seen from the following.

a) WHO declared the centre as a collaborating centre for cancer control in developing countries in 1996.
b) WHO has also selected the centre as a centre for providing training in cytopathology, radiotherapy etc.
c) Regional Cancer Centre is one of the institutions in Kerala recognized by Ministry of Health and Family Welfare as a Centre of Excellence.
d) IRAC, a unit of WHO has selected the centre, to establish an International School of Colposcopy to train Gynaecologists and other specialists selected from developing countries.
e) UNFPTA has entrusted Regional Cancer Centre to conduct an "Operation Research Project on Cancer Control" in North Kerala.
f) Dept of Science and Technology has also selected the Centre to receive FIST grant (Fund for Improvement on S & T Infrastructure).
g) Ministry of Health and Family Welfare has accorded sanction for research and development on ISM&H.
h) Dept. of Science and Technology of Govt. of India has recognized the centre as a scientific and research organization
i) The Board of National Examination has recognized RCC for conducting Dip. NB courses in various disciplines in oncology related subjects

Kerala State Pollution Control Board

23.34 Kerala State Pollution Control Board is functioning under the Government of Kerala in the Health and Family Welfare Department. The main achievements of the Board during 2004-05 and upto 30.9.2005 are as follows:

- Board has been able to bring more than 1500 hospitals under the ambit of the Bio-Medical Wastes (Management and Handling) Rules.

- Resolved pollution problems through technical advice in respect of Phillips Carbon Black Limited, Merchem Limited, Cochin Minerals and Rutiles Limited and Hindustan Newsprint Limited.
- Effective steps have been taken against the Hindustan Coca-Cola Limited, which was improperly disposing hazardous wastes.
- Quality of ambient water and ambient air is constantly monitored from various stations through out the State.
- In order to prepare the local Governments to scientifically dispose municipal solid wastes, a MODEL municipal solid waste management plant is being set up at Kozhikode with the technical and financial assistance of the Board. The Board is giving full support and co-operation to the activities of the Clean Kerala Mission.
- Proposal for setting up model solid waste management plants were prepared to Kalpetta and Alappuzha Municipalities and submitted to the Ministry of Environment and Forests for funding.
- An amount of Rs. 18.45 crore has been released by the Government of India to the Government of Kerala for cleaning Pamba River and this is based on the Action Plan prepared by the Board.
- A common bio-medical waste treatment and disposal facility could be got implemented at Palakkad, through Indian Medical Association, for disposal of bio-medical wastes generated in hospitals.
- Training programmes on scientific disposal of hazardous wastes, municipal wastes and bio-medical wastes were organized for the benefit of general public and user agencies.

CHAPTER-24

GOVERNANCE

'Government' and 'Governance' are distinct terms: "Government is an institutional superstructure that society uses to translate politics into polices and legislations while Governance is the outcome of the interaction of the Government, the public service and the citizens throughout the political process, political development, programme design and service delivery. Governments are specialized institutions that contribute to governance. Governance refers to the relationship between civil society and the State, between those who rule and those who are ruled, and between the government and the governed"*

BOX-24.1
Government vs Governance

Government	Governance
Superstructure	Functionality
Decisions	Processes
Rules	Goals
Roles	Performance
Implementation	Coordination
Outputs	Outcomes

Source: E-Governance, by P.Panneervel

24.2 Governance is the link between Government and its broader political, administrative and social environment. It deals with the functional aspects or activities and is concerned with long term processes rather than immediate decisions.

24.3 UNDP defines governance as an exercise of economic, political and administrative authority to manage a country's affairs. Good governance is participatory, transparent and accountable to the people. World Bank defines governance as 'The manner in which power is exercised in the management of country's economic and social resources'.

24.4 There are three distinct dimensions of governance.

- The form of political regime;
- The process by which authority is exercised in the management of the country's economic and social resources; and
- The capacity of governments to design, formulate and implement policies and discharge functions.

* *E-Governance, by P.Panneervel*

Box-24.2
Conceptualizing Governance

UNDP: Governance is viewed as the exercise of political, economic and administrative authority in the management of a country's affairs at all levels. It comprises mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and meditate their difference.

Commission on Global Governance:

Governance is the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and co-operative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest.

Mahbub ul Haq Human Development Centre:

Governance must enable the state, civil society and the private sector to help build capacities, which will meet the basic needs of all people, particularly women, children and the poor. It requires effective participation of people in state, civil society and private sector activities that are conducive to human development.

Source: Gujarat Human Development Report - 2004.

24.5 Good governance is a necessity for development and poverty reduction. Key institutional and capacity elements of good governance are comprehensive legal frame work defended by an impartial and competent judicial system, accountable, open and transparent executive decision making coupled with a capable, flexible and efficient bureaucracy, and strong civil society participation.

Box-24.3
Good governance - for what?

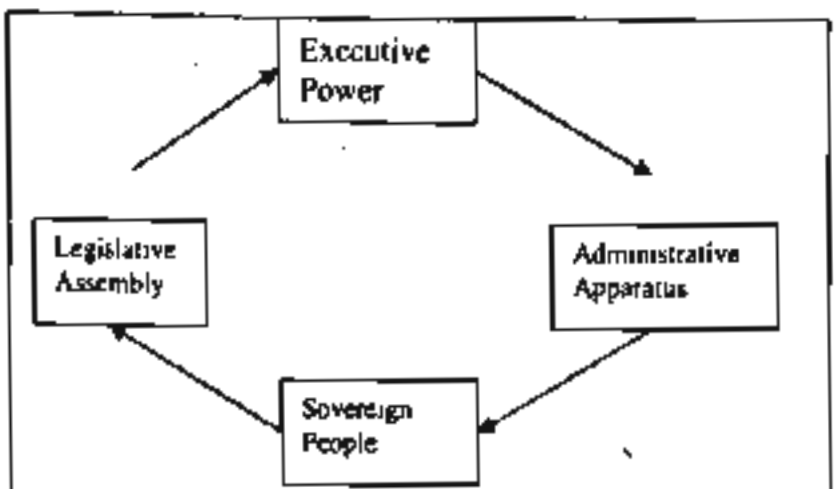
From the human development perspective, good governance is democratic governance. Democratic governance means that:

- People's human rights and fundamental freedoms are respected, allowing them to live with dignity.
- People have a say in decisions that affect their lives.
- People can hold decision - makers accountable.
- Inclusive and fair rules, institutions and practices govern social interactions.
- Women are equal partners with men in private and public spheres of life and decision-making.
- People are free from discrimination based on race, ethnicity, class, gender or any other attribute.
- The needs of future generations are reflected in current policies.
- Economic and social policies are responsive to people's needs and aspirations
-
- Economic and social policies aim at eradicating poverty and expanding the choices that all people have in their lives.

Source: Gujarat Human Development Report - 2004.

24.6 Good governance ensures effective property rights and contract enforcement without excessively restrictive and arbitrary regulatory structures. In essence good governance means a system in which public power and public wealth are used only for public welfare.

Box-24.4



The parliamentary governance chain

Source. Governance in Public Administration by Anne Metti Kjaer

24.7 The Tenth Five Year Plan of India recognized the importance of good governance in delivering development. The focus of good governance efforts is on increasing transparency, reducing administrative corruption and improving service delivery especially to the poor and weaker sections.

24.8 Government of Kerala has also given thrust to Governance reforms. The Governance reforms programme of Kerala, viz.Modernizing Government Programme (MGP) has been started in 2002.

A. MODERNISING GOVERNMENT PROGRAMME

24.9 The Modernising Government Programme (MGP) is conceived as a comprehensive reform package for overhauling Government towards enhancing transparency, efficiency and effectiveness in delivery of services. In implementing this scheme, Government have made a radical departure from the conventional, emphasis on results and outcome as against the usual emphasis on activity based management. In doing so, careful attention has been bestowed on fostering decentralized planning hitherto undertaken in the State

24.10 Kerala has followed a unique trajectory of decentralization of powers to the Local Governments. The State adopted the path of participatory local level planning with Government spearheading development activities on a campaign mode. The Local Self Governments have become rich in experience and are now focusing on identifying critical gaps for implementing their emerging needs and priorities. MGP has reinforced the decentralization of powers and functions of LSGs in the State.

24.11 The theme wise list of initiatives undertaken under MGP are given below:

Theme	Number of Initiatives
Theme 1. Minimum Needs Programme	28
Theme 2: Enabling Environment for Economic Growth and Employment Generation	15
Theme 3 Fiscal Sustainability	7
Theme 4: Core Government Functions	17
Theme 5: Effective, efficient and Accessible Local Governments	33
Total	**100**

Some of important Initiatives undertaken are detailed below.

1. Simplification of Rules and Procedures –

24.12 Simplification of Rules and Procedures is one of the objectives of MGP Initiatives. Implementation of the same are being taken up in the areas of Review of licensing and regulatory framework, New Office Management systems and Procurement Manuals for LSGs etc and Technical Assistance of experts has been arranged through Procurement Service Provider (PSP) to facilitate simplification of Rules, Manuals, Codes and Procedures in Government.

Sl. No	Initiative	Objective and Methodology
1	Action Research Project through Beacon Panchayats	The objective is to free beacon local governments from existing rules and regulations to enable them to experiment and develop new systems and procedures in identified areas and to draw lessons from these experiments to be incorporated into the existing procedures and systems adhering to the basic principles of simplicity, transparency, people friendliness, efficiency and accountability.
2	New Office Management Systems under MGP	The objective is to design a simple, transparent, consistent and accountable office system for local governments and to develop software relevant to the new office management system
3	Management Manuals	In order to improve the performance of institutions transferred to local governments, it is intended to prepare comprehensive management manuals on the lines of the election manual to help both the elected council and the professionals to understand their rights and responsibilities very clearly and to enable them to run the institutions efficiently. The manuals would have two parts; the first part would deal with rules and procedures, which have to be observed compulsorily. The second part would contain suggestions drawn from theory and experience for preparation of manuals for hospitals and schools.

4	Procurement Management under MGP	The procurement system in Local governments is governed by the Stores Purchase Rules. However, these rules are designed for a centralized system. Therefore, there is an immediate need for preparation of a new procurement manual which is appropriate to the Local Government situation and which facilitate accountability and transparency.
5	Public Works Manual for LSGI under MGP	The objective of the programme is to design new standards and specifications related to Public Works in tune with existing works practice and incorporating different technologies, particularly, appropriate technologies and to design a new public works manual for local governments that allows community contracting and facilitates social audit.
6	Preparation of new budget manual and Account Manual for LSGI under MGP	The budget system in local governments has not been modified after transfer of powers and responsibilities. Similarly the accounting system has also become inappropriate to the new demands. The second Finance Commission has conducted a detailed study in this respect and draft manuals Auditors of India. These have to be validated in consultation with stakeholders and experts and operationalised in selected local governments. Also the necessary softwares have to be developed for application of Information Technology, Budgeting and Accounting.
7	Simplification of rules for faster implementation of decision of Government	In order to make Government operations faster and efficient, the following rules have been identified for review and reform. 1. Kerala Service Rules 2. Kerala Subordinate Service Rules 3. Kerala Financial Code 4. Kerala Treasury Code 5. Rules of Business 6. Secretariat Manual 7. District Office Manual 8. Manual of plan Implementation 9. Procedures for Administrative Sanction 10. Procedures for Technical Sanction More than mere amendment of such rules, a business process re-engineering approach would be applied to enhance the process of change in Government. The scheme would be implemented in consultation with stakeholders and experts and after studying the best practices in other parts of the country. The scheme will be implemented through the Department of Personnel and Administrative Reforms.

2. Participatory Planning and Implementation

24.13 MGP has acknowledged the primacy of participative processes of Plan Formulation and Implementation at the grass roots level. Mechanisms of Social Audit and surveys of public expenditure have been identified and being implemented as part of the following MGP initiatives.

Sl. No	Initiative	Objectives and Methodology
1	Poverty Co-ordination Unit under MGP *	A policy decision has been taken to change over from identifying people below poverty line on the basis of income criterion alone to a system which combines a number of non – monetary indicators of poverty with appropriate weightages for each criterion. This index is to be evolved and finalised with the full participation of people below poverty line as well as other stake holders, academic experts, activists in the field of poverty reduction, local government leaders etc. The components of the scheme would be: 1. Developing an entitlement index after widespread consultation 2. Validating the BPL data using the Neighbourhood Groups under the CDS System 3. Applying the index and categorizing families according to severity of poverty. Restructuring of the subsidy regime in tune with entitlements based on severity of poverty.
2	Poverty data base and maintenance under MGP *	In order to ensure that poverty is properly tackled and the funds meant for the poor actually reach them, multi-pronged strategy of monitoring consisting of the following elements is to be put in place. 1. Community Based Monitoring through Neighbourhood Groups of the Poor. 2. Improved IT enabled monitoring through official channels 3. Independent monitoring by institutions and organizations of proven capability. 4. Conduct of policy studies on different poverty groups and localities having higher incidence of poverty. Conduct of evaluation studies on selected anti poverty initiatives.
	Design and Implementation of Results Based Planning System	Over the years the planning process has tended to get routinised. Many a time when plan schemes are approved only a vague conceptualization of what is intended exists. This leads to long delays in working out detailed proposals and sometimes leads to deviation from the basic objective. Now that the Budget cycle has been modified to fully approve the budget before the end of the previous financial year, in order to facilitate schemes to be

		implemented straightway the plans have assumptions and risks etc. This would result in realistic determination of allocation, proper monitoring of implementation and timely correction in the event of slippages. Therefore a result based planning system would be introduced in phased manner. During 2004-05,four departments were identified namely Animal Husbandry, Fisheries, Health(Alopathy), and Social Welfare under this scheme. In the current financial year (2005-06) eight more departments viz.Health (Ayurveda & Homeopathy), Public Works, Forest, Industries (Village Industries), General Education, SC department, ST department and Irrigation have also been identified.

** As per G.O (Rt) 413/2004/Plg. Dated 4.11.2004 the components of these two initiatives were entrusted to Kudumbasree.*

3. Fiscal Sustainability and Accountability

24.14 MGP has identified new budgeting and accounting strategies for ensuring fiscal sustainability and accountability by ensuring better accounting practices. Following initiatives were implemented to achieve above goals.

Initiatives

1. Rescheduling of Budget Preparation
2. Indicative Ceilings in Budget Circular
3. Rolling Three Year forward estimates
4. Liability Management System
5. Pre-determined flow of funds to Spending Departments
6. Supplementary Demands reduced
7. Audit Reports of Accountant General – Prompt Action

4. Replication of Best Practices

24.15 MGP has documented a shelf of best practices covering cost effective, time effective and quality oriented micro models through LSGIs. The best practices are being institutionalized through study and documentation, and adoption of framework for capacity building of Local Institutions for replication.

Initiative	Objectives
1. Replication of best practices under MGP	The objective is to document success stories in local development to disseminate information on projects of excellence and best practices and institutionalize micro models and best practices through replication.

5. Service Delivery Project

24.16 Service Delivery Project (SDP) is one of the fast track projects under MGP to improve the quality of services delivered by Government to the people of Kerala, particularly the poor. 2605 institutions under eight departments having high levels of Government – Citizen-interface have been selected. They are given below:

Sl. No	Name of Institutions	Number of Institutions
I	**Health Department**	
	District Hospitals	4
	Taluk Hospitals	14
	Primary Health Centres	99
	Community Health Centres	17
II	**Revenue Department**	
	Collectorate	14
	Taluk Offices	63
	Village Offices	506
III	**Registration Department**	
	Sub-Registrar Offices	69
IV	**General Education Department**	
	VHSE	28
	HSE	56
	High School	56
	UP School	56
	LP School	224
V	**LSG Department**	
	Rural Grama Panchayats	103
	Urban Municipalities	14
	Urban – Municipal Corporations	5
VI	**Food and Civil Supplies Department**	
	Taluk/City Rationing Offices	69
VII	**Home Department**	
	Police Stations	57
VIII	**Social Welfare Department**	
	Old age homes	14
	Other Welfare institutions	34
	Anganwadies	1102
IX	**Secretariat**	1

24.17 In addition to the above, the following five new initiatives have been included under Service Delivery Project:

(i) Normative Manpower Study
(ii) Base Line and Citizen Survey
(iii) Certification Programme for Master Trainers and Trainers
(iv) Quality Initiatives
(v) Training Programmes for all Staff of all Institutions covered under SDP

24.18 As a part of implementation of Service Delivery Project, detailed institutional plans have been prepared and incorporated in the formulation of Annual Plan proposals in the interest of sustainability. The SDP Plans are linked to plan integration process of the departments in a manner that the development budget of the departments is focused on delivery of quality services.

a) Major Achievements of SDP

i) Uniform for Students of the selected schools under the Scheme

24.19 Under SDP, Uniforms and Text Books were issued to all students of selected schools before school reopening.

ii) District Collectorate Suite

24.20 DC SUITE, a software programme designed to computerize the work flow in the collectorate aimed at fast file processing and quicker decision making was successfully implemented at Palakkad Collectorate. DC SUITE is a major Service Delivery initiative of the Revenue Department intended to enhance the efficiency of District Administration through Computerisation and networking the activities of Collectorates. National Informatics Centre is the implementing agency of this programme.

iii) Hospital Kiosk Project

24.21 The novel concept "Hospital Kiosk", a State Level Service Delivery Project initiative has been formally launched in the State at General Hospital, Kochi. The concept of Hospital Kiosk was emerged as a faster solution to the issuance of birth and death certificates within 24 hours of reporting the event from the hospitals.

iv) Integrated Personnel & Payroll Management System

24.22 Pilot Phase of the Integrated Personnel & Payroll Management System, has been successfully launched in Finance Department, Government Secretariat by processing the establishment salary bill for March, 2005. The System was developed by National Informatics Centre for Government of Kerala

v) Police Portal For Community Interaction

24.23 The portal will serve as a mechanism for effective asynchronous interaction between Police and Citizens. Every citizen can submit online complaints to any police officer. This will be useful in helping the public come forward with complaints relating to matters of general concern. There is an open discussion forum, wherein a citizen can discuss any problem, give ideas and suggestions. In addition to this, there are restricted discussion forums in which representatives of the Resident's Associations and the local police officers hold regular discussions to identify and find solutions to problems. In order to encourage citizens to come forward and share information with the Police fraternity, a facility has been created for citizens to register as informants and share confidential information. They will be able to do that while keeping their identity confidential.

b) State Training Policy

24.24 As a part of the State Training Policy, the State Government views Training as an obligation towards its employees and has decided to earmark 0.5 % of the plan budget for training in each Department. Following initiatives are being implemented with the objective of capacity building in Government Departments.

Sl. No	Initiative	Objectives and methodology
1	Capacity building in financial management for LSG and relevant community organizations	Human Resource Management in local governments covers human resources available in them as well as those from the transferred institutions. There is a need to evolve an integrated HR strategy to address placement and capacity building. To start with, it is proposed to focus on capacity building for improved financial and general management since it is the most critical element in the process of enabling Panchayats and Municipalities to grow into efficient local Governments. It is planned to implement the initiative by:- 1. Accessing expertise from outside. 2. Assessment of the requirement of human resources for financial and general management in local Governments. 3. Training the trainers and training of personnel. Implementation of new rules, procedures regarding financial and general
2	Comprehensive training programme for civil servants	The State has approved a training policy. The training contemplated includes: ➢ Introduction training at the time of entry into service ➢ In-service training at suitable intervals during career progression, preferably once in five years. ➢ Promotion linked training of one month duration either before or after promotion ➢ Short duration exposures ➢ Reskilling consequent to redeployment of employees The thrust areas identified under the policy for training are Information Technology, Decentralized Planning and Development, Governmental Machinery, Management topics and Departmental topics. Additional funds will be authorized if required in the course of implementation
3	Capacity Building of Finance Department	Budgetary reform, especially in resource allocation, is a powerful driver of wider public sector reform with focus on the reform of Central policy , planning and budgeting systems. A key element of the approach is to strengthen the capacity of the Finance Department in the Secretariat to make strategic choices and lead in financial and policy discipline. Methodology is for imparting training to staff of Finance Department in consultation with IMG, CMD, CDS, CTS etc. and MGPM.

4	Capacity Building of Secretariat Departments, Commercial Taxes and other Departments	Objectives is to impart training to staff of Commercial Taxes Department and other departments in Secretariat in consultation with IMG, CMD, CDS, CTS etc. and MGP Mission and the improvements of working environment in the Secretariat Department.

24.25 The total outlay for MGP during the last two years is Rs.942.85 crore and total expenditure comes to Rs.417.75 crore. The year wise outlay and expenditure are given below.

(Rs. in crore)

Year	Outlay	Expenditure
2003-04	487.35	239.27
2004-05	455.50	178.48

24.26 The major sectors for which the above expenditure incurred are: Community Development and Panchayat, Major and Medium Irrigation, Medium and Large Industries, Information Technology, Medical and Public Health, Urban Development, Labour and Labour Welfare, Social security and welfare and Secretariat Economic Services

c) Sevana Mudra

24.27 The State Government has announced an award system called Sevana Mudra under the SDP, whereby, well performing institutions focusing on the tenets of their Service Delivery Policy will be duly recognised. The recognition will have twin objectives of providing the needed impetus for the performing institutions and encourage others to emulate the well performing institutions. Currently, 42 institutions from Education, Health, Revenue, Food and Civil Supplies and Social Welfare are pursuing the Sevana Mudra initiative. The initiative would cover additions to the existing infrastructure and capacity building for the employees and clients. The institutions have already completed consultation process with the clients to identify the services and have arrived up mutually agreed service standards.

24.28 MGP has thus been launched as a bold step forward for Government to reverse the decline over the past in its fiscal and administrative performance. It is more than a reform programme - it is a paradigm shift in the way Government transacts its business with the citizens.

B. E-GOVERNANCE

24.29 Information Technology has brought revolutionary changes in every walk of life. It has accelerated the pace of globalization. E-government is the application of Information and Communication Technology (ICT) to improve efficiency and accountability of government, whereas, E-governance depends on the use of ICT by mobilising government resources, and utilising with internal information resources by the government employees with the help of citizens' acceptability to the changes taking place to provide better services to them.

BOX -24.5

How can E-Government Impact Good Governance?

Good governance goals	How e-government can help
Increasing Transparency	• Dissemination of government rules and procedures; citizen's charters; government performance data to wider audience. • Disclosure of public assets, government budget; procurement information. • Making decisions of civil servants available to public
Reducing administrative corruption	• Putting procedures online so that transactions can be easily monitored. • Reducing the gatekeeper role of civil servants through automated procedures that limit discretionary powers. • Eliminating the need for intermediaries
Improving service delivery	• Less time in completing transactions. • Reduction of costs associated with travel for citizens to interact with government. • Improving government's ability to deliver service to larger segment of population.
Improving civil service performance	• Increased ability of managers to monitor task completion rates of civil servants. • Improved efficiency of civil servants by automating tedious work. • Increased speed and efficiency of inter - and intra -agency workflow and data exchange. • Eliminating redundancy of staff
Empowerment	• Providing communities with limited or no access to government with a new channel to receive government services and information. • Reducing the brokerage power of intermediaries.
Improving government finances	• Reducing cost of transactions for government processes. • Increasing revenue by improving audit functions to better track defaulters and plug leakages by reducing corruption. • Providing better control of expenditure.

Source: Subash Bhatnagar: E-Governance from Vision and Implementation.

24.30 E-governance can also be defined as the application of electronic means in the :

- interaction between government and citizens and government and businesses, and
- internal government operation to simplify and improve democratic, government and business aspects of the governance.

BOX-24.6
E-government vs E-governance

E-government	E-governance
Electronic service delivery	Electronic consultation
Electronic workflow	Electronic controllership
Electronic voting	Electronic engagement
Electronic productivity	Networked societal guidance

Source: E-Governance, by P.Pounneervel

Objectives of E-governance

24.31 The main objectives of an E-governance are:

- to provide the citizens access to information and knowledge about the political process, services and choices available;
- to make possible the transition from passive information access to active citizen's participation by
- informing the citizens,
- representing the citizens,
- encouraging the citizens to vote,
- consulting the citizens ,and
- involving the citizens, and
- to make the system more efficient, more effective, and improve government process.

24.32 The Central and State governments promote the E- Governance in education, health, poverty eradication and providing public utilities. Kerala ranks second among the Indian States in the matter of progress achieved in E -governance Initiative

The Details of E-Governance activities of the State Government.

24.33 Government of Kerala acknowledges the critical importance of Information Technology as an instrument for the State's overall development and committed to its use, both as a crucial engine of economic growth and as a tool for increasing productivity, speed and transparency in governance and improved quality of life for the common man.

24.34 The following are some of the major E-governance initiatives of the state that promises delivery of service in a more simple, efficient, accountable, responsive and transparent manner.

FRIENDS

24.35 FRIENDS is a single window 'no queue' integrated remittance centre where the citizens can pay utility payments to the Government under one roof at no extra cost. FRIENDS Janasevanakendrams are currently operational in all the district head quarters of the State (See Chapter 21).

DC Suite

24.36 As mentioned in pare 24.20,with the total Computerisation of the Collectorate, Palakkad became the first IT enabled District Head Quarters in the country. It covers 21 functional areas of Colelctorate, and includes electronic file management system, revenue recovery management, public grievance monitoring system, etc. Information is made available to public through touch screen kiosks, interactive voice response systems etc. This project is proposed to be replicated in other districts soon.

Smart Move

24.37 The Motor Vehicles Department offers several Citizen centric services. Tne department has implemented the software 'Smart Move' in three districts, viz; Thiruvananthpauram, Ernakulam and Kozhikode with the intention to roll out solutions across the State. This system enables the department to offer Test on any working day, issue of license immediately on passing the test and selection of test date by the applicant. It avoids scope of manipulation and favour while issuing registration number and helps in accurate tax and fee calculation.

TRIMS

24.38 The 187 treasuries across the state handle more than 70 lakh chalans, 50 lakh bills and stamps worth Rs.350 crores every year, around 4 lakh direct pensions and 1.5 lakh money order pensions which are disbursed every month. To streamline the working of all treasuries the E-governance project TRIMS is implemented in the State. Benefits include, all activities from bill submission to automated payment and accounting any bill any counter system, teller system, single window system for speedy disposal, automated DA arrear processing, payment with in fifteen minutes etc.

THOZHIL

24.39 "Thozhil" is implemented in seven offices out of the 94 Employment Exchange Offices. Computerisation will be completed in the near future. This project provides facilities for online renewal of registration, addition of experience certificate, addition of personal details, search for vacancies posted by private employers etc. There is a provision for employers to register and post vacancies to attract suitable applicants.

PEARL

24.40 Package for Effective Administration of Registration Laws (PEARL) is implemented in the Registration Department. On an average, about 15 lakh documents are registered per annum in the State and about 10 lakh Encumbrance certificates are issued. Feature of PEARL include, Automation of Sub Registrar Offices, Registration of a document with in 15 minutes, Computerized Encumbrance Certificates, Stamp duty and Fee worked out automatically, prevention of loss and damage of document etc.

SWIFT

24.41 There are about 25 types of certificates issued from Taluk Offices and for certain certificates, citizens have to submit their application on plain paper. With the implementation of SWIFT (Single Window Interface For Taluks) a common application form is designed for all the certificates.

AIMS

24.42 Agriculture resources are monitored by the Directorate of Agriculture using the automated application software called AIMS (Agriculture Information Management System). The

Agriculture Department comprises of around 1500 officers spread across the state. Monitoring starts from the Krishi Bhavans at the village level, with the direct interaction of the Agriculture Officers with the farmers. Data gets consolidated at the Block, District and the Directorate level for effective monitoring and passed on to all the higher levels by means of the mail service provided in the AIMS software.

Integrated Service Gateway.

24.43 Government of Kerala have commenced work for setting up an integrated Government Services platform to government departments for information as well as service delivery to the citizens. The platform shall offer same look and feel for all government sites and shall be hosted centrally driven from a central RDBMS (Relational Data Base Management System). However information, transaction and payments shall be managed individually by each of the departments. The platform shall also offer information on Public contact domains and documentation required pertaining to each application form.

24.44 The other major initiatives are e-Pay, Information. Kerala Mission(IKM), See WAN,K-BASE. The details are given in Chapter 21.

Information Computer Teconology for Development Projects

1. Akshaya

24.45 Akshaya is the universal e-literacy programme pioneered in Malappuram district during 2002-03.It is now extended to seven other districts to reach out to34 lakh families. Akshaya is setting up around 5000 multipurpose Community Technology Centres called Akshaya-e-Kendras across Kerala. Run by Private entrepreneurs, each Akshaya Centre is set up within 2-3 kilometers of every household, will cater to the information, communication and education needs of around 1000 families, to make available the power of networking and connectivity to the common man. Akshaya is envisaged as a social and economic catalyst focusing on the various facets of e-learning, information dissemination, e-transaction, e-governance and communication facilities to the common man. Government have now decided to roll out the programme to entire state.

24.46 The other major ICT for development projects are Citizen's Call Centre, IT @ School, KISSAN, e-Krishi, Collabrative Content Management, Telemedicine, Education Grid, Police Portal. There details are given in Chapter 21

2. State Wide Area Network

24.47 State Wide Area Network has the following components.

- State Information Infrastructure
- Data Centres
- District Level and Block Level Connectivity
- Rural Connectivity Infrastructure.

The details are given in Chapter 21

BOX -24.7

Testimonials On Akshaya

"The impulses for the Computer Literacy campaign were not top driven, but generated from below; the village moved the authorities who in turn pushed department's higher up to get the plan as well as the funds sanctioned. The amount involved was not much, which shows that with minimum support, but high motivation and all around participation, people can be equipped with computer operating capabilities".

Source: THE TIMES OF INDIA-Editorial, August 15,2003

CHAPTER - 25

World Trade Agreement

The World Trade Organisation, which came into existence on January 1, 1995, has 149 members and 27 governments are actively pursuing accession to it, as on December 31st 2005. The Sixth Ministerial Conference was held in Hong Kong in December 2005

Hong Kong Ministerial Conference 2005

25.2 The Hong Kong Ministerial conference attended by 149 member countries, resulted in an imbalanced outcome. The major decisions are shown in BOX 25.1 Among others it was committed to eliminate all forms of export subsidies by the developed countries by 2013.

25.3 The World Trade Agreement yielded no significant reduction in protection especially in agriculture in developed countries. The reason includes weaknesses in specific aspects of the agreement such as high baseline support levels from which reductions were made. Now protection in agriculture takes different forms, like tariff protection, subsidies, tariff peaks, Tariff Rate Quotas (TRQ), tariff escalation and opaque tariffs. Even if tariffs are reduced by developed countries tariff peaks seem to be the major hurdle in market access for certain sectors, where developing countries have good export potential. The tariff structures in many countries have traditionally displayed significant escalation favouring domestic processors for a large number of commodities.

BOX 25.1

Major decisions of Hong Kong Ministerial Conference, December 2005

- In agriculture, all forms of export subsidies are to be eliminated and discipline on all export measures to be completed by 2013.
- On market access, developing countries have the right to have a Special Safeguard Mechanism based on import quantity and price triggers with precise arrangement to be further defined.
- Developing countries with no AMS commitments will be exempted from reductions in *de minimis* and the overall cut in trade – distorting domestic support. Green Box criteria will be reviewed in line with paragraph 16 of the Frame work.
- Modalities to be established no later than 30 April 2006.
- All forms of export subsidies for cotton will be eliminated by developed countries in 2006.
- On Market Access, developed countries will give duty and quota free access for cotton exports from least developed countries (LDCs) from the commencement of the implementation period.

- In NAMA, a Swiss formula by which tariff reduction will be on a line by line basis will be adopted. To establish base rates a non-linear mark-up approach should be adopted.

- In the case of services the plurilateral approach which will incorporate sectoral and modal approaches was agreed upon. Plurilateral requests should be submitted to other members by February 28, 2006.

Source : WTO

Non-Agricultural Market Access (NAMA)

25.4 A key item on the agenda of the Doha Round of Trade negotiation was liberalisation of trade in industrial products and in the terminology of the WTO 'Non-Agricultural Market Access'. The frame work adopted for modalities for NAMA, as contained in Annex B of the so called July Package and based primarily on the proposals made by developed countries, stipulates reduction of industrial tariffs in both developed and developing countries according to agreed formula. The elements regarding the formula are shown in BOX 25.2

BOX 25.2
Elements regarding the formula on NAMA

- Product coverage shall be comprehensive without a prior exclusion

- Tariff reduction and elimination shall commence from the bound rates after full implementation of current concessions. However, for unbound tariff lines, the basis for commencing the tariff reduction shall be two times the MFN applied rate in the base year.

- The base year for MFN applied tariff rate shall be 2001.

- Credit shall be given for autonomous liberalisation by developing countries provided that the tariff lines were bound on an MFN basis in the WTO since the conclusion of the Uruguay Round.

- All non-ad valorem duties shall be converted to ad valorem equivalent on the basis of a methodology to be determined and bound in ad valorem terms.

- The reference period for import data shall be 1999-2001.

- The Negotiation Group should finalise its structure and details as soon as possible.

- In pursuing sectorial initiatives, the Negotiating group should review proposals with a view to identifying those which could garner sufficient participation to be realised. Participation should be on non-mandatory basis.

- Adopt a non-linear, mark-up approach to establish base rates for commencing tariff reduction.

- The Negotiating Group should be instructed to establish ways to provide flexibilities for these Members without correlating a sub category of WTO Members.
- The modalities should be established and the negotiations concluded, no later than April 30, 2006 and comprehensive draft schedules based on these modalities should be submitted no later than 31st July, 2006.

25.5 In developing countries like India, elimination of tariffs will lead to very high reduction compared with developed countries, and a further reduction or even a complete elimination in industrial tariffs of developed countries would not lead to a substantial increase in the market access for countries like India.

Agreement on Agriculture (AoA)

25.6 India adopted a modified tariff schedule on March 15, 2000. The tariff bindings, subsequent to revision in 1996 and renegotiation within the WTO in 1999, retained the overall structure notified after the Uruquay Round – 100 per cent for commodities, 150 per cent for processed products and 300 per cent for edible oil. Departure from this pattern is mainly with respect of tariff lines that were negotiated as special case like certain meats and dairy products, temperate zone fruits, cereals, rapeseed oil, soyabean oil, certain fruit juices and wool. Various studies have demonstrated the low level of protection prevailing in India while it is very high in developed countries. The OECD countries estimates the Producers Support Estimate (PSE) in its member countries at $ 279.5 billon in 2004. Such extensive subsidies have an adverse effect on the developing countries.

25.7 The tariff rates of some of the commodities relevant to Kerala prevalent in other countries are shown in Table 25. 1

Producer Support Estimates in India

25.8 Since the early 1990s, India has undergone substantial economic policy reform. The recent study by IFPRI examined the market price support for 11 crops in India over the period 1985-2002, the expenditure on input subsidies benefiting farmers (Fertilizer, electricity and irrigation) and product specific and total producer support estimates (PSEs). The major findings are shown in BOX 25.3

25.9 In many industrialised countries, the average income of farmers is higher than the national average, reaching almost 250 per cent of average income for the Netherlands, 175 per cent for Denmark, 160 per cent for France and 110 per cent for the United States and Japan. The average agricultural tariff of developing countries declined from almost 30 percent in 1990 to about 18 per cent in 2000, a decline of 35 per cent. An extensive network of subsidies has evolved to support agriculture particularly in rich countries. The support accorded to OECD country producers through higher domestic prices and direct production subsidies was $ 248 billion in 1999-2001. Protection rates for producers in the OECD decreased from 62.5 per cent in 1986-88 to 49 per cent in 1999-01. Agricultural support tends to be counter cyclical in rich countries, pushing price adjustments into the global market and accentuating price drops. In European Union farmers prices were 34 per cent higher than the international prices in 1999-01.

Table – 25.1
MFN and Bound Rates on Kerala's Major Agricultural Products

Sl. No.	Product	Principal Exporters	MFN Applied Tariff (%)	WTO Bound Rates (%)
1	Coconut Products	Pakistan	10	100
		Philippines	7	60
		Germany	0	0
		Belgium	0	0
		Malaysia	0	0
2	Natural Rubber	United States	0	-
		China	20	20
		Japan	0	0
		Malaysia	0	5
		Korea	1	2
3	Tea	United Kingdom	0-3.2	0-3.2
		United States	0-6.4	0-6.4
		Russia	5-12	5-12.5
		Japan	0-17	0-17
		Pakistan	30	140
4	Coffee	United States	0	0
		German	0-11.5	0-11.5
		Belgium	0-11.5	0-11.5
		Japan	0-12	0-12
		France	0-11.5	0-11.5
5	Spices	United States	0-5 cents/Kg	0-8
		Germany	0	0
		Japan	0-3.6	0-3.6
		Singapore	0	0
		France	0	0
6	Marine Products	Japan	0-10	0-10
		United States	0-15, 1.1 cents/kg	0-15
		Spain	0-22	0-22
		France	0-22	0-22
		Germany	0-22	0-22

Source : (2002) WTO IDB Database

BOX 25.3

Major findings of the study on PSE in India

- Support for agriculture has been rising when world prices are low (as in the middle of 1980s and 1998-2002) and falling when world prices are high (as in early and mid 1990s).
- Aggregate for both price support and budgetary expenditure over the period 1985-2002, the counter cyclical dimension of agricultural policy dominates a clear trend of movement from disprotection towards protection.
- Except in the mid 1980s and in 2000-2002, rice has been disprotected in India
- India's milk powder % MPS is negative in several years in the mid 1990s and 2000. This indicates that India's domestic milk powder is competitive with imported milk powder and may be export competitive.
- The PSE results over the 1985-2002 period showed positive support for agriculture of nearly 10 per cent in the mid 1980s, that declined to nearly zero in the mid 1990s.
- Support dropped to its lowest value (disprotection) when world prices were high in 1996, then rises during 1997-2002 to a level again around 10 per cent. Disprotection measured by the PSE falls to its lowest value – 59.4 per cent under the importable hypothesis and – 28.7 per cent under the exportable hypothesis in 1996.

Source: IFPRI, 2005

Fisheries Subsidies

25.10 The last three years has seen a great deal of effort being devoted to defining fisheries subsidies and developing framework for categorizing and measuring subsidies. Fisheries sub sector escaped the WTO disciplines on subsidies till the Doha round of negotiations. Agreement on Subsidies and Countervailing Measures (ASCM) should be applied to fisheries as per the WTA. The WTO provides an internationally agreed process for notifying fisheries subsidies, although the extent to which this has complied with is open to question. (Article 25 of the WTA) The SCM Agreement provides for notification of specific subsidies.

25.11 Over fishing of the World's marine resource has led to serious depletion of fish stocks due to misallocation / absence of property rights over the world's marine resources and the excessive subsidization of the marine fishing industry.

25.12 Direct assistance to fishers and fishery workers, lending support programmes, tax preferences and insurance support programmes, capital and infrastructure support programmes, marketing and price support programmes, fisheries management programmes are included in OECD classification scheme. Again developed countries are pumping huge subsidies to the fisheries sub sector. (Table 25.2)

25.13 The subsidies in developing countries include port facilities owned and managed by public sector, sales tax exceptions for imports used by the fishing industry, subsidised fishing inputs etc. More international work is needed to develop broadly accepted definition of subsidies and methodologies for measurement.

The Sanitary and Phytosanitary (SPS) Agreement

25.14 The SPS Agreement is linked to the Agreement on Agriculture (AoA). The SPS Agreement contains specific rules for countries which want to restrict trade to ensure safety and the protection of human life from plant or animal carried diseases. SPS Agreement encourages members to use international standards, guidelines and recommendations where they exist. Increasingly stringent food safety and health standards in industrialized countries pose major challenges for developing countries, especially for high value food products such as fruits, vegetables, meat, fish , nuts and spices.

Table : 25.2
Subsidies in Fisheries 1997

Country	Officially reported subsidies in fish harvesting (US $M)	Total subsidies in fish harvesting reported to WTO (US $ M)
Japan	2925-2946	0
EU	775-995	658
USA	868	0
Canada	742-793	1
Indonesia	254	0
Norway	158-163	22
China	50	NA

Source: Schorr and Cripps, 2001

Some important elements in the Agreement

(a) Requires animals and animal products to come from disease free areas
(b) Inspection of products for microbiological contaminants
(c) Mandating a specific fumigation treatment for products
(d) Setting maximum allowable levels of pesticide residues in food.

25.15 The SPS norms in US differ from that in EU to a great extent. The permissible limit for total afflatoxin in food and feed is 20 ppb in US and Australia while in EU it is 1 ppb. The EU norms are higher than the Codex norms. Even EU member countries follow their own norms which vary greatly. Though Codex standards are considered as base, the norm set by the importing countries matters most in disputes.

25.16 The SPS norms are gradually emerging as trade barriers. The developing countries need to actually participate in global standard setting bodies. Expert groups of scientists, and food technologists should be identified and database has to be created with associated infrastructure. The SPS and TBT agreements contain promises of financial and technical assistance for the developing countries. However, translating these promises into action has

not yet been achieved. Further conforming to EU and other norms entails massive investments in Hazard Analysis and Critical Control Points (HACCP) methods which are capital intensive..

25.17 Developing countries in general are experiencing difficulties in meeting the SPS requirements of developed countries and concerns have been expressed about the way in which SPS agreement has been implemented. The additional cost involved include increase in production costs of respecting SPS requirements and conformity costs like Certification and control. The access to technical know-how is also restricted and even the Private sector certification is under developed.

25.18 Major findings of a study on coffee farms conducted in Karnataka are shown in BOX-25.4. Out of 282 farms surveyed, 149 are SPS complying farms. Partial financial support could speed up adoption of SPS norms by the farms.

BOX -25.4
Major Findings of a Study on SPS in Coffee

- SPS complying farms experienced an increase in labour input per unit of land. The mandays per hectare was 575 for non-SPS complying units and 878 for SPS complying units.
- SPS complying farms experienced 43% increase in labour costs over non-SPS complying coffee farms in pre harvest operations. The increase experienced by these farms in the matter of harvesting operations was 33%.
- The full SPS compliant farms included in the sample uprooted 90% of their old coffee plants and partial SPS compliant units undertook only non-replanting based SPS measures.
- The incremental costs and cash crunch faced by SPS complying farms increased the risk of non-repayment of loans.

Source: Damodaran, 2002

Pesticide Residues

25.19 Fixation of Maximum Residue Limits (MRL) in food and commodities are prescribed by the Ministry of Health and Family Welfare under PFA Act . MRL is fixed by taking into account the toxicological data of the pesticides. For about 32 pesticides, tolerance limits are to be fixed. This has to be done on a priority basis.

25.20 State has already taken steps to establish disease free zone for cattle modernisation of agriculture through the establishment of laboratories, popularisation of organic farming etc.

25.21 In Kerala, fish and fishery products showed a positive case of efforts to comply with strict food safety requirements in export market as revealed in a recent study by World Bank (2004)..

SPS in Fisheries

25.22 The SPS measures introduced (eg. Shrimp Ban from Bangladesh, Nile Perch Ban for Uganda, Ban in European Union for some shipments from India etc.) represent major shocks for fish exporting developing countries. A large number of countries now have specific Hazard Analysis and Critical Control Point (HACCP) based regulations regarding the safety of fish products.

25.23 A recent study in India has shown that installation cost of HACCP plants varies from Rs. 10 million to Rs. 25 million. On an average an export processing firm has to spent about Rs. 2 million/year to maintain HACCP system. On an average HACCP implementation has led to pre export and handling cost of Rs. 7 per kg. Small firm has to incur Rs. 10 /kg on pre export processing of fish. State has to move towards international standards of product hygiene in order to retain the market share in future which entails heavy investment. However a recent World Bank study has estimated high levels of investment in fisheries sub sector on compliance with EU standards in Kerala. The major findings are shown in BOX 25.5

BOX: 25.5

Impact of sanitary measures on Exports of Fishery products from India – The case of Kerala

- The estimated annual cost per processing plant in Kerala for EU approved plant is $ 6444 in 2003. This implies a total annual cost for EIA Cochin of monitoring EU approved plants in Kerala of approximately $ 341000 in 2003-04 and a cost for all India of approximately $ 876000.
- Hygiene control in landing centers is weak.
- While processing sector expanded rapidly in 1990s, hygiene controls did not keep pace with increasing requirements in India's major export markets.
- Cost of compliance with hygiene requirements for EU approval ranged from $ 51,400 to $ 514,300 with a weighted mean of $ 265492 per plant in surveyed 14 plants, in processing sector in the state.
- Estimates of the cost of a rejected consignment including freight, storage, customs clearance and interest as working capital range from $ 10000 to 15000.
- Exporters to the US generally reported fewer problems than experienced in EU markets.
- Over the last two years, more than 60 processing units have ceased operations. 5-6 major exporters are consolidating in the sector through the purchase of the assets of other processors. Within next 5 years, Kerala may have only less than 50 fish processors/exporters.
- Kerala has made heavy investment to comply with the EU's hygiene standards for fish and fishery products amounting to $ 13.5 million.
- The imposition of strict food safety standards by the EU resulted in shift to integrated preprocessing by EU approved processing facilities which led to closure of a significant number of independent preprocessing units.

Source: World Bank 2004

Issues

1. The SPS Agreement encourages the use of Equivalence and mutual recognition of Agreements in Article 4. Developing countries frequently complained about the lack of implementation of Article 4. Some of the importing countries are demanding sameness instead of equivalence. The former implying that the measures must be identical not only in outcome but in formulation too which is unacceptable.

2. The infrastructure support as well as technical competency in developing countries are quite inadequate

3. One of the main problems of the various SPS measures applied today is the lack of transparency.

4. The dispute settlement process is lengthy and very demanding in terms of financial capacity and human resources.

5. Developing countries may end up with standards set at levels inappropriate to their situation and which require standards infrastructure which simply does not exist in these countries. As pointed out by a World Bank study, the various standards already set in the international organizations were not developed as part of the WTO process and left out the developing countries.

6. Likewise standards will be slow to develop in areas where developed countries have few interests like lack of international standards for pesticide residues for tropical fruits.

7. Very high investment for establishing the instrastructure for quality control

8. Developed countries should increase to reorient their assistance flows to developing countries for SPS capacity building.

9. Developed countries should harmonise SPS product and process requirements with those of other countries.

10. World Bank should include policy advice and investment leading to SPS management and market access.

Technical Barriers to Trade (TBT)

25.24 Technical regulation such as product certificate requirements, performance mandates, testing procedures, conformity assessments and labeling standards significantly raise set up and production costs. Developing countries are typically standards takers rather than standards makers. The findings of a study by World Bank with data from firms in 12 industries located in 16 developing countries including India and Pakistan are shown in BOX-25. 6

BOX: 25 . 6

Cost of compliance with product standards for firms in Developing countries

- Standards do increase short run production costs by requiring additional inputs of labour and capital. A 1 percent increase in investment to meet compliance cost in importing countries raises variable products costs between 0.06 and 0.13 percent. Fixed cost of compliance is 4.7 percent of value added on an average.
- Variable production costs increased by 0.058 percent higher when the initial set up cost for compliance with foreign standards is increased by 1 percent. 0.060 percent additional labour and 0.056 percent additional capital are employed.

Source: World Bank 2005

Trade Related Intellectual Property Rights (TRIPS)

25.25 Trade Related Aspects of Intellectual Property Rights Agreement (TRIPS) was incorporated as one of the core agreements All the IPR instruments, viz., patent, copyrights, trademarks, geographical indications, industrial designs and trade secrets are covered under TRIPS. The plant varieties must be protected by patents or by a *sui generis* system The TRIPS Agreement is a comprehensive multilateral agreement on intellectual property. The agreement sets minimum standards of national protection of intellectual property rights for all categories except for expression of folklore, utility models, breeder's rights and community s rights to traditional knowledge.

25.26 A Council for TRIPS was established to monitor the operation of the agreement and government's compliance with it. No provision is included in TRIPS about IPR related to internet data transmission and e-commerce. Assessment of national IPR laws should be undertaken in order to consider their consistency with the standard of TRIPS Agreement. The salient features of TRIPS as compared to previous international co-operation treaties in IPRs such as those managed by WIPO is that it makes an extensive set of IPR Protection Standards mandatory for WTO members. The agreement explicitly maintain three organizations that are involved in setting standards. The Codex Alimentarius, the International Office of Epizootic (OIE) and the International Plant Protection Convention (IPPC).

25.27 TRIPS figured prominently in the Doha WTO Ministerial meeting in November 2001 and resulted in the Doha Declaration on the TRIPS Agreement and Public Health. Patent protection is likely to lead to higher prices of drugs. The public health aspects of TRIPS requirement have yet to be fully assessed. TRIPS rules require WTO members to provide patent protection for any invention, whether a product (such as a medicine) or a process (such as method of production of chemical ingredients for a medicine) for a period of 20 years.

25.28 The Doha Declaration mandated that the Council for TRIPS examine the relationship between TRIPS, the Convention on Biological Diversity (CBD) and the protection of traditional knowledge and folklore.

25.29 Consideration should be given to the possible impact of the adoption of patents and plant breeders rights on biodiversity. Several studies have suggested that such regimes may

reduce biodiversity particularly through the replacement of farmers varieties by commercial uniform varieties.

25.30 TRIPS agreement provides for a minimum term of protection of 20 years counted from the date of filing. A bill to amend the Patent Act 1970 was introduced in Parliament on 20 December 1999. The Act was amended in 1999 and 2002 to meet India's obligations under TRIPS. The third Amendment bill was put in place for introducing product Patent regime in the last session and it was lapsed with the change of Government. To meet WTO commitment, India has brought in an ordinance to support the product patent regime in December 2005. The Ordinance of 26th December 2004 paved the way for product patent for inventions in the fields of food, chemicals and pharmaceuticals.

25.31 TRIPS agreement provides a higher level of protection to wines and spirits and India has proposed to extend such higher level of protection to basmati rice, Darjeeling tea, alphonso mango, kolhapuri slippers etc.

25.32 In the area of agriculture, an important policy issue is the extent to which the protection of plant varieties as required by the TRIPS Agreement which may hinder or foster local innovations while some countries have opted to follow the model of the International Union for the Protection of New Varieties of Plants (UPOV); New approaches may also be developed in the form of *Sui generis* system. The development of a *sui generic system* for the protection of traditional knowledge including farmer's varieties is an important policy issue. The protection of plant varieties is legally introduced in the country by Protection of Plant Varieties and Farmers' Rights Act 2001 (PPVFR Act).

25.33 Indigenous Knowledge (TK) has been used for centuries by indigenous and local communities. Despite the growing recognition of Indigenous Knowledge as a valuable source of knowledge, western intellectual property laws continues to treat it as a component of Public domain. Protection of TK is a necessary but not a sufficient requirement for its preservation and further development. Developing institutional and consultative mechanism on TK protection , innovation and facilitating TK based products marketing and commercialization of TK based products are also important

25.34 Preparation of village wise community Bio diversity Registers has been undertaken in some panchayats in Kerala. The pilot projects completed may have to scale up to cover the entire state in a phased manner with the full involvement of local governments.

Agreement on Textiles and Clothing (ATC)

25.35 The Agreement on Textiles and Clothing (ATC) is a WTO Agreement. Liberalisation in Textiles and Clothing has been a key concern of the developing countries in relation to the implementation of the Uruguay Round Agreements. In March 2001, EU had removed quotas on imports from Sri Lanka in return for it bringing down a range of tariffs and binding all its tariffs for textiles and clothing. The bilateral pact gave Sri Lanka an emerging advantage in the lucrative EU market

BOX 25.7

Textile Quota Phase – Out Benefits

The Multi – Fibre Arrangement (MFA), which governed international trade in textiles and clothing since 1974, came to an end in December 2004. The MFA enabled developed nations, mainly the US. European Union and Canada to restrict imports from developing countries through a system of quotas. Under the MFA, there were about 1,300 bilateral quota restrictions inhibiting world trade in the sector. The World Trade Organisation's Agreement on Textiles and Clothing (ATC) in 1995 to abolish the MFA marked a significant turnaround in global textile trade. The ATC mandated progressive phase – out of import quotas and the integration of textiles and clothing into the multilateral trading system before January 2005.

The share of textiles and garment exports in India's total exports works out to about 16 percent. The US, the EU and Canada account for nearly 70 percent of India's garments exports and 44 percent of India's textile exports. Consequent upon the phasing out of the ATC, the textile sector is expected to become another sunrise industry for India, given its high export potential. India is expected to be the second largest beneficiary after China from world trade in textiles and clothing. The Indian textiles and apparel industry can achieve a potential size of US $ 85 billion by 2010 of which the domestic market potential would be US $45 billion and export potential would be US $ 40 billion. This optimistic scenario mainly emanates from India's distinct advantages in terms of competitive labour costs, availability of skilled manpower and strong capabilities in certain areas of production involving expertise in styling and designs.

Besides textile exports, India is expected to benefit from increased outsourcing of textiles and apparel manufacturing. Having an integrated textile industry – right from fibre to high – end fashion clothes – would also work in India's favour. The proactive measures announced in the Union Budget, 2005 – 06 and New Foreign Trade Policy 2004 paving the way for modernization of the Indian textile industry through a host of incentives, rationalisation of tariff, allowing 100 percent foreign direct investment (FDI) in textile sector, dereservation of textile items from the SSI manufacturing , establishment of Special Economic Zones (SEZs) and apparel parks would help the domestic industry reap the benefits from the quota phase – Out in the medium to long term.

The removal of quotas may not, however, directly provide easy and unrestricted access to developed country markets. There would be non – tariff barriers arising from standards related to health, safety, environment, quality and labour. Rapid proliferation of regional trading arrangements (RTAs) also pose a threat to a country like India, which is now a part of major RTAs. India's textile and clothing sectors would, therefore, have to show improvement in productivity. raw material base, quality, cost of inputs, design skills and economies of scale in order to benefit from a highly competitive environment in the post – MFA regime. Consolidation of supply chains would play a key role in enhancing competitiveness of textiles. For organized participants in this sector, technology, investment and export infrastructure would play a lead role in driving improvements in quality and productivity

Although it is too early to make a realistic assessment with regard to whether India has made durable gains after the phase – out of textile quotas, data for the first half of 2005 since the textile quota phase – out suggest substantial gains. According to the US Department of Commerce, India was the second fastest growing textiles exporter to the S in January– June 2005, led only by China . During January – June 2005, India's textiles and apparel exports to the USA increased by about 24.2 percent (volume terms), which is higher than other competitors such as Mexico, Indonesia. Thailand, Korea and the Philippines.. The surge in exports of Chinese textiles to the US and the EU has provoked the US and the EU to impose safeguard measures, which would work to India's advantage as it closely competes with China.

Source: RBI, 2005

25.36 ATC promised to benefit exporters in Asia and the Pacific by improving Market access for exports of textiles and apparel in the large EU and US markets. However, since 1995, both the EU and the US have signed and implemented numerous Preferential Trade Agreements (PTA) including reciprocal Free Trade Agreements and non-reciprocal Preferential Arrangements such as African Growth and Opportunity Agreement. These trade agreements impose distortions on market access. In addition newly emerging exporters particularly China and Vietnam have entered global markets.

25.37 The elimination of quota and the accession of China to the WTO, means that textile and clothing trade is likely to shift toward both China and also the Indian sub continent in the optimistic scenario. Considering that out of US $ 353 billion in World Textiles and Clothing exported in 2002, Asia (excluding Japan, Australia and New Zealand) accounted for 42.6 per cent. The International Textiles and Clothing (ITC) monograph says that in abide to retain a share of textiles production and trade for their domestic industry, the US and the EU have designed methods to put the Rules of Origin to their advantage. The distorted trade policy adopted in developed countries in textiles will have an adverse impact for the developing countries in the quota free regime. Rule of Origin can be designed to shut out textile imports by requiring that all intermediate inputs (Yarn-Ferro rule) - originate in any member states of a Free Trade Area. The North American Free Trade Area (NAFTA) adopted a rule, making it more difficult for competitive East Asian Suppliers of textile intermediate production to access the North American Market. If Preferential Trade Agreements continue to proliferate and make use of restrictive Rule of Origin in textile and apparel (as is highly likely) then the elimination of quotas will deliver smaller benefits to Asian pacific developing country suppliers.

25.38 India's share in global exports is only three per cent compared to China's 14 per cent. China is stated to be a serious competitive threat to India. The export share of Korea (6%) and Taiwan (5.5%) are ahead of India while Thailand (2.3%) and Indonesia (2%) are close to India

25.39 The total apparel market in India including tailored and ready made goods is estimated to be US $ 20 billion. Readymade apparel accounts for only 20 per cent of the domestic market. However brands accounts for nearly 2/3 of readymade apparel. The estimated branded apparel market was Rs. 52 billion in 1998-99 which increased to Rs. 90.04 billion in 2001-02.

25.40 Overall there is low level of modernisation in most levels of the clothing and textiles value chain especially in weaving and garmentry. Among powerlooms which produce 60 per cent of fabric output, less than 2 per cent are shuttle less looms. In the apparel sector also, India has a much lower investment especially in special purpose machines. More investment is needed in cutting machineries and finishing machineries. Some textile firms in India are upgrading capability by not only diversifying product portfolios but moving to high value added cloth such as technical textiles (heat resistant, acid resistant etc). The emergence of branding is also taking place.. Branding which began in men's wear is slowly moving into women's wear and sports wear areas.

General Agreement on Trade in Services (GATS)

25.41 Like other WTO agreements, GATS is a framework agreement. Its actual content, and hence its implication, at the national level largely depends on individual country's

commitments. Unless explicitly indicated other wise, commitments are bound, which means that their modification or withdrawal may give rise to requests for compensation from affected countries. As a result, commitments virtually guarantee a minimum level of market access to foreign service providers.

25.42 The General Agreement on Trade in Services (GATS) classifies services into 160 service types, and differentiates between four Modes of supply

India's Commitment under the GATS

25.43 India has scheduled only nine service sectors in the past round of negotiations. These include engineering service, computer and related services, research and development services and technical analysis and testing services under the category of business services, telecommunication services and audiovisual services under the category of communication services, construction and related engineering services, financial services, health related and social services and tourism and related services. In most of the sectors, the specific commitments cover only some of the sub sectors. In health and related services, only hospital services are covered.

25.44 Mode 4 is the predominant form of India's exports particularly Kerala's in health services and thus should play a central role in India's negotiating strategy in this sector. India should obtain sector specific commitments in addition to the horizontal commitments in Mode 4, and also negotiate for improved market access for specific categories of service providers, with clear specification of educational and other qualifications that must be satisfied. Major limitations in this negotiation are the qualification related conditions and requirement for registration with professional associations. In some EU countries, the market access commitment in Mode 4 for nurses restricts entry to those licensed by domestic professional associations, which in turn require conditions of residency.

25.45 Kerala should take active interaction in formulating a national country position strategy in service sector especially in health sector . Detailed data has to be generated for supporting the argument. This is one of the areas of strength for the state.

25.46 Mode 4 will remain important for a range of services. Even in software industry, the means of service supplying personnel remains crucial. Although the share of onshore services has declined nearly half of Indian software exports are still supplied through the temporary movement of programmers to the client's site overseas. There is no substitute for human labour, atleast in some occupation, eg. the caring occupation, personnel services and a range of professional services and the demand for Mode 4 is likely to increase over time.

25.47 Nothing in the GATS limits the scope of natural persons to particular levels of skill, but the agreement is less clear on other dimension. Japan allows foreign business travellers to stay for a maximum of 90 days but certain categories of intra-corporate transferees can stay as long as 5 years. A clear duration distinction is needed under 'temporary'.

25.48 Most existing commitments under the GATS favours the business travellers and intra corporate transfers who must be managers, executives or specialists. Such commitments are of limited interest to countries that are not significant foreign investors, contracts are often qualified by other restriction, prior employment, navigational quotation, economic needs tests and residency requirements. Several European countries have programmes for less skilled, short term foreign workers - eg. general workers in agriculture, tourism and the hotel trade,

project workers in construction etc. These programmes are not included in the GATS commitments.

25.49 The benefits of services trade reform are huge but service negotiation in the WTO are making little progress. A deep problem is that WTO members have sought to negotiate market access in services without adequately addressing concerns that General Agreement on Trade in Service (GATS) commitments limit regulatory freedom unduly and regulatory institutions in many countries are weak to adjust with liberalized markets. The following actions are required.

- GATS must focus primarily on disciplines for measures that discriminate against foreign services and providers.
- A credible assistance mechanism must be established to help developing countries make the regulatory improvement needed for successful liberalization.
- WTO members should make access commitments on labour mobility (Mode-4) conditional on the fulfillment of specific conditions by source countries.

25.50 One recent study finds that the gains from reduction in service sector protection by half would be five times larger than those from comparable goods trade liberalization. Another suggests that countries that successfully reformed their financial and telecommunication services sector grew on an average about 1.0 percentage point further than other countries.

25.51 The most stringent barriers to service trade are to the mobility of individual providers of Mode 4. Recent studies show that if industrial countries were to allow temporary access to Foreign Service providers equal to just 3 per cent of their labour force, the global gains would be over $150 billion more than the gains from the complete liberalization of all trade in goods.

Regional Trading Agreements (RTAs)

25.52 Along with the evolution of multilateral system, there has also been a parallel movement towards the formation of RTAs. The proliferation of Regional Trade Agreements is fundamentally altering the world trade. The number of RTAs has risen six fold in just two decades. According to WTO, 43 per cent of global merchandise trade is channelised through RTAs and this is expected to cross 50 per cent by 2005- 06. The number of these agreements has more than quadrupled since 1990 rising to about 230 by late 2004. Another 60 agreements are in various stages of negotiation. The European Union and US are playing a prominent role in this proliferation. As agreements proliferate a single country become a member in several different agreements. The average African country belongs to four different agreements and the average Latin American Country belongs to seven agreements. Disciplines are lacking with respect to preferential rules and WTO has no mandate to monitor the trade effects of RTAs. Multilateralism will dominate in World trade along with proliferation of RTAs.

BOX : 25.8
Mode 4 and international migration

The WTO General Agreement on Trade in Services (GATS) does not cover labor migration *per se*, but rather the narrower concept of movement of people across borders as one of four modes of delivering services. Mode 4 covers the temporary movement of persons across borders for the purpose of supplying a service. "Temporary" movement is not defined, but permanent migration is explicitly excluded, as are workers in most non service sectors, such as agriculture or manufacturing.

Mode 4 Service suppliers can be viewed in terms of both duration and purpose of stay: they enter a country for a specific purpose (to fulfill a service contract), for a limited and (generally) specified period of time, and are usually confined to one sector or one job (they do not enter the labor market and are not free to search for employment). Mode 4 is normally understood to include business visitors (persons who come for three moths or less to negotiate a contract), intracorporate transfers (persons transferred within a company from one country to another), and suppliers of contractual services (individuals or employees of foreign companies with a contract to supply a service to a client in the receiving country). While Mode 4 includes persons at all skill levels, to date market opening commitments by WTO members have been limited to the highly skilled.

Relatively few market-opening commitments on Mode 4 have been made by both developed and developing countries. Those that have been made tend to be subject to restrictions on number, type, and duration of stay of service suppliers. Countries' actual regimes for temporary entry of workers tend to be more liberal than their GATS commitments, however, and considerable movement on service issues is occurring in a range of sectors (such as health), notwithstanding the near-absence of relevant GATS commitments.

Five issues arise regarding GATS Mode 4 as an instrument to manage labor mobility. First, GATS commitments are fixed commitments of guaranteed treatment, while migration regimes seek to retain flexibility to make adjustments in line with labor market conditions. Second, GATS commitments follow the most-favored-nation (MFN) principle that is, treatment offered to one country must be extended to all WTO members – whereas migration regimes can offer special treatment to countries with regulatory trust or other special relationships have been built (through visa waiver programs, for example). Third, GATS Mode 4 covers only a relatively limited subset of the workers moving around the globe. Agricultural workers, for example, are not generally viewed as falling under the GATS. Fourth, multilateral trade negotiations have a 50-years history, while migration has largely remained a national policy prerogative characterized by limited international dialogue. Finally, movement of people, especially the lower-skilled, raises a raft of issues related to social and cultural integration, exploitation, impact on local labor markets, and, more recently, security that trade agreements are ill-equipped to address.

Against this background, what role might the GATS play in managing labor mobility? The GATS is a narrow, but sharp, instrument that can deliver a powerful guarantee of access, but only for certain types of workers. Beyond this, however, GATS negotiations can be used to create a sense of urgency that may serve to bring migration authorities to the table to discuss ways to manage mobility. Bilateral or regional approaches could, for example, include low skilled workers and develop creative, cooperative approaches to issues such as remittance transfer, brain drain, and low of investment in education, prescreening of temporary workers, and return. These agreements could assist in building regulatory trust and improving management schemes in receiving and sending countries. Over time, by creating a template of basic requirements or criteria that could be applied to all countries on a nondiscriminatory basis, they could be used to extend access to a wider group of countries and so approach the MFN principle of GATS.

Source. World Economic Prospects 2006, World Bank

25.53 India's current Regional Trade Engagements at different levels of negotiation / modification are shown in BOX 25.9

BOX-25. 9

India's Current Regional Trade Agreement Engagements

- Framework Agreement on Comprehensive Economic Co-operation with ASEAN countries
- Bangladesh-India-Sri Lanka - Thailand Economic co-operation (BIMST EC FTA)
- India Singapore Comprehensive Economic Co-operation Agreement (CECA)
- Framework Agreement for establishing Free trade between India and Thailand
- India-Sri Lanka Bilateral Free Trade Areas and the Proposal for Comprehensive Economic Partnership Agreement.
- Agreement on South Asia Free Trade Area (SAFTA)
- India -Mercosur FTA
- Bilateral Non-Reciprocal Treaty with Nepal
- South Asia Preferential Trade Agreement
- Bilateral Non-reciprocal Treaty with Bhutan
- India-Sri Lanka FTA
- India-Southern African Customs Union Framework Agreement
- Joint Study group with Mauritius
- India-GCC Framework Agreement
- Joint Study group with China
- Joint study group between India and Republic of Korea, India and Japan
- Bangkok Agreement
- Brief on India Egypt PTA
- Global System of Trade Preference (GSTP)

South Asian Free Trade Agreement (SAFTA)

25.54 In 1995, the seven South Asian countries – Bangladesh, Bhutan, India. The Maldives, Nepal, Pakistan and Sri Lanka – initiated a multilateral framework for region wide integration under the South Asian Preferential Trade Agreement (SAPTA). It was converted into South Asian Free Trade Area (SAFTA) from 2006.

25.55 The impetus towards regional preferential trading arrangements and greater regional economic integration raises many important issues for the South Asian region as a whole and for the individual countries. South Asia accounts for only 1.5 per cent of World GDP and just over 1 per cent of World trade with 20 per cent of World's population. The SAFTA Agreement will be a boon for the region's four least developed countries – Bhutan, Bangladesh, Maldives and Nepal. Salient features of the Agreement are shown in BOX: 25.10.

BOX: 25.10

Salient features of SAFTA Agreement

- As per the agreement SAARC member countries India, Pakistan and Sri Lanka will bring down their customs duties to 0-5 per cent by 2013 while the least developed countries (LDC's) Bangladesh, Maldives, Nepal and Bhutan will do it by 2018.
- 5,500 tariff lines had been included under SAFTA, which included both industrial and agricultural products.
- India has kept 950 items under the negative list on which no tariff concession would be provided.
- As per the agreement of SAFTA, trade liberalization programme would not apply to the tariff lines included in the sensitive list.
- India has finalized two separate lists – a longer list for non- LDC's like Pakistan and Sri Lanka containing 884 items and a shorter to others like Bangladesh, Bhutan, Maldives and Nepal with 763 items.
- Least Developed Countries would also be provided technical assistance in areas like capacity building in standards, product certification, training of human resources, improvement of legal system and administration, customs procedures and trade facilitation.
- India being the larger and relatively developed economy will be providing concession to least developed countries including a mechanism for compensation of revenue loss due to reduction in duties. The LDC's which will be compensated include Bangladesh and Maldives.
- SAFTA would enhance trade with Bangladesh and Pakistan which would have the opportunity to source the fabric for their large apparel and garment sections from India.
- As per the agreed rules of origin, twin criteria of change in tariff heading at four digit level and value addition of 40 per cent for Non-LDC's and 30 per cent for LDC's would apply.

Source: PTI

BOX 25.11
Major Findings of a study on Regional Trade in South Asia

- All members increased their related importance in the region towards the late 1990s.
- Regional trade in South Asia tends to be centered around India which for most of the smaller countries is the closest neighbouring country.
- There exists very little or no trade among the smaller countries as Bhutan, Maldives and Nepal. There may be other factors such as transport and logistical impediments that give rise to high transaction costs or lack of trade complementarities.
- India's real trade intensities normalized for geographical proximity into the other South Asian countries are stronger than that implied by its bilateral trade shares.
- The region has established a mutual dependency in basic foods and agricultural products. A narrow group of products on which most countries display comparative advantage has made inroads in regional trade and are mostly made of agriculture and raw material for manufacture.
- Continuing unilateral/Multilateral liberlisation help South Asia to further diversify and evolve new comparative advantages.

Source. World Bank 2005

India- ASEAN Agreement

25.56 The growth in India's trade was the fastest with Southeast Asia compared to any other regions between 1991 and 2005. Share of exports to ASEAN countries in total exports has also increased from seven percent in 2000-01 to10 percent in 2004-05.

25.57 India's major trading ventures with ASEAN countries are shown in BOX-25.12

BOX : 25.12
India and ASEAN Trade Relationships

- A framework agreement for the creation of a Free Trade Area (FTA) with Thailand was signed in October 2003. Under this agreement, 84 items can be imported from Thailand from April 2004 at 50 per cent of the normal rate of duty prevailing in India.
- India has been engaged in negotiations to form a Comprehensive Economic Co-operative Agreement (CECA) with Singapore.
- Sub regional co-operation between India and some of the ASEAN members such as Vietnam, Thailand, Myanmar, and Laos has also accelerated. These include the Mekong-Ganga Co-operation MGC) and the BIMST-EC (Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Cooperation).
- India is also an active participant in Thailand's initiative Asian Co-operation in Dialogue - ACD, which has representation from all parts of Asia.

India views the above groupings as consistent with ASEAN as a whole

Source: Asher et al. EPW

25.58 The recent bilateral and sub-regional efforts to strengthen economic relations of India with ASEAN was materialised in the Fourth ASEAN – India summit at Kaulalumpur, Malaysia on December 13th 2005. The ASEAN India FTA is expected to encompass a strategic and political partnership, thus going well beyond a traditional FTA agreement Now there is a clear institutional framework for operationalising economic co-operation between the two parties. The salient features of the Fourth ASEAN-India summit are shown in the BOX 25.13.

BOX : 25.13

The salient features of the Fourth ASEAN-India Summit, December 2005

The Fourth ASEAN India Summit was held successfully on 13th December 2005 in Kaula Lumpur, Malaysia. It was chaired by the Prime Minister of Malaysia. It was attended by the Heads of Government/States of ASEAN member countries and our Prime Minister Dr. Manmohan Singh. Negotiations on India-ASEAN FTA are proceeding as expected and they are to be operational from 1st January 2007 Some important elements of the Agreement are

- The need for ASEAN and India to strengthen their economic partnership in the face of growing challenges of globalization, terrorism, rising oil prices and the threat posed by Avian influenza and other emerging and communicable diseases were acknowledged.
- Progress was made in the areas of co-operation including agriculture, health, pharmaceuticals, science and technology, human resource development, transport and infrastructure, ICT and people- to -people interaction.
- It was decided to accelerate the implementation of the ASEAN-India plan of Action through concrete activities, programmes and projects.
- It was agreed to develop – substantive activities consistent with the ASEAN-India Joint Declaration for Co-operation to Combat International Terrorism adopted at the Second ASEAN-India summit on 8th October 2003 in Indonesia.
- It was decided to work closely to enhance their trade and investment ties through the ASEAN-India Free Trade Area (AIFTA) so that the two economic regions could serve as engines of growth for each other
- The potential of harnessing areas of knowledge and technology for furthering ASEAN-India co-operation was acknowledged. In this context, both the parties welcomed greater co-operation in Information Technology and biotechnology.
- Human Resource Development was recognised as an area in which both the parties could share relative advantages and strengths with each other. There will be a proposal to bring together prospective students in ASEAN with Indian universities and colleges.
- It was agreed to enhance ASEAN Indian partnership in the area of energy infrastructure, especially renewable energy such as solar energy, hydro electric, biotechnology and geo thermal energy

- In order to address the danger posed by Avian influenza there will be information sharing and international co-operation.
- Both the parties look forward to closer co-operation in setting up a network of tsunami early warning systems across the Indian Ocean on a real time basis.
- India agreed to set up permanent centers for English Language Training (CELT) in Combodia, Myanmar and Vietnam which would equip students, civil servants professionals and businessmen with adequate English language proficiency and communication skills.
- India's proposal to establish and maintain a satellite based network linking India with other countries for tele medicine and tele education application was agreed.
- The ASEAN recognised the importance of private sector linkages between ASEAN and India in deepening our economic relation and encouraged the strengthening of such collaboration.
- It was agreed that ASEAN and India will work closely in East Asia Summit to ensure that the broad strategic forum will further contribute to promoting peace and security, economic prosperity and development in the region.

25.59 As far as India is concerned, it will open up doors to closed markets for Indian products such as textiles, leather, and marine products. The domestic competition too, is expected to increase in sensitive areas. However the concern of Kerala especially in agriculture needs to be addressed in these agreements. The case of pepper import from Sri Lanka in recent years is an example to highlight. Similar is the possibility of import of agricultural products from Vietnam where most of the perennial crops are having a comparative advantage over Kerala.

Immediate State level initiatives needed in the following areas

- A study series should be commenced to analyze the implications for the State as well as to prepare sector specific action plans in the post WTO context with institutional partnership.
- Some specialized academic institutions to be identified for providing inputs to Government for Policy decisions and framing State specific views.
- Development projects have to be initiated immediately for modernization of laboratories for quality checking of products and inputs. Good laboratory practices and good manufacturing practices to be implemented in a phased manner.
- Measures to be taken to get protection for various indigenous products with GI appellation like Malabar Pepper, Cochin Ginger, Alleppey finger turmeric, selected handicrafts etc.
- A Consultative forum to be established for discussing various issues on bilateral trade and WTO. The newly established inter state trade council by the Government of India could be utilized effectively

- Since regional trading blocks are increasing very fast, State must press the Centre for consultation in the preliminary stage itself. State may have to generate extensive database on regional trading blocks for preparing position papers.

- A modernisation plan suited to the Post WTO context for the apparel industry to be put in place.
- Quality literacy movement to be put across the supply chain to retain the market share of our exports.
- New set of income/price stabilisation schemes to be tried out on an experimental basis instead of continuing the traditional procurement operations for price stabilisation. The support price, procurement schemes etc seems less effective for the stabilisation of prices.

- Technical assistance for modernisation of fish processing/pre processing units for upgradation to HACCP levels to be given thrust.

- Experimental database to be created for generating support base for fixing Maximum Residue Levels of various pesticides used in the state.

- SPS and TBT agreements are potential threats for the export of traditional products from our state. Investment for quality upgradation, packaging units, etc with Private participation in combination with support from GOI and financial institutions should be initiated.

- Extensive documentation of ITKs and preparation Biodiversity Registers to be given top priority. An effective TRIPS cell may be constituted to address comprehensively various areas included in the TRIPS Agreement.
- A proper database on Service sector has to be generated. A system has to be put in place to monitor the service sector. The Foreign Trade Policy has already announced the establishment of Services Export Promotion Council.. Since this is an important area for the state top priority should be given.

CHAPTER 26

MISSIONS FOR KERALA'S DEVELOPMENT AND POVERTY ALLEVIATION

His Excellency the President of India, Dr.A.P.J. Abdul Kalam has outlined 10 Missions for Kerala's prosperity in his address to the Kerala Legislative Assembly on 28.7.2005 considering the core competence of the state. Subsequently six more Missions were added by the state Government (Three) and Legislative Assembly (Three) to address priorities for Kerala's Development and Poverty Alleviation covering agriculture, poverty alleviation, Traditional industries, revitalization of Public sector, strengthening decentralization and Environment Conservation.. The 10+3+3 Missions are shown in BOX : 26.1.

BOX : 26.1

10+3+3 MISSIONS FOR KERALA'S DEVELOPMENT AND POVERTY ALLEVIATION

1. Tourism
2. Development of Smart Inland Waterways
3. Development and Marketing of knowledge products
4. Pharmaceutical Products through Herbs (Molecule to Drug) as well as Ayurveda
5. Quality Training to Nurses and other Paramedics
6. Creation of Exclusive Economic Zone
7. Deep Sea Fishing, Fish Processing & Marketing of Sea Foods
8. PURA for coastal regions
9. Value addition to Rubber, Tea, Coffee, Spices, Coconut and Fruits
10. Space Mission to catalyze development.
11. Agriculture
12. Traditional Industries
13. Poverty Alleviation.
14. Revitalization of Public Sector
15. Strengthening Decentralization
16. Environment Conservation

26.2 As a follow up Five Task Forces were constituted to prepare detailed project proposals for the implementation of the 16 Missions. Detailed reports were prepared by the Task Forces A High Level Advisory Council has been constituted with 22 experts for guidance and further direction in the implementation of the Missions. The Task Force reports were discussed by the Council in October 2005 and suggested certain modifications and a plan of action. Subsequently detailed action plan has been prepared based on the suggestions of the High level Advisory Council, Task Force reports and further discussions with the conveners and other stakeholders for the implementation of the Missions. Some of the projects identified for implementation are shown in BOX 26.2

BOX : 26.2

- **Knowledge Development, Education and Research**
  Development of nursing education
  Establishment of World class institutions
  Skill upgradation and soft skill development
  Establishment of Autonomous colleges
  Creation of a special fund to encourage innovation in Universities
  Net working of Colleges and Resource sharing
  Ayurveda- CARE – Keralam Project

- **Knowledge Products, Knowledge Industry and Knowledge services**
  Establishment of three knowledge cities

- **Agriculture, Agro/food Products and Fisheries**
  Value addition in agriculture
  Micro irrigation
  Establishment of Agro service centres
  Mechanisation
  Floriculture
  Promotion of organic farming
  Expansion of Special livestock breeding programme
  Establishment of Quality control laboratories
  Expansion of Pasugramom
  Expansion of One paddy- one fish farming
  Promotion of Deep sea fishing
  Value addition to fisheries products
  Establishment of Cold Chain
  Establishment of Coastal PURAs

- **Tourism and smart water ways**
  Development of 10 new Tourism products
  Waste management
  Quality infrastructure
  Establishment of Malabar Cultural village
  Upgradation of Airports
  Human Resource Development
  Establishment of science city
  Development of inland water ways and feeder canals

- **Poverty Alleviation, Traditional industries and disadvantaged groups**
  Expansion of Asraya Project to all Panchayats
  Cluster Development through Kudumbashree
  Establishment of Urban HAATS
  Implementation of 75 point Action plan for strengthening decentralization
  Networking of Panchayats
  Alundur model of sewerage system
  Revitalisation of traditional industries
  Establishment of schools for mentally challenged

Estimated cost of the Projects

26.3 The total cost of the proposals for implementation from 2005-06 to 2010-11 is estimated at Rs.13494.53 crore. The task force wise cost of projects are shown in Table- 26.1

Table 26.1:
Task Force wise Estimated Total cost projected for various projects for 2005-06 to 2010-11

(Rs. Crores)

Task Force No.	Name of the Task Force	Estimated Total cost	Estimated Share of Government of Kerala
1	Knowledge Development, Education and Research	866.00	119.00
2	Knowledge Products, Knowledge Industry and Knowledge services	3000.00	100.00
3	Agriculture, Agro/Food products and Fisheries	1369.88	677.91
4	Tourism and Smart Water Ways	7536.88	1016.86
5	Poverty Alleviation, Traditional industries and disadvantaged groups	721.29	266.67
	TOTAL	**13494.53**	**2182.44**

26.4 The major share of Rs.10392.10 crore (77%) is expected from the private sector and financial institutions. The expected share of the Government of Kerala is Rs. 2182.44 crore over a period of five years . The importance of the Missions was highlighted in the address to the Legislative Assembly on 3rd February. 2006 by his Excellency Shri. R.L. Bhatia, Governor of Kerala.

26.5 Some of the schemes included under the Missions were already dovetailed with the ongoing state and centrally sponsored schemes including Twelfth Finance Commission award. Apart from schemes under state plan and centrally sponsored schemes, selected schemes are expected to be implemented through the plan support of local governments. In order to provide further focus on selected areas and address critical gaps identified by the five Task Forces, separate provision is also suggested. The implementation of all these schemes are proposed to be linked with the existing schemes as well as schemes of local governments wherever possible for realizing the overall targets. The State Planning Board has coordinated the preparation of the action plan. Now the Government is considering the proposals for the preparation of the comprehensive document on VISION 2010.

APPENDIX TABLES

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Appendix - 2.1

TWELFTH FINANCE COMMISSION
SUMMARY OF RECOMMENDATIONS

I. PLAN FOR RESTRUCTURING PUBLIC FINANCES

1. By 2009-10, the combined tax-GDP ratio of the centre and the states should be increased to 17.6 per cent, primary expenditure to a level of 23 per cent of GDP and capital expenditure to nearly 7 per cent of GDP.
2. The combined debt-GDP ratio with external debt measured at historical exchange rates should, at a minimum, be brought down to 75 per cent by the end of 2009-10.
3. The system of on-lending should be brought to an end over time and the long term goal for the centre and states for the debt-GDP ratio should be 28 per cent each.
4. The fiscal deficit to GDP ratio targets for the centre and the states may be fixed at 3 per cent of GDP each.
5. The centre's interest payment relative to revenue receipts should reach about 28 per cent by 2009-10. In the case of states, the level of interest payments relative to revenue receipts should fall to about 15 per cent by 2009-10.
6. The revenue deficit relative to GDP for the centre and the states, for their combined as well as individual accounts should be brought down to zero by 2008-09.
7. States should follow a recruitment and wage policy, in a manner such that the total salary bill relative to revenue expenditure net of interest payments and pensions does not exceed 35 per cent.
8. Each state should enact a fiscal responsibility legislation, which should, at a minimum, provide for
   (a) eliminating revenue deficit by 2008-09;
   (b) reducing fiscal deficit to 3 per cent of GSDP or its equivalent, defined as the ratio of interest payment to revenue receipts;
   (c) bringing out annual reduction targets of revenue and fiscal deficits;
   (d) bringing out annual statement giving prospects for the state economy and related fiscal strategy; and
   (e) bring out special statements along with the budget giving in detail the number of employees in government, public sector, and aided institutions and related salaries.

II. SHARING OF UNION TAX REVENUES

9. The share of the states in the net proceeds of shareable central taxes shall be 30.5 per cent. For this purpose, additional excise duties in lieu of sales tax are treated as a part of the general pool of central taxes. If the tax rental arrangement is terminated and the states are allowed to levy sales tax (or VAT) on these commodities without any prescribed limit, the share of the states in the net proceeds of shareable central taxes shall be reduced to 29.5 per cent.
10. If any legislation is enacted in respect of service tax after the eighty eighth Constitutional amendment is notified, it must be ensured that the revenue accruing to a state under the legislation should not be less than the share that would accrue to it, had the entire service tax proceeds been part of the shareable pool.
11. The indicative amount of over all transfers to states may be fixed at 38 percent of the central gross revenue receipt.
12. The states should be given a share as specified in Table in the net proceeds of all the shareable Union taxes in each of the five financial years during the period 2005-06 to 2009-10.

Table

State	Share (all Shareable taxes excluding service tax) (percent)	Share of Service Tax (percent)
1	2	3
Andhra Pradesh	7.356	7.453
Arunachal Pradesh	0.288	0.292
Assam	3.235	3.277
Bihar	11.028	11.173
Ghhattishgarh	2.654	2.689
Goa	0.259	0.262
Gujarat	3.569	3.616
Haryana	1.075	1.089
Himachal Pradesh	0.522	0.529
Jammu Kashmir	1.297	Nil
Jharkhand	3.361	3.405
Karnataka	4.459	4.518
Kerala	2.665	2.700
Madhya Pradesh	6.711	6.799
Maharashtra	4.997	5.063
Manipur	0.362	0.367
Meghalaya	0.371	0.376
Mizoram	0.239	0.242
Nagaland	0.263	0.266
Orissa	5.161	5.229
Punjab	1.299	1.316
Rajasthan	5.609	5.683
Sikkim	0.227	0.230
Tamil Nadu	5.305	5.374
Tripura	0.428	0.433
Uttar Pradesh	19.264	19.517
Uttaranchal	0.939	0.952
West Bengal	7.057	7.150
All States	100.00	100.00

III. LOCAL BODIES

13. A total grant of Rs.20,000 crore for the Panchayati Raj institutions and Rs.5,000 crore for the urban local bodies may be given to the states for the period 2005-10.
14. The PRIs should be encouraged to take over the assets relating to water supply and sanitation and utilize the grants for repairs/rejuvenation as also the O&M costs. The PRIs should, however, recover at least 50 percent of the recurring costs in the form of user charges.
15. Out of the grants allocated for the panchayats, priority should be given to expenditure on the O&M costs of water supply and sanitation. This will facilitate panchayats to take over the schemes and operate them.
16. At least 50 per cent of the grants provided to each state for the urban local bodies should be earmarked for the scheme of solid waste management through public-private partnership. The municipalities should concentrate on collection, segregation and transportation of solid

waste. The cost of these activities, whether carried out in house or out sourced, could be met from the grants.

17. Besides expenditure on the O&M costs of water supply and sanitation in rural areas and on the schemes of solid waste management in urban areas, PRIs and ULBs should, out of the grants allocated, give high priority to expenditure on creation of data base and maintenance of accounts through the use of modern technology and management systems, wherever possible. Some of the modern methods like GIS (Geographic Information Systems) for mapping of properties in urban areas and computerization for switching over to a modern system of financial management would go a long way in creating strong local governments, fulfilling the spirit of the 73rd and 74th Constitutional amendments.
18. The states may assess the requirement of each local body on the basis of the principles stated by us and earmark funds accordingly out of the total allocation recommended by us.
19. Grants have not been recommended separately for the normal and the excluded areas under the fifth and sixth schedule of the Constitution. The states having such areas may distribute the grants recommended by us to all local bodies, including those in the excluded areas, in a fair and just manner.
20. The central government should not impose any condition other than those prescribed by us, for release or utilization of these grants, which are largely in the nature of a correction of vertical imbalance between the centre and the states.
21. The normal practice of insisting on the utilization of amounts already released before further releases are considered, may continue and the grants may be released to a state only after it certifies that the previous releases have been passed on to the local bodies. The amounts due to the states in the first year of out award period i.e. 2005-06 may be released without such an insistence.
22. State Governments should not take more than 15 days in transferring the grants to local bodies after these are released by the Central Government. The centre should take a serious view of any undue delay on the part of the state.
23. The central government should take note of our views on the issues listed in para 8.23 of the Report, while formulating or revising various policy measures. In particular, action may be taken to raise the ceiling on profession tax.
24. The state should adopt the best practices listed in the Report (para 8.19) to improve the resources of the panchayats.
25. The suggestions made by us in respect of state finance commissions in the Report (paras 8.29 to 8.37 and 8.54) should be acted upon with a view to strengthening the institution of SFCs, so that it may play an effective role in the system of fiscal transfers to the third tier of government.

IV. CALAMITY RELIEF

26. The scheme of CRF be continued in its present form with contributions from the centre and the states in the ratio of 75:25.
27. The size of the CRF for our award period is worked out at Rs.21,333.33 crore.
28. The scheme of NCCF may continue in its present form with core corpus of Rs.500 crore. The outgo from the fund may continue to be replenished by way of collection of National Calamity Contingent Duty and levy of special surcharges.
29. The definition of natural calamity, as applicable at present, may be expanded to cover landslides, avalanches, cloud burst and pest attacks.
30. The centre may continue to make allocation of food grains to the needy states as a relief measure, but a transparent policy in this regard is required to be put in place.
31. A committee consisting of scientists, flood control specialists and other experts be set up to study and map the hazards to which several states are subject to.

32. The provision for disaster preparedness and mitigation needs to be built into the state plans, and not as a part of calamity relief.

V. GRANTS-IN-AID TO STATES

33. The system of imposing a 70:30 ratio between loans and grants for extending plan assistance to non-special category states (10:90 in the case of special category states) should be done away with. Instead, the centre should confine itself to extending plan grants to the states, and leave it to the states to decide how much they wish to borrow and from whom.
34. A total non-plan revenue deficit grant of Rs.56,855.87 crore is recommended during the award period for fifteen states.
35. Eight states have been recommended for grants amounting to Rs.10,171.65 crore over the award period for the education sector, with a minimum of Rs.20 crore in a year for any eligible state.
36. Seven states have been recommended for grants amounting to Rs.5,887.08 crore over the award period for the health sector (major heads 2210 and 2211), with a minimum of Rs.10 crore a year for any eligible state.
37. The grants for the education and health sectors are an additionality, over and above the normal expenditure to be incurred by the states in these sectors. These grants should be utilised only for the respective sectors (non-plan), i.e., major head 2202 in the case of education and major heads 2210 and 2211 in the case of health. Conditionalities governing the releases and utilisation of these grants have been specified in the Report (annexures 10.1 to 10.3). No further conditionalities should be imposed by the central or the State Government for the release or utilisation of these grants. Monitoring of the expenditure relating to these grants will rest with the State Government concerned.
38. A grant of Rs.15,000 crore over the award period is recommended for maintenance of roads and bridges. This amount will be in addition to the normal expenditure which the states would be incurring on maintenance of roads and bridges. This amount will be provided in equal installments over the last four years (i.e. 2006-07 to 2009-10) of the award period so that the states get a year for making preparations to absorb these funds.
39. An amount of Rs.5,000 crore is recommended as grants for maintenance of public buildings.
40. The maintenance grants for roads and bridges, and for buildings, are an additionality, over and above the normal maintenance expenditure to be incurred by the states. These grants should be released and spent in accordance with the conditionalities indicated.
41. A grant of Rs.1,000 crore spread over the award period 2005-10 is recommended for maintenance of forests. This would be an additionality over and above what the states would be spending through their forest departments. It should also result in increased expenditure to the extent of this grant, in addition to the normal expenditure of the forest department.
42. A grant of Rs.625 crore spread over the award period is recommended for heritage conservation. This grant will be used for preservation and protection of historical monuments, archeological sites, public libraries, museums and archieves, and also for improving the tourist infrastructure to facilitate visits to these sites.
43. An amount of Rs.7,100 crore has been recommended as grant for state specific needs. While these grants have been phased out equally over the last four years, this phasing should be taken as indicative in nature. The states may communicate the required phasing of grants to the Central Government.

VI. FISCAL REFORM FACILITY

44. The scheme of Fiscal Reform Facility may not continue over the period 2005-10, as the scheme of debt relief as described in the Report (Chapter-12), obviates the need for a separate Fiscal Reform Facility.

VII. DEBT RELIEF AND CORRECTIVE MEASURES

45. Each state must enact fiscal responsibility legislation prescribing specific annual targets with a view to eliminating the revenue deficit by 2008-09 and reducing fiscal deficits based on a path for reduction of borrowings and guarantees. Enacting the fiscal responsibility legislation on the lines indicated in the Report (Chapter 4) will be a necessary pre-condition for availing of debt relief.
46. Debt relief may not be linked with performance in human development or investment climate.
47. The central loans to states contracted till 31-3-2004 and outstanding on 31-3-2005 (amounting to Rs.1,28,798 crore) may be consolidated and rescheduled for a fresh term of 20 years (resulting in repayment in 20 equal installments), and an interest rate of 7.5 per cent be charged on them. This will be subject to the state enacting the fiscal responsibility legislation and will take effect prospectively from the year in which such legislation is enacted.
48. A debt write-off scheme linked to the reduction of revenue deficit of states may be introduced. Under the scheme, the repayments due from 2005-06 to 2009-10 on central loans contracted upto 31-3-2004 and recommended to b e consolidated will be eligible for write off. The quantum of write off of repayment will be linked to the absolute amount by which the revenue deficit is reduced in each successive year during the award period. The reduction in the revenue deficit must be cumulatively higher than the cumulative reduction attributable to the interest relief recommended by us. Also, the fiscal deficit of the state must be contained at least to the level of 2004-05. In effect, if the revenue deficit is brought down to zero, the entire repayments during the period will be written off. The enactment of the fiscal responsibility legislation would be a necessary pre-condition for availing the debt relief under this scheme also with the benefit accruing prospectively.
49. The Central Government should not act as an intermediary for future lending and allow the states to approach the market directly. If some fiscally weak states are unable to raise funds from the market, the centre could borrow for the purpose of on lending to such states, but the interest rates should remain aligned to the marginal cost of borrowing for the centre.
50. External assistance may be transferred to states on the same terms and conditions as attached to such assistance by external funding agencies, thereby making Government of India a financial intermediary without any gain or loss. The external assistance passed through to states should be managed through a separate fund in the public account.
51. The moratorium on repayments and interest payments on the outstanding special term loan amounting to Rs.3,772 crore as on 31-03-2000 given to Punjab may continue for another two years i.e. upto 2006-07, by which time the Central Government must finalize the quantum of debt relief to be allowed in terms of the recommendations of the EFC.
52. In respect of relief and rehabilitation loans given to Gujarat from ADB and World Bank through the Central Government, the central government may, if the government of Gujarat so desires, alter the terms and conditions of these loans, so that these are available to Gujarat on the same terms on which the external agencies have extended these loans.
53. All states should set up sinking funds for amortization of all loans including loans from banks, liabilities on account of NSSF etc. The fund should be maintained outside the consolidated fund of the states and the public account and should not be used for any other purpose, except for redemption of loans.
54. States should set up guarantee redemption funds through earmarked guarantee fees. This should be preceded by risk weighting of guarantees. The quantum of contribution to the fund should be decided accordingly.

PROFIT PETROLEUM

55. The Union should share the profit petroleum from NELP areas with the states from where the mineral oil and natural gas are produced. The share should be in the ratio of 50:50.

Appendix - 2.2

Total Twelfth Finance Commission Transfers to State

(Rs. in crore)

States	States in Central Taxes & Duties (2005-10)	Grants-in-aid											
		Non-plan Revenue Deficit (2005-10)	Health Sector (2005-10)	Education (2005-10)	Maintenance of Forests & Bridges (2006-10)	Maintenance of Buildings (2006-10)	Maintenance of Forests (2005-10)	Heritage Conservation (2006-10)	States Specific Needs (2006-10)	Local Bodies (2005-10)	Calamity Relief (2005-10)	Total (Col. 3 to Col. 12)	Total Transfers (Col 2 + col. 12)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Andhra Pradesh	45108.68				980.12	242.52	65.00	40.00	500.00	1961.00	1425.93	5214.58	50353.26
Arunachal Pradesh	1767.34	1357.88			44.36	57.62	100.00	5.00	10.00	71.00	112.56	1758.22	3525.56
Assam	19850.69	205.67	966.02	1107.37	330.12	230.64	60.00	20.00	130.00	581.00	767.89	4478.71	24329.40
Bihar	67671.04		1819.69	2683.76	309.56	359.61	5.00	40.00	400.00	1766.00	592.37	7975.79	75646.83
Chhattisgarh	16785.76				202.40	183.09	85.00	10.00	300.00	700.00	444.45	1987.94	18773.70
Goa	1559.4				39.48	24.18	5.00	20.00	10.00	30.00	4.73	135.39	1724.53
Gujarat	31900.47				805.20	203.61	20.00	25.00	200.00	1345.00	1019.47	3708.28	35608.75
Haryana	6596.46				182.72	152.80	2.00	15.00	330.00	679.00	515.46	1845.98	8442.44
Himachal Pradesh	2301.72	10262.38			261.64	147.60	70.00	10.00	50.00	155.00	4001.52	12857.14	14450.36
Jammu & Kashmir	7441.71	12353.46			317.68	164.54	30.00	10.00	200.00	319.00	543.89	13438.57	20880.28
Jharkhand	20624.02		360.92	651.73	409.34	159.61	30.00	10.00	330.00	580.00	501.46	3032.82	23656.84
Karnataka	27361.88				1458.12	705.12	55.00	50.00	600.00	1241.00	475.16	4054.40	31416.28
Kerala	16353.21	470.37			643.32	103.50	25.00	25.00	500.00	1134.00	354.32	3254.51	19607.72
Madhya Pradesh	41180.49		181.60	459.56	556.89	443.02	115.00	20.00	300.00	2024.00	1011.27	5141.37	46321.96
Maharashtra	30663.19				1189.68	223.61	70.00	50.00	300.00	2774.00	923.77	5531.06	36194.25
Manipur	2221.44	4391.98			76.96	37.71	30.00	5.00	30.00	55.00	22.11	4648.76	6870.20
Meghalaya	2276.61	1796.86			86.40	35.02	30.00	5.00	35.00	58.00	44.88	2091.16	4367.77
Mizoram	1466.52	2977.39			42.12	23.29	25.00	5.00	65.00	30.00	26.19	3194.39	4660.91
Nagaland	1611.67	5526.50			120.88	46.17	25.00	5.00	45.00	46.00	15.19	5839.74	7453.41
Orissa	31669.43	488.04	196.37	323.30	1475.08	389.14	75.00	50.00	370.00	907.00	1199.37	5273.30	36942.73
Punjab	7971.90	3132.67			420.96	151.90	2.00	10.00	96.00	495.81	605.16	4913.59	12884.59
Rajasthan	34418.56			100.00	633.32	212.09	25.00	50.00	450.00	1450.00	1722.50	4643.91	39062.47
Sikkim	1292.94	188.67			18.64	32.19	8.00	5.00	200.00	14.00	69.74	536.20	1829.14
Tamil Nadu	32552.74				1214.40	242.93	30.00	40.00	300.00	1442.00	866.46	4135.19	36688.13
Tripura	2626.09	5494.20			61.48	50.11	15.00	5.00	49.00	65.00	51.12	5790.91	8417.00
Uttar Pradesh	118209.45		2312.38	4454.07	2403.16	600.28	20.00	50.00	800.00	3445.00	1177.11	15262.00	133471.45
Uttaranchal	5762.22	5114.68	50.00		124.56	97.60	35.00	5.00	240.00	196.00	369.28	6432.12	12194.34
West Bengal	43303.91	3044.71		391.86	412.93	181.23	15.00	40.00	890.00	1664.00	933.64	7573.37	50877.28
Total States	613112.02	56855.87	5857.08	10171.65	15000.00	5000.00	1000.00	625.00	7100.00	25000.00	16000.00	142639.60	755751.62

Source: Report of the Twelfth Finance Commission

Appendix 3.1
Gross Domestic Product at Factor Cost - All India, 1993-94 to 2004-05

(Rs. crore)

Year	At Current Prices		At Constant Prices	
	Amount	% change	Amount	% change
Base 1993-94				
1993-94	781345		781345	
1994-95	917058	17.4	838031	7.3
1995-96	1073271	17.0	899563	7.3
1996-97	1243547	15.9	970082	7.8
1997-98	1390148	11.8	1016595	4.8
1998-99	1598127	15.0	1082747	6.5
1999-00	1761838	10.2	1148367	6.1
2000-01@	1902999	8.0	1198592	4.4
2001-02	2081474	9.4	1267945	5.8
2002-03	2254868	8.3	1318362	4.0
2003-04*	2519785	11.7	1430548	8.5
2004-05**	2838123	12.6	1529366	6.9

**- Quick Estimates*

*** - Advance Estimate*

Source: - Central Statistical Organisation

Appendix 3.2
Net National Product at Factor Cost - All India

(Rs. Crore)

Year	At Current Prices			At Constant Prices		
	NNP (Rs.Crore)	% change	Per Capita NNP (Rs.)	NNP (Rs. Crore)	% Change	Per Capita NNP (Rs.)
Old Series (Base 1980-81)						
1970-71	36503	6.0	674.7	82211	5.2	1519.6
1980-81	110685	19.9	1630.1	110685	7.5	1630.1
1990-91	418074	17.0	4983	186446	5.1	2222.2
1991-92	479612	14.7	5602.9	186191	-0.1	2175.1
1992-93	546023	13.8	6261.7	195602	5.1	2243.1
New Series (Base 1993-94)						
1993-94	685912	17.0	7690	685912	5.1	7690
1994-95	805981	17.5	8857	734358	7.1	8070
1995-96	941861	16.9	10149	787809	7.3	8489
1996-97	1093962	16.1	11564	852084	8.2	9007
1997-98	1224946	12.0	12707	891086	4.6	9244
1998-99	1415093	15.5	14396	948580	6.5	9650
1999-00	1564048	10.5	15625	1008114	6.3	10071
2000-01	1686995	7.9	16555	1050338	4.2	10308
2001-02	1848229	9.6	17823	1115171	6.2	10754
2002-03	2008770	8.7	19040	1161902	4.2	11013
2003-04*	2252070	12.1	20989	1266005	9.0	11799
2004-05**	2542921	12.9	23308	1354385	7.0	12414

** Quick Estimate*

*** Advance Estimate*

Source: Central Statistical Organisation

Appendix 3.3

Gross Domestic Product at Factor Cost by Economic Activity-All India (at Current Prices)

Sl. No.	Industry	1993-94	2001-02	2002-03	2003-04*
1	2	3	4	5	6
1	Agriculture, Forestry & Fishing	241967	510588	507883	575283
2	Mining & Quarrying	20092	47925	62116	65357
3	Manufacturing	125493	320216	351824	392919
4	Electricity, Gas & Water Supply	18984	44678	49883	54113
5	Construction	40593	125520	139754	155834
6	Trade,Hotels and Restaurant	99369	301495	332599	376518
7	Transport, Storage and. Communication	51131	157307	173422	202079
8	Financing, Insurance, Real Estate & Business Services	90084	270225	310075	340102
9	Community, Social & Personal services	93632	303540	327352	359580
Gross Domestic Product at Factor Cost		781345	2081474	2254888	2519785

**-Quick Estimate*

Source: Central Statistical Organisation

Appendix 3.4

Gross Domestic Product at Factor Cost by Economic Activity-All India (at 1993-94 prices)

Sl. No.	Industry	1993-94	2001-02	2002-03	2003-04*
1	2	3	4	5	6
1	Agriculture, Forestry & Fishing	241967	304866	283393	310611
2	Mining & Quarrying	20092	28608	31185	33195
3	Manufacturing	125493	213681	227542	243400
4	Electricity, Gas & Water Supply	18984	30715	31659	32827
5	Construction	40593	65161	69911	74819
6	Trade,Hotels and Restaurant	99369	190436	206046	224113
7	Transport, Storage and Communication	51131	107395	120922	141446
8	Financing, Insurance, Real Estate & Business Services	90084	157746	171463	183718
9	Community, social & Personal services	93632	169537	176141	188419
Gross Domestic Product at Factor Cost		781345	1267945	1318362	1430548

** Quick Estimate*

Source: Central Statistical Organisation

Appendix 3.5
Gross Domestic Product (Kerala) at Factor Cost by Industry of Origin from 1998-99 to 2004-05 (At Current Prices)

(Rs. Lakh)

Sl. No	Industry of Origin	2000-01	2001-02	2002-03	2003-04 (Provisional)	2004-05 (Quick)
1	2	5	6	7	8	9
1	Agriculture	1116493	1074685	1239047	1272036	1301065
2	Forestry and Logging	196373	119884	129434	143073	159471
3	Fishing	155234	158951	147626	155448	162605
4	Mining and Quarrying	19994	19373	15714	17453	18779
	Sub Total: Primary	**1488094**	**1372893**	**1531821**	**1588010**	**1641920**
5	Manufacturing	699137	666504	731089	773896	804351
5.1	Registered	410165	394216	432552	467640	492092
5.2	Un-registered	288972	272288	298537	306256	312259
6	Electricity, Gas & Water Supply	167076	189068	222633	287317	371711
6.1	Electricity	155628	175221	206305	267506	347316
6.2	Gas	1322	1542	1847	2058	2331
6.3	Water Supply	10126	12305	14481	17753	22064
7	Construction	680073	729710	871529	1001080	1133509
	Sub total : Secondary	**1546286**	**1585282**	**1825251**	**2062293**	**2309571**
8	Transport,Storage & Communication	652484	728593	815639	930516	1056478
8.1	Railways	18934	22528	28032	28615	31101
8.2	Transport by other means	503899	536959	595435	661734	737966
8.3	Communication	128362	167596	191064	239014	286209
8.4	Storage	1289	1510	1108	1153	1202
9	Trade, Hotel & Restaurants	1559009	1566089	1671032	1922414	2184208
10	Banking and Insurance	344325	400052	497122	548051	628786
11	Real estate ownership, Business, legal	426012	512267	590428	698485	883401
12	Public Administration	352779	351748	409971	422274	470888
13	Other Services	610235	723306	773313	774053	877856
	Sub Total:Tertiary	**3944644**	**4282055**	**4757505**	**5295793**	**610617**
	Gross State Domestic Product	**6979224**	**7240230**	**8114577**	**8946096**	**10053108**
	Mid Year Population('000)	31699	31968	32357	32711	33072
	Per capita Income (Rs.)	**22017**	**22648**	**25078**	**27349**	**30398**

Source : Department of Economics & Statistics

Appendix 3.6

Gross Domestic Product (Kerala) at Factor Cost by Industry of Origin
(At Constant prices) for the Years From 1998-99 to 2004-05

(Base year 1993-94)

Sl.No	Industry of Origin	1998-99	1999-00	2000-01	2001-02	2002-2003	2003-04 Provisional	2004-05 Quick	Annual Compound Growth Rate
1	2	3	4	5	6	7	8	9	10
1	Agriculture	721098	733584	576701	562236	569124	584277	562922	-4.42
2	Forestry and Logging	76121	80620	69423	83026	85185	94161	91517	3.9
3	Fishing	68012	73582	73462	74310	75125	79107	81572	2.59
4	Mining and Quarrying	8875	9161	10816	10403	11254	12500	13418	7.03
	Sub Total. Primary	874107	896947	730402	729975	740689	770045	749429	-2.73
5	Manufacturing	405645	435887	410022	378872	391904	415352	418647	-0.16
5.1	Registered	235007	260075	248585	233263	240947	260492	268479	1.25
5.2	Un-registered	170638	175812	161437	145609	150957	154890	152168	-2.4
6	Electricity, Gas & Water Supply	51428	68544	101258	111874	114118	147277	183749	21.84
6.1	Electricity	46956	61072	94320	103681	105809	137198	171812	22.52
6.2	Gas	725	797	801	972	958	1087	1154	8.02
6.3	Water Supply	3747	4675	6137	7281	7351	9012	10783	18.41
7	Construction	262920	229873	287801	301633	357006	410074	451622	11.3
	Sub total : Secondary	719993	732304	799081	792379	863028	972703	1054018	6.59
8	Transport,Storage & Communication	331969	384318	459968	528378	621705	733806	895612	17.14
8.1	Railways	13198	14382	15872	16620	15836	16852	17718	4.42
8.2	Transport by other means	236610	265763	305128	315867	347037	385678	425523	9.88
8.3	Communication	81428	103456	142319	194731	257906	330912	451341	33.29
8.4	Storage	753	717	849	1160	926	964	1030	5.83
9	Trade, Hotel & Restaurants	614013	665954	766849	766812	824450	948476	1036924	3.67
10	Banking and Insurance	225614	253597	274620	314134	313739	337 02	365690	2.27
11	Real estate ownership, Business, Legal	215128	226279	235869	239710	249434	295084	314800	6.37
12	Public Administration	157506	200105	204997	197035	282269	270140	303849	10.16
13	Other Services	264343	294857	311010	333989	351839	352175	373200	5.56
	Sub Total: Tertiary	1808593	2030120	2277313	2380059	2623435	2938783	3250075	10.03
	Gross State Domestic Product	3402693	3659371	3806796	3902413	4227152	4679531	5093522	8.02
	Population('000)	31168	31432	31699	31969	32357	32711	33072	0.87
	Per capita Income (Rs.)	10917	11642	12009	12207	13064	14306	15401	5.61

Source : Department of Economics & Statistics

Appendix 3.7

Net Domestic Product (Kerala) at Factor Cost by Industry of Origin (At Current Prices) for the Years from 1998-99 to 2004-05

(Rs.in lakh)

Sl.No	Industry of Origin	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04 (Provisional)	2004-05 (Quick)
1	2	3	4	5	6	7	8	
1	Agriculture	1114695	1222120	1067820	1026498	1186799	1219788	1247935
2	Forestry and Logging	103613	121479	195541	118930	128418	142057	105426
3	Fishing	111189	135343	136319	138132	124490	132312	137653
4	Mining and Quarrying	9634	11249	15752	15299	12462	14201	15602
	Sub Total: Primary	**1339131**	**1490191**	**1415432**	**1298859**	**1452168**	**1508358**	**1506616**
5	Manufacturing	558175	612334	603075	550833	605471	609370	601584
5.1	Registered	301905	344959	342089	308934	340225	336405	362701
5.2	Un-registered	256270	267375	260986	241999	265246	272965	238883
6	Electricity, Gas & Water Supply	57794	77090	137799	151264	186444	253459	330420
6.1	Electricity	51536	69490	127404	138551	173323	236185	307767
6.2	Gas	1109	1251	1322	1542	1647	2058	2031
6.3	Water Supply	5149	6349	9073	11171	13274	15216	20622
7	Construction	534385	490976	651710	701567	841174	833412	1051696
	Sub total : Secondar	**1150354**	**1180400**	**1392584**	**1403664**	**1635089**	**1696241**	**1983670**
8	Transport,Storage & Communication	320325	378282	450271	519697	604343	712744	835230
8.1	Railways	11155	12818	9170	12364	17172	15708	17330
8.2	Transport by other me	245883	298910	353109	381115	441644	506536	561348
8.3	Communication	62418	65540	86797	124799	144708	189479	235443
8.4	Storage	1069	1014	1195	1419	819	1021	1109
9	Trade, Hotel & Restau	1167492	1295247	1534603	1470945	1643236	1892189	2089495
10	Banking and Insurance	270687	300062	337028	391791	488258	538287	618264
11	Real estate ownership, Business, legal	232654	269437	342265	389379	457841	547733	650511
12	Public Administration	222145	307385	317024	313409	353682	358038	397027
13	Other Services	399286	473431	584536	605045	735066	758022	864385
	Sub Total:Tertiary	**2612589**	**3023844**	**3565727**	**3792628**	**4282428**	**4807013**	**5454913**
	Net State Domestic Product	***5102074***	***5694435***	***6373743***	***6485351***	***7369684***	**6011612**	**6945199**
	Population('000)	*31168*	*31432*	*31699*	*31988*	*32357*	32711	33072
	Per capita income (Rs.)	**16370**	**18117**	**20107**	**20287**	**22778**	**24492**	**27048**

Source : *Department of Economics & Statistics*

Appendix 3.8

Net Domestic Product (Kerala) at Factor Cost by Industry of Origin at constant prices from 1998-99 to 2004-05

[Base year 1993-'94] *(Rs.In lakh)*

Sl. No	Industry of Origin	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
							Provisional	Quick
1	2	3	4	5	6	7	8	9
1	Agriculture	689962	701705	544822	531156	539447	549229	558581
2	Forestry and Logging	75683	80182	68985	82588	84668	88415	90675
3	Fishing	57329	62300	62180	63028	60817	65266	70929
4	Mining and Quarrying	6520	6781	8436	8023	9346	10888	11326
	Sub Total: Primary	**829494**	**850968**	**684423**	**684795**	**694278**	**713796**	**731511**
5	Manufacturing	350458	369887	353129	312153	305182	328967	345837
5.1	Registered	193471	209064	207327	182741	174781	196556	212404
5.2	Un-registered	156987	160823	145802	129412	130401	130409	133433
6	Electricity, Gas & Water Supply	35933	48518	82447	89505	93788	113407	153829
6.1	Electricity	32010	43589	76080	81983	86087	104303	142039
6.2	Gas	725	797	801	912	958	940	1038
6.3	Water Supply	3198	4132	5566	6610	6743	8164	10553
7	Construction	252240	219186	265421	281305	335638	372579	323760
	Sub total : Secondary	**638631**	**637391**	**701987**	**682963**	**734608**	**812853**	**823226**
8	Transport,Storage & Communication	219846	256397	326459	391177	483146	563335	729817
8.1	Railways	6873	7933	8714	9338	8497	9247	9843
8.2	Transport by other means*	152362	167971	200844	211583	242712	250437	276098
8.3	Communication	63955	79840	116114	169187	231063	302707	442783
8.4	Storage	694	653	787	1069	873	944	893
9	Trade, Hotel & Reataurants	598017	648161	765698	725875	805092	855873	927643
10	Banking and Insurance	220560	248188	289289	308500	307602	330514	358771
11	Real estate ownership, Business, legal	165724	171367	167903	148862	171650	180861	187023
12	Public Administration	137964	184368	183591	174767	230886	236848	286513
13	Other Services	250192	281661	293706	323375	327688	338578	361168
	Sub Total: Tertiary	**1592305**	**1790142**	**2009848**	**2072858**	**2326063**	**2506007**	**2850735**
	Net State Domestic Product	**3060430**	**3278501**	**3396258**	**3440414**	**3754949**	**4032758**	**4405472**
	Population('000)	31168	31432	31699	31968	32357	32711	33072
	Per capita income (Rs.)	**9819**	**10430**	**10714**	**10752**	**11605**	**12328**	**13321**

Source : Department of Economics & Statistics

Appendix 3.9

District wise Distribution of Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2002-2003 (at Current Prices)

(Rs. in Lakh)

SL No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	STATE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture	84263	92808	67173	52813	100678	148887	90790	70021	84819	86043	85450	60612	83432	76310	1158799
2	Forestry and Logging	5920	6670	8428	0	963	30974	963	12302	15181	12277	4918	5062	5792	868	128410
3	Fishing	5853	25790	149	11268	921	62	24400	7854	473	11441	24836	0	4843	5801	124480
4	Mining and Quarrying	871	621	267	418	449	148	1282	806	719	1160	2229	183	2438	786	12482
	Sub Total. Primary	96907	125889	86017	64495	103211	179971	117415	91084	101192	111129	117433	73157	96505	83564	1452169
5	Manufacturing	34734	65572	11625	10358	29002	7690	7980	78741	43854	29971	43838	3579	50496	35481	505471
5.1	Registered	30756	36040	6552	32534	18297	4321	44842	44938	24530	18841	24602	2007	20341	19938	340225
5.2	Unregistered	23970	28786	5080	30922	19705	3369	34969	34933	19124	13130	19204	1565	22095	15543	165246
6	Electricity, Gas & Water supply	31890	1789	9175	15770	16930	15011	22007	17104	19005	6595	13508	1370	5844	2575	188444
6.1	Electricity	26952	17248	8701	14658	15011	16183	20263	16067	18561	5789	12254	1161	5200	2399	173023
6.2	Gas	190	159	60	136	123	70	184	177	168	174	160	40	140	84	1847
6.3	Water Supply	4748	488	394	937	904	58	1892	860	296	572	1579	72	504	272	23274
7	Construction	90258	53755	23656	53476	47053	15398	158225	89333	48453	65612	93370	9758	69397	25750	841174
	Sub total : Secondary	176882	137214	45456	135596	91983	38099	280363	186179	102092	102118	150902	14607	125777	63506	1535286
8	Transport, Storage & Communication	51320	40687	22352	35438	47528	9214	88259	71837	38011	55812	51250	23543	23370	15331	606343
8.1	Railways	1578	1504	129	1175	1046	0	1649	1219	2585	1764	1539	0	1491	1621	17179
8.2	Transport by other means	64436	29678	17975	25573	37716	6492	62690	54601	23760	42928	32070	21861	11174	10159	441844
8.3	Communication	14934	9620	4240	9102	8610	2708	23662	15847	11620	11070	17336	1650	10696	3639	144708
8.4	Storage	74	82	8	90	156	18	115	34	66	50	8	32	60	19	815
9	Trade, Hotel & Restaurants	254300	120449	48011	115519	111411	38616	208855	182728	128036	132116	175498	25963	144440	58994	1643236
10	Banking and Insurance	60242	30467	27928	33836	38572	18259	70749	58232	37889	30272	36426	10893	33348	17139	468258
11	Real estate ownership business & level	51278	40655	21473	30651	30660	19367	46196	48358	36948	30603	37966	11217	30013	15240	457841
12	Public Administration	84035	29957	15888	24015	26056	5671	38162	27445	23308	19170	27799	4138	22883	5164	353662
13	Other Services	55191	54248	35580	54488	50354	21023	75712	71007	50720	68141	59330	15465	51455	23302	735066
	Sub Total. Tertiary	516068	315554	151312	297427	312021	110380	527030	448882	312012	345114	400310	92185	306309	135170	4209428
	Net State Domestic Product	789455	593767	293786	498518	509035	328020	905708	725424	516996	558361	668553	179925	528591	282041	7309684
	Population('000)	3287	2826	1251	2140	1995	1147	3149	3024	2560	3689	2925	799	2452	1223	32357
	Per capita income (Rs.)	24017	22230	23484	23296	25644	28605	28762	24000	19436	15138	22857	22519	21550	23062	22779

Source : Department of Economics & Statistics

Appendix 3.10

District wise Distribution of Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2002-2003 (at Constant Prices)

Base Year 1993-94 (Rs. in Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture	38301	42185	30533	24005	45853	67509	41258	31827	38483	39110	38840	28014	37920	34686	539447
2	Forestry and Logging	3903	6376	12150	0	535	20422	635	6111	10668	8094	3243	6172	3819	440	84568
3	Fishing	2791	13068	73	5504	450	30	11920	3839	231	5589	12133	0	2366	2834	60817
4	Mining and Quarrying	503	485	200	312	336	111	947	679	539	1026	1672	137	1828	591	9348
	Sub Total: Primary	45498	62114	42956	29821	47274	88102	54770	44455	49901	53819	55886	35223	45936	38551	694278
5	Manufacturing	27566	30051	5860	35463	14518	3876	40223	40190	22004	15107	22095	1100	25421	17883	305182
5.1	Registered	15800	18828	3056	20310	8372	2220	23036	23018	12602	8652	12654	1031	16559	10261	174781
5.2	Unregistered	11768	14122	2504	15153	6246	1656	17187	17174	9402	6455	9441	769	10862	7642	130401
6	Electricity, Gas & Water Supply	15898	8895	4564	7846	8426	7607	11120	8509	5958	3266	8789	634	2963	1332	93798
6.1	Electricity	13387	8546	4322	7300	7903	7541	10064	7980	5742	2875	8088	577	2583	1161	85087
6.2	Gas	99	82	42	70	84	36	95	92	77	93	84	21	73	33	968
6.3	Water Supply	2412	247	200	476	459	30	961	437	139	291	599	36	307	138	6743
7	Construction	36014	21447	10237	20138	19098	6344	63134	35645	18537	26180	37256	3890	27690	10035	335638
	Sub total : Secondary	79500	63393	20881	63447	42142	17827	114477	84347	46500	44543	66120	6327	56074	29250	734608
8	Transport Storage & Communication	50117	32507	16721	29284	35159	7905	73188	56125	32961	42194	46240	14582	23935	12158	483145
8.1	Railways	780	744	64	581	517	0	818	603	1269	673	759	0	736	753	8497
8.2	Transport by other means	35412	16310	9878	14053	20728	3568	34562	30023	13058	23592	17791	12014	6141	5582	242712
8.3	Communication	23846	15355	6770	14534	13748	4391	37686	25463	18554	17676	27881	2634	16963	5801	231063
8.4	Storage	79	87	9	96	166	17	122	36	70	53	9	34	73	22	673
9	Trade, Hotel & Restaurants	75598	59013	23870	56598	54565	18920	102327	89526	51751	64729	65694	12720	70758	28903	805092
10	Banking and Insurance	31652	19194	17595	21317	24301	10243	44572	32944	23870	19071	24209	6929	21009	10787	307802
11	Real estate ownership, business & legal	18225	15243	8050	12816	11277	7261	17319	16256	13862	14848	14230	4205	11552	5717	171850
12	Public Administration	54859	19556	10228	15877	17016	3833	24813	17917	13215	12514	16148	2701	14938	3371	290888
13	Other Services	42436	24183	11404	24282	26018	8372	33752	31855	22810	30377	30634	7340	22938	10287	327688
	Sub Total:Tertiary	283887	169098	87668	159754	188358	57605	298069	244423	170248	183798	219744	48477	185140	71333	2328063
	Net State Domestic Product	408885	295203	151285	253022	257772	163464	465318	373224	266650	282096	341752	90027	287150	139134	3754949
	Population(000)	3267	2628	1251	2140	1995	1147	3140	3024	2680	3689	2905	799	2452	1223	32367
	Per capita Income (Rs.)	12439	11242	12093	11823	12988	14251	14777	12342	10024	7647	11684	11267	10895	11370	11605

Source : *Department of Economics & Statistics*

Appendix 3.11

District wise Distribution of Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2003-034 (at Current Prices) *

(Rs. in lakhs)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDU	ERK	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	STATE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture	86805	95367	83040	54281	102692	152717	93314	77987	96071	60435	87825	85261	95731	70432	1279786
2	Forestry and Logging	6549	10697	20395	0	1055	34264	1069	13609	17993	13581	5441	10256	6407	739	142057
3	Fishing	6307	28474	159	11974	979	66	25933	8349	503	12159	26398	0	3147	6166	132312
4	Mining and Quarrying	764	707	304	474	511	169	1439	7032	919	1559	2541	205	2779	855	24201
	Sub Total: Primary	99925	135265	89838	66729	106237	187216	121751	94957	106192	115734	122203	75946	100083	88232	1508356
5	Manufacturing	55087	65995	11700	70809	29189	7739	80316	80254	43335	30164	44119	3595	50761	35707	609370
5.1	Registered	30411	36435	6453	39090	16114	4272	44338	44305	24255	16652	24356	1985	28023	19712	336402
5.2	Unregistered	24676	29560	5241	31719	13075	3467	35977	35949	19081	13512	19753	1610	22738	15995	272965
6	Electricity Gas & Water Supply	42302	24234	12390	21253	22856	20835	29903	23077	16259	8739	18231	1709	7904	3671	253459
6.1	Electricity	36727	23530	11866	20028	21802	20660	27610	21694	15754	7589	15698	1562	7008	3109	206185
6.2	Gas	272	177	90	157	137	76	205	197	185	594	102	42	156	69	2058
6.3	Water Supply	5443	557	452	1074	1036	67	2188	986	339	656	1351	62	692	313	15316
7	Construction	69428	53255	26419	53005	47421	15751	158785	80506	45004	65006	92520	9668	88758	24920	803412
	Sub total: Secondary	186894	143484	49517	142067	99485	44325	267083	181839	106198	103808	154059	14972	127451	64198	1696241
8	Transport, Storage & Communication	94992	49117	26298	42432	53683	11009	104686	84697	44898	65405	61242	27274	28191	17824	712744
8.1	Railways	1442	1376	118	1074	957	0	1538	1115	2347	1610	1403	0	1353	1397	15708
8.2	Transport by other means	73904	34039	20616	29328	43258	7446	72131	62655	27252	49735	37129	25074	12815	11850	506536
8.3	Communication	19554	12500	5562	11515	11273	3542	30904	20981	15215	14895	22700	2160	13927	4755	189479
8.4	Storage	92	102	10	113	194	20	143	42	82	62	13	42	96	23	1021
9	Trade, Hotel & Restaurants	177677	138697	55630	133021	128293	44456	240497	210411	141731	152132	202085	29097	165323	67931	1892189
10	Banking and Insurance	55390	33589	30760	37309	42525	17925	77998	57651	41774	33974	42363	11952	36765	18993	538287
11	Real estate ownership, business & legal	81348	48639	25689	40258	35986	23150	55266	51870	44202	47379	45407	13415	38862	18241	547733
12	Public Administration	83079	30326	15061	24311	26387	5943	38532	27784	23595	19406	28142	4159	23105	9227	350030
13	Other Services	98164	55942	26279	56169	60787	21579	78375	73225	52304	70269	71557	15960	50082	24029	758022
	Sub Total: Tertiary	572638	355310	180645	333494	349658	124191	595155	505638	351999	387965	450797	103739	344368	152145	4807013
	Net State Domestic Product	859458	634059	320050	542290	554760	355732	983989	792434	564289	607638	727859	194627	571902	302575	8011612
	Population 2001	3324	2655	1269	2163	2006	1160	3183	3007	2685	2729	2067	808	3479	1236	32711
	Per Capita Income (Rs.)	25856	23882	25300	25071	27655	30667	30913	25922	20985	16294	24615	24088	23070	24480	24492

* Provisional Estimate Source : Department of Economics & Statistics

Appendix 3.12

District wise Distribution of Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2003-2004 (at Constant Prices)(Rs.in Lakh) *

Base Year 1993-94

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	STATE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture	38995	42950	31086	24441	46604	68703	42016	32405	39160	39819	39544	29439	38511	35316	549229
2	Forestry and Logging	4076	6658	12688	0	663	21326	663	8470	11140	8452	3386	6445	3988	460	88415
3	Fishing	2963	14045	78	5907	483	33	12792	4118	248	5998	13021	0	2530	3041	65268
4	Mining and Quarrying	586	542	233	364	392	130	1103	791	628	1199	1948	160	2129	685	10886
	Sub Total: Primary	46620	64195	44085	30712	48222	90252	56574	45784	51176	55464	57899	36044	47257	39502	713796
5	Manufacturing	29558	35410	6278	37994	15662	4152	43094	43062	23574	16185	23673	1929	27236	19160	325967
5.1	Registered	17769	21287	3774	22840	9415	2496	25906	25887	14172	9730	14231	1160	16373	11518	196558
5.2	Unregistered	11789	14123	2504	15154	6247	1656	17188	17175	9402	6455	9442	769	10863	7642	130409
6	Electricity Gas & Water Supply	19236	10758	5519	9490	10194	9209	13450	10280	7214	3925	8102	763	3571	1600	113407
6.1	Electricity	16219	10378	5236	8845	9575	9137	12193	9669	6957	3484	7374	699	3129	1408	104303
6.2	Gas	97	81	41	69	63	35	94	90	75	89	83	20	71	31	940
6.3	Water Supply	2920	299	242	576	556	36	1163	529	182	352	725	44	371	169	8164
7	Construction	39976	23808	11354	22355	21200	7042	70082	39569	20566	29061	41356	4322	30738	11139	372579
	Sub total : Secondary	88772	69976	23161	69839	47056	20403	125626	92918	51354	49171	73211	7014	61545	31907	812953
8	Transport, Storage & Communication	68712	37863	19140	34276	40140	9361	86054	65033	39239	48507	55456	15005	29467	14202	563335
8.1	Railways	849	810	69	632	563	0	888	657	1382	950	826	0	803	818	9247
8.2	Transport by other means	36530	16829	10193	14500	21387	3681	35662	30979	13474	24042	18357	12397	6336	5701	250437
8.3	Communication	31239	20130	8869	19040	16011	5664	49372	33358	24307	23157	36264	3451	22249	7599	302797
8.4	Storage	85	94	9	104	179	19	132	39	76	50	9	37	79	24	944
9	Trade, Hotels & Restaurants	80366	62735	25163	60168	59029	20113	108761	95172	65845	68812	91407	13523	75231	30728	855873
10	Banking and Insurance	34010	20624	18905	22905	26111	11006	47891	35398	25648	20492	26011	7337	22574	11602	330514
11	Real estate ownership, business & legal	20256	16060	8482	13203	11883	7650	18249	17128	14595	15644	14993	4431	12172	6025	180861
12	Public Administration	56275	20061	10492	16082	17456	3932	25556	18379	15608	12837	18616	2771	15324	3457	236846
13	Other Services	43546	24987	11783	25089	26883	9603	34874	32707	23362	31396	31962	7584	23700	10732	336578
	Sub Total: Tertiary	303465	182330	93965	171813	180501	61745	321405	263818	184097	197678	238445	51531	178468	76746	2506007
	Net State Domestic Product	438857	316501	161211	272364	275779	172400	504605	402520	286627	302313	369555	94589	287280	148155	4032756
	Population (000)	3324	2655	1265	2163	2006	1160	3180	3057	2669	3729	2957	808	2479	1236	32711
	Per capita Income (Rs.)	13203	11921	12744	12592	13748	14862	15853	13167	10659	8107	12498	11707	11588	11987	12328

* Provisional Estimate

Source : Department of Economics & Statistics

Appendix 3.13

District-wise Distribution of Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the Year 2004-05 at Current Prices (Quick Estimate)

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSKD	STATE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture	85605	97546	70533	55535	108074	156241	93467	73825	88970	80476	69051	66845	87290	80242	1247535
2	Forestry and Logging	4560	7936	15129	11	791	25429	791	10130	33284	10578	10.16	7646	4755	545	105428
3	Fishing	5240	29523	135	17452	1019	69	25980	8596	572	10850	27457	0	3355	6414	137653
4	Mining and Quarrying	135	777	334	521	582	186	1383	2134	900	1773	2791	226	3057	954	15812
	Sub Total: Primary	100550	135925	85261	88512	148446	181925	124810	93546	123865	114017	108147	74904	100892	88156	1509818
5	Manufacturing	54363	55152	11561	69904	28515	7640	70280	70229	43074	29779	43555	3548	51117	15252	601584
5.1	Registered	32788	39281	6964	42140	17370	4600	47504	47768	26151	17854	25260	2140	30213	21253	392701
5.2	Unregistered	21575	15871	4597	27756	11142	3034	31485	34461	17724	11925	17295	1409	19859	13999	208883
6	Electricity, Gas & Water Supply	56317	31460	16940	27716	29597	27141	39146	30356	21946	11269	23736	2134	10262	4305	330420
6.1	Electricity	47858	30634	15491	26099	28253	26950	35875	28581	20576	10279	21759	2062	9234	4155	321187
6.2	Gas	206	175	86	140	135	77	202	195	163	192	179	44	154	69	2013
6.3	Water Supply	8241	565	502	1468	1209	104	3156	1331	1207	818	1798	28	875	81	20622
7	Construction	112844	67231	32076	63100	68840	19876	157116	111687	58052	52030	110735	12196	66752	31446	1051606
	Sub total: Secondary	223544	153818	59667	160729	118269	54697	318493	220272	122444	123078	184026	17482	143136	71000	1963870
8	Transport, Storage & Communication	110608	96393	32703	42776	64222	12977	123004	99134	52861	70366	72378	31504	33840	20413	836230
8.1	Railways	1591	1515	130	1185	1055	0	1664	1281	2589	1780	1548	0	1504	1546	17530
8.2	Transport by other means	84813	39057	23561	23862	49847	8546	83704	71913	31273	56507	42615	28777	14738	10366	561343
8.3	Communication	24236	15657	6898	14829	14109	4415	35811	25946	18906	18011	28206	2684	17302	5916	235443
8.4	Storage	100	11	11	120	211	22	156	45	85	55	11	43	93	26	1158
9	Trade, Hotels & Restaurants	196204	153956	51431	185892	161668	49103	265675	212352	150764	167946	223158	53614	118987	75013	2097495
10	Banking and Insurance	62619	38550	35366	42846	48843	20588	89588	56215	47977	38337	48657	12725	42227	21705	618254
11	Real estate ownership business & rental	72857	57765	32609	47813	42739	27517	65817	61603	59496	58256	53927	15416	43278	21662	661511
12	Public Administration	94334	53878	17584	25856	28461	6567	47839	31808	25164	21518	31206	3845	23668	5757	397127
13	Other Services	111938	63792	33581	54051	68632	24321	89032	83500	59643	95125	81598	19352	40507	27432	864355
	Sub Total: Tertiary	649760	403276	205474	378338	398051	141481	675873	573614	399405	440869	540924	116488	389479	172418	5454013
	Domestic Product	973857	703019	351603	607579	832763	378073	1118844	888134	675634	878624	819092	208874	637561	331609	8945199
	Population (000)	3141	2684	1279	2187	2324	1172	3216	3091	2313	2770	2930	817	2506	1250	30272
	Per capita Income	28975	26183	2490	27781	30993	32259	34709	28733	29019	19068	27998	25811	25439	26529	27040

Source: Department of Economics & Statistics

Appendix 3.14

District wise Distribution of Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the Year 2004-05 (at constant prices) (Quick Estimate)

Base Year 1993-94

(Rs. In lakhs)

Sl No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	STATE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture	28859	43681	31618	24857	47479	69538	42131	32956	38927	40487	40210	29540	38268	35216	501581
2	Forestry and Logging	4118	6754	12742	0	713	21594	100	6874	11303	8565	3588	6328	4295	487	90675
3	Fishing	3220	15954	85	6418	523	35	12602	4476	270	6518	14160	0	2758	8306	70929
4	Mining and Quarrying	639	584	242	378	406	121	1347	833	654	1244	2894	166	2215	716	11325
	Sub Total: Primary	47806	66963	44685	31654	48185	91188	58453	44979	52054	57214	59852	36035	48467	40426	731311
5	Manufacturing	31261	37454	8040	43169	16585	4393	63581	45547	24528	37118	25039	2042	28508	20267	345837
5.1	Registered	10261	23003	4978	24681	10174	2598	27895	27974	15314	13514	15976	1253	17680	12448	212404
5.2	Unregistered	12062	14451	3062	18526	6391	1795	17686	17573	9821	6625	9681	787	11115	7819	133433
6	Electricity Gas & Water Supply	25669	14639	7488	12886	13821	12529	18211	18850	5792	5297	11071	8307	4820	2165	153629
6.1	Electricity	23587	14133	7130	12045	13039	12443	16904	19167	5474	4784	10642	952	4281	1917	142039
6.2	Gas	107	86	45	78	64	46	103	99	83	98	92	23	79	35	1038
6.3	Water Supply	1975	398	313	745	719	44	1504	684	235	455	537	57	480	217	10553
7	Construction	34739	20889	9879	13425	18422	5149	60894	34383	17877	25253	36907	3736	26740	9681	323760
	Sub total: Secondary	91871	72750	24003	72478	48844	23041	124481	83880	53589	67609	73047	6023	30539	32117	821229
8	Transport, Storage & Communication	88967	48650	24204	44408	50694	17357	112874	83884	51481	61775	74171	15750	40459	18358	729617
8.1	Railways	904	852	74	873	389	0	945	890	1471	1011	870	0	854	872	8843
8.2	Transport by other means	40983	18954	11257	15868	23570	4059	38318	34153	14834	26837	26238	10867	6955	8390	278099
8.3	Communication	45805	29445	12874	27851	26346	8280	72518	48785	35556	33873	53045	5048	33583	11113	442783
8.4	Storage	80	69	9	98	170	18	125	37	74	54	9	35	75	23	693
9	Trade, Hotel & Restaurants	57106	67986	27778	46210	30934	21601	117903	101154	71156	74882	89072	14857	31540	33303	827463
10	Banking and Insurance	36818	23387	20522	24883	28347	11947	51968	38424	27841	22244	28235	7986	24504	12982	358771
11	Real estate ownership, business & legal	20943	16608	8771	15746	12587	7011	16871	17714	15058	18177	15504	4682	12587	8328	187123
12	Public Administration	68076	24268	13693	19454	21119	4756	30885	22230	1881	15329	22920	3362	18337	4184	288513
13	Other Services	48771	35654	12062	28703	27877	10329	37700	34880	24921	33490	34084	8090	25287	17448	361166
	Sub Total Tertiary	346779	268869	106122	194547	204011	69100	369479	300095	209837	223787	273508	57396	202909	96174	2650755
	Net State Domestic Product	486456	348579	174810	298779	301940	183329	552953	440904	314480	348672	406615	101188	311714	158457	4405472
	Population (2001)	3361	2684	1215	2187	2029	1172	3218	3001	2218	3270	2996	817	2606	1250	30672
	Per capita Income (Rs.)	14471	12987	15068	13662	14881	15648	17174	14694	11871	4719	13568	12382	12436	12679	13371

Source : Department of Economics & Statistics

Appendix 3.15

Population of States/Union Territories by sex and percentage share of population in total population - 2001

Sl.No.	India/State/Union Territory	Total population			Percentage share in total population	Population density (per sq.km.)
		Persons	Males	Females		
1	2	3	4	5	6	7
	INDIA	1027015247	531277078	495738169	100	324
1	Andaman & Nicobar Islands	356,265	192,985	163,280	0.03	43
2	Andhra Pradesh	75,727,541	38,286,811	37,440,730	7.37	275
3	Arunachal Pradesh	1,091,117	573,951	517,166	0.11	13
4	Assam	26,638,407	13,787,799	12,850,608	2.59	340
5	Bihar	82,878,796	43,153,964	39,724,832	8.07	880
6	Chandigarh	900,914	508,224	392,690	0.09	7903
7	Chatisgarh	20,795,956	10,452,426	10,343,530	2.03	154
8	Dadra & Nagar Haveli	220,451	121,731	98,720	0.02	449
9	Daman & Diu	158,059	92,478	65,581	0.02	1411
10	Delhi	13,782,976	7,570,890	6,212,086	1.34	9294
11	Goa	1,343,998	685,617	658,381	0.13	363
12	Gujarat	50,596,992	26,344,053	24,252,939	4.93	258
13	Haryana	21,082,989	11,327,658	9,755,331	2.05	477
14	Himachal Pradesh	6,077,248	3,085,256	2,991,992	0.59	109
15	Jammu & Kashmir	10,069,917	5,300,574	4,769,343	0.98	99
16	Jharkhand	26,909,428	13,861,277	13,048,151	2.62	338
17	Karnataka	52,733,958	26,856,343	25,877,615	5.14	275
18	**Kerala**	**31,838,619**	**15,468,664**	**16,369,955**	**3.1**	819
19	Lakshadweep	60,595	31,118	29,477	0.01	1894
20	Madhya Pradesh	60,385,118	31,456,873	28,928,245	5.88	196
21	Maharashtra	96,752,247	50,334,270	46,417,977	9.42	314
22	Manipur	2,388,634	1,207,338	1,181,296	0.23	107
23	Meghalaya	2,306,069	1,167,840	1,138,229	0.22	103
24	Mizoram	891,058	459,783	431,275	0.09	42
25	Naagaland	1,988,636	1,041,686	946,950	0.19	120
26	Orissa	36,706,920	18,612,340	18,094,580	3.57	236
27	Pondicherry	973,829	486,705	487,124	0.09	2029
28	Punjab	24,289,296	12,963,362	11,325,934	2.37	482
29	Rajasthan	56,473,122	29,381,657	27,091,465	5.5	165
30	Sikkim	540,493	288,217	252,276	0.05	76
31	Tamil Nadu	62,110,839	31,268,654	30,842,185	6.05	478
32	Tripura	3,191,168	1,636,138	1,555,030	0.31	304
33	Uttar Pradesh	1,66,052,859	87,466,301	78,586,558	16.17	689
34	Uttaranchal	8,479,562	4,316,401	4,163,161	0.83	159
35	West Bengal	80,221,171	41,487,694	38,733,477	7.81	904

Source: Census of India - 2001

Appendix 3.16

District-wise Population, Decadal Growth Rate, Sex-ratio and Population Density

Sl.No.	State/District	Population 2001			Percentage decadal growth rate		Sex-ratio (No.of females per 1000 males)		Population density per sq.km.	
		Persons	Males	Females	1981-91	1991-01	1991	2001	1991	2001
1	2	3	4	5	6	7	8	9	10	11
	Kerala	**31838619**	**15468664**	**16367955**	**14.32**	**9.42**	**1036**	**1058**	**749**	**819**
1	Kasaragod	1203342	587763	615579	22.78	12.3	1026	1047	538	604
2	Kannur	2412365	1154144	1258221	16.63	7.13	1049	1090	759	813
3	Wayanad	786627	393397	393230	21.32	17.04	966	1000	315	369
4	Kozhikode	2878498	1398674	1479824	16.69	9.87	1027	1058	1118	1228
5	Malappuram	3629640	1759479	1870101	28.87	17.22	1053	1063	872	1022
6	Palakkad	2617072	1265794	1351278	16.52	9.86	1061	1068	532	584
7	Thrissur	2975440	1422047	1553393	12.2	8.7	1085	1092	903	981
8	Ernakulam	3098378	1535881	1562497	11.42	9.09	1000	1017	963	1050
9	Idukki	1128605	566405	562200	10.45	6.96	975	999	236	252
10	Kottayam	1952901	964433	988468	7.71	6.76	1003	1025	828	884
11	Alappuzha	2105349	1012572	1092777	7.28	5.21	1051	1079	1415	1489
12	Pathanamthitta	1231577	588035	643542	5.6	3.72	1062	1094	450	467
13	Kollam	2584118	1248616	1335502	10.68	7.33	1035	1070	967	1038
14	Thiruvananthapuram	3234707	1571424	1663283	13.5	9.78	1036	1058	1344	1476

Source: Census of India - 2001

Appendix 3.17

Age Group Population of Kerala 2001.

SLNo.	Age Group	Population (In lakhs)			Percentage			All India Percentage
		Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9
1	0-4	27.65	14.09	13.56	8.7	9.1	8.3	12.2
2	9-May	25.44	12.96	12.49	8	8.4	7.6	13.3
3	14-Oct	29.87	15.24	14.63	9.4	9.9	8.9	11.8
4	15-19	29.85	14.85	14.99	9.4	9.6	9.2	9.4
5	20-24	29.84	14.4	15.44	9.4	9.3	9.4	8.9
6	25-29	27.86	12.97	14.89	8.7	8.4	9.1	8.3
7	30-34	25.16	11.86	13.31	7.9	7.7	8.1	7
8	35-39	24.66	11.55	13.31	7.7	7.5	8	6.2
9	40-44	19.51	9.6	9.9	6.1	6.2	6	5.1
10	45-49	19.26	9.52	9.74	6.1	6.1	5.9	4.3
11	50-54	14.38	7.25	7.13	4.5	4.7	4.4	3.7
12	55-59	11.3	5.42	5.89	3.6	3.5	3.6	2.7
13	60-64	10.32	4.8	5.52	3.2	3.1	3.4	2.6
14	65-69	9.02	3.99	5.02	2.8	2.6	3.1	1.5
15	70-74	6.13	2.73	3.4	1.9	1.7	2.1	1.3
16	75-79	3.99	1.74	2.26	1.3	1.1	1.4	0.5
17	80+	3.89	1.57	2.32	1.2	1	1.4	0.8
18	Age not stated	0.26	0.14	0.12	0.1	0.1	0.1	0.4
19	All Ages	*318.41*	*154.68*	*163.73*	*100*	*100*	*100*	*100*

Source: Census of India 2001

Appendix 4.1
Number of Operational Holdings and Area Operated by Size Class in Kerala (1995-96)

Sl. No.	Size of Holding (ha)	Number	Area (ha)	Average Size (ha)
1	2	3	4	5
1	Below 0.50	5453211	587542	0.11
2	0.50-1.00	464714	324907	0.70
	Marginal (1+2)	5917925	912449	0.15
3	1.00 to 2.00 (Small)	262291	349541	1.33
4	Above 2.00	118173	450233	3.81
	Total	**6298389**	**1712223**	**0.27**

Source: Directorate of Economics and Statistics

Appendix 4.2
District wise Number & Area of Individual operational holdings 1995-96

District	Number	Area(ha)	Area per holding
Thiruvananthapuram	760288	90975	0.12
Kollam	546414	89510	0.16
Pathanamthitta	287574	79397	0.28
Alappuzha	438628	81235	0.19
Kottayam	385874	136212	0.35
Idukki	282238	128886	0.46
Ernakulam	601603	119569	0.2
Thrissur	599637	133368	0.22
Palakkad	484996	18565	0.39
Malappuram	559581	142893	0.26
Kozhikode	516569	106805	0.21
Wayanad	151771	84253	0.56
Kannur	416845	152160	0.37
Kasaragod	198408	93088	0.47
State	**6230426**	**1626916**	**0.26**

Source DES

Appendix 4.3

Percentage Distribution of Main Workers in Kerala (1991and 2001)

Item	1991	2001
2	3	4
Cultivators	12.24	7.20
Agricultural labourers	25.55	16.07
Household industry workers	2.58	3.54
Livestock, Forestry, Fishing, Plantation, Mining, Quarrying and allied sectors	10.23	73.19
Other workers	49.40	

Source: Census Reports.

Appendix 4.4

District wise Actual and Normal Rainfall (mm) with Percentage Departure from Normal rainfall for 2005

DISTRICT	SouthWest Monsoon			NorthEast Monsoon		
	Actual Rainfall	Normal Rainfall	Percentage Departure	Actual Rainfall	Normal Rainfall	Percentage Departure
	(mm)	(mm)	(%)	(mm)	(mm)	(%)
ALAPPUZHA	1523	1836	-17	561.9	584.6	-4
KANNUR	2140.6	2713.2	-21	335.6	323.5	4
ERNAKULAM	2488.8	2348.1	6	492.8	620.9	-21
IDUKKI	4339.1	2584.5	68	726.7	636.6	14
KASARAGODE	2209.8	2990.8	-26	185.5	320.3	-42
KOLLAM	1242.5	1379.2	-10	722	557.4	29
KOTTAYAM	2078.1	1968.1	6	741.2	624.7	19
KOZHIKODE	1826.8	2775.5	-34	393	470.5	-17
MALAPPURAM	1931.5	2031.4	-5	469.9	453.2	4
PALAKKAD	1969	1687.1	17	332.9	446.7	25
PATHANAMTHITTA	1891.2	1662.3	14	688.4	577.8	19
THIRUVANANTHAPURAM	765.3	969.9	-21	744.9	512.4	45
THRISSUR	2211.2	2196.7	5	265	441	-40
WAYANAD	2489.8	2756	-10	367.6	334	10

Source: IMD website

Appendix 4.5

Area, Production and Productivity of Principal Crops

Sl. No.	Crops	Area (Ha.)			Production (MT)			Productivity (Kg./Ha.)		
		2002-03	2003-04#	2004-05#	2002-03	2003-04#	2004-05#	2002-03	2003-04#	2004-05#
1	Rice	310521	287340	289974	688859	570045	667105	2218	1984	2301
2	Jowar	2571	2129	650	1311	1087	315	510	511	485
3	Ragi	1320	1504	488	1068	1217	586	809	809	1200
4	Other Cereals	2121	1233	-	1645	960	-	776	779	-
5	Pulses	5764	5998	5798	4615	4930	4754	801	822	820
6	Sugarcane	3758	3535	3327	31283	29088	28263	8324	8231	8495
7	Pepper	208607	216440	208984	67358	69015	68362	323	319	327
8	Chilies	783	682	649	787	679	652	1005	996	1005
9	Ginger	8998	8516	8863	32412	32872	30567	3602	3872	3449
10	Turmeric	3140	2774	2797	6938	5652	5814	2210	2037	2[illegible]9
11	Cardamom	41412	41332	41067	8680	8875	8931	210	215	217
12	Arecanut	97485	102504	97568	107279	105490	106389	1100	1029	1090
13	Banana	55888	55906	55742	421809	442220	425192	7577	7910	7628
14	Other Plantains	54811	53496	55129	409282	399717	414769	7467	7472	7524
15	Cashewnut	88548	88576	86105	66067	65655	63701	746	760	740
16	Tapioca	104179	94297	104388	2413217	2540790	2438771	23164	26945	23343
17	Sweet Potato	850	1002	816	10463	11981	10375	12309	11957	12714
18	Groundnut	2422	2587	1845	1801	1968	1711	744	740	927
19	Sesamum	811	1204	821	260	285	238	321	237	380
20	Coconut *	699198	698498	697767	5709	5878	5727	8348	8540	8379
21	Cotton **	3400	2949	2880	5488	4748	4357	1614	1610	1623
22	Tobacco	90	76	81	501	423	444	5567	5666	5481
23	Coffee***	83113	84684	84644	63322	63850	54300	762	754	642
24	Tea****	37068	38327	-	55348	5[illegible]553	-	[illegible]33	1502	-
25	Rubber*****	476047	478402	480543	594917	655134	690711	1250	1369	1437

 # Area, Production and Productivity for 2004-05 are provisional except Paddy

** Production of Coconut in million numbers and productivity in Nos/Ha*

*** Production of Cotton in No. of bales of 170 kg*

**** Coffee Board figures*

***** Tea Board Figures*

****** Rubber Board Figures*

Appendix 4.6

Index of Area, Production and Productivity of Crops in Kerala

Base - Average of Triennium ending 1993-94

SLNo.	Crops	2002-03	2003-04	2004-05
1	2	3	4	5
	AREA			
A	All Crops	93.25	92.87	92.22
B	**Food Grains (1+2)**	**57.47**	55.24	**55.00**
1	Cereals	58.78	56.46	56.24
2	Pulses	25.84	26.89	25.99
C	**Non-Food Grains (3to8)**	**103.00**	103.69	**102.92**
3	Oil Seeds	100.56	100.56	100.08
4	Fibres	26.89	23.33	21.22
5	Plantation Crops	107.67	110.31	108.99
6	Condiments & Spices	115.36	119.04	114.91
7	Fruits and Vegetables	91.96	87.08	91.15
8	Other Crops	60.37	56.65	53.47
	PRODUCTION			
A	All Crops	97.80	108.75	96.26
B	**Food Grains(1+2)**	**65.62**	54.30	**63.26**
1	Cereals	65.63	54.30	63.27
2	Pulses	28.50	30.45	29.36
C	**Non-Food Grains**	**98.82**	103.86	**100.00**
3	Oil Seeds	112.70	115.10	112.30
4	Fibres	26.92	23.26	21.36
5	Plantation Crops	152.42	165.87	182.49
6	Condiments & spices	137.41	143.60	135.72
7	Fruits & Vegetables	96.57	101.51	97.38
8	Other Crops	65.93	61.23	59.54
	PRODUCTIVITY			
A	**All Crops**	104.89	117.10	104.4
B	**Food Grains (1+2)**	**114.18**	98.3	**115.02**
1	Cereals	111.65	96.17	112.5
2	Pulses	110.29	113.24	113
C	**Non-Food Grains (3to8)**	**95.94**	100.16	**97.16**
3	Oil Seeds	112.07	114.46	112.23
4	Fibres	100.11	99.7	100.66
5	Plantation Crops	141.56	150.37	167.44
6	Condiments & spices	119.22	120.63	118.11
7	Fruits and Vegetables	105.01	106.6	106.83
8	Other Crops	109.21	108.08	111.35

Source: Directorate of Economics and Statistics

Appendix 4.7

Season-wise Area, Production and productivity of Rice in Kerala (2002-03 to 2004-05)

Season	Area (Ha)			Production (MT)			Productivity (kg/ha)		
	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10
Virippu	112438	102770	105349	233217	220132	241824	2074	2142	2296
Mundakan	157004	147384	148693	343792	266674	335529	2190	1809	2253
Puncha	41079	37186	35732	111850	83239	89752	2723	2238	2512
All Seasons	**310521**	**287340**	**289774**	**688859**	**570045**	**667105**	**2218**	**1984**	**2301**

Source : DES

Appendix 4.8

Season-wise Coverage of HYV of Rice in Kerala

Year	Coverage of HYV (Ha.)				Total Area under Rice (Ha)				% of HYV over Total Area under Rice			
	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1994-95	74478	55576	44391	174445	198725	237788	66777	503290	37.48	23.37	66 48	34.66
1995-96	71027	51602	41247	163876	186676	224543	59831	471150	38.05	22.97	68 94	34.78
1996-97	61532	54725	37072	153329	163893	210309	56624	430826	37.54	26.02	65.47	35.59
1997-98	69306	50693	48680	168679	144743	180701	61678	387122	47.88	28 05	78.93	43.57
1998-99	62346	66338	48414	177096	120217	174714	57700	352631	51.86	37.97	83.91	50.22
1999-00	70948	85936	54106	210990	121525	170228	58021	349774	58.38	50.48	93.25	60 32
2000-01	83868	89827	52892	226687	129752	162445	55258	347455	64.64	55.36	95.72	65.24
2001-02	78753	102714	40621	222068	110556	161978	43850	316384	71.23	63 41	92.64	70.20
2002-03	96381	112271	40152	250804	112438	157004	41079	310521	87.50	71.51	97.74	80.77
2003-04	92667	109316	36563	238546	102770	147384	37186	287340	90.20	74 20	98.30	83 00
2004-05	97559	115630	35306	248495	105349	148893	35732	289974	92.6	77.7	98.8	85.7

Source : DES

Appendix 4.9

District wise Area , Production and Productivity of Rice in Kerala

Sl. No.	District	Area (Ha)			Production (MT)			Productivity (kg/ha)		
		2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	6423	5371	5196	14119	11278	12356	2198	2100	2378
2	Kollam	11457	10187	8949	24204	22419	20646	2113	2200	2307
3	Pathanamthitta	5431	5262	4339	13521	12641	10784	2490	2402	2485
4	Alappuzha	29635	32083	32158	91561	63008	78491	3090	1964	2441
5	Kottayam	12264	11502	13161	30884	26195	32789	2518	2277	2491
6	Idukki	3785	3228	3186	8574	7526	7782	2265	2331	2456
7	Ernakulam	32072	29495	28145	60886	54044	54501	1898	1832	1936
8	Thrissur	37274	34158	36351	87272	79842	87463	2341	2337	2406
9	Palakkad	115910	105131	111029	243926	189443	260118	2104	1802	2343
10	Malappuram	19678	17671	16749	38981	36744	36539	1981	2079	2182
11	Kozhikode	5085	5185	4623	7167	7579	6727	1409	1462	1455
12	Wayanad	12968	12343	11331	31326	28421	29206	2412	2303	2578
13	Kannur	11323	9461	9102	20794	16518	17098	1836	1746	1878
14	Kasaragod	7196	6263	5675	15644	14387	12605	2174	2297	2221
	State	310521	287340	288974	688859	570045	667105	2218	1984	2301

Source : DES

Appendix 4.10

District-wise and Season-wise Area, Production and Productivity of Rice for 2004-05

Name of District	Autumn			Winter			Summer			Total		
	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)
1	2	3	4	5	6	7	8	9	10	11	12	13
Thiruvananthapuram	2621	6423	2451	2573	5930	2305	2	3	2283	5196	12356	2378
Kollam	3589	8695	2423	5360	11951	2230	-	-	-	8949	20646	2307
Pathanamthitta	834	1852	2201	1803	4233	2348	1702	4699	4202	4339	10784	2485
Alappuzha	6366	18345	2881	13801	32466	2352	11991	27680	3514	32158	78491	2441
Kottayam	2881	8270	2871	7108	17228	2424	3172	7291	3499	13161	32789	2491
Idukki	1147	2943	2566	1862	4445	2387	157	394	3820	3166	7782	2458
Ernakulam	10797	21349	1977	12486	24400	1954	4862	8752	2740	28145	54501	1936
Thrissur	9641	19964	2071	18052	40613	2250	8658	26888	4727	36351	87463	2406
Palakkad	54409	126966	2334	56200	132403	2356	420	749	2714	111029	260118	2343
Malappuram	4697	9907	2109	10452	21236	2030	1590	5396	5165	16749	36539	2182
Kozhikode	431	583	1353	3548	4844	1365	644	1300	3073	4623	6727	1455
Wayanad	-	0	-	9007	22928	2546	2324	6278	4112	11331	29206	2578
Kannur	4877	9257	1898	4107	7692	1873	118	149	1922	9102	17098	1878
Kasaragode	3059	7270	2377	2524	5760	2044	92	175	2895	5675	12905	2221
STATE	105349	241824	2295	148893	335529	2253	35732	89752	3823	289974	667105	2301

Source : DES

Appendix 4.11

Area, Production and Productivity of HYV of Rice (2002-03 to 2004-05)

District	Area			Production			Productivity		
	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10
Thiruvananthapuram	5539	4426	4715	12317	9427	11361	2224	2130	2410
Kollam	7024	6015	5917	15371	13603	14142	2188	2262	2390
Pathanamthitta	4439	4900	3776	11468	11774	9547	2584	2403	2528
Alappuzha	27871	30333	31464	89237	60771	77564	3202	2003	2465
Kottayam	12130	11104	13040	30635	25449	32604	2526	2292	2500
Idukki	3379	2835	2941	7718	6529	7201	2284	2303	2448
Ernakulam	28076	26529	25761	54403	49662	51055	1938	1872	1982
Thrissur	27873	26980	28175	70642	66989	70862	2534	2483	2515
Palakkad	100055	92758	100971	217996	171180	243401	2179	1845	2410
Malappuram	11863	11385	11660	26064	26701	27717	2197	2345	2397
Kozhikode	1441	1744	1454	2665	3070	2836	1849	1760	1950
Wayanad	9524	9473	8703	24455	22608	23557	2568	2387	2707
Kannur	7587	6463	6590	14660	12248	13182	1932	1895	2003
Kasaragode	4004	3601	3336	9667	9113	8251	2414	2531	2473
STATE	250804	238545	248493	587300	489123	593280	2342	2050	2388

Source : DES

Appendix 4.12

Plantation Crops - Area, Production and Productivity (2000-2001 to 2004-05)

	2000-01		2001-02		2002-03		2003-04		2004-05	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India	Kerala	India
1	2	3	4	5	6	7	8	9	10	11
AREA (Ha.)										
Tea *	36847	438000	36899	438000	37068	511940	38327	512000	-	-
Coffee	84735	347000	84795	347000	83113	355102	84684	327941	84644	327941
Rubber *	474364	562670	475039	566558	476047	569667	478402	573980	480543	578000
Cardamom	41288	72000	41336	72000	41412	73125	41332	73237	41067	-
PRODUCTION (MT)										
Tea	69132	846500	66090	854000	55346	837602	57553	850490	-	-
Coffee	70550	301200	66690	300500	63322	275275	63850	270500	54300	275500
Rubber	579866	630405	580350	631400	594917	649435	655134	711650	690711	749665
Cardamom	7580	10469	8380	11365	8680	11920	8875	11580	8931	11415
PRODUCTIVITY (kg/ha)										
Tea	1876	1933	1791	1950	1493	1636	1502	1661	-	-
Coffee	833	868	786	866	762	775	754	825	842	840
Rubber	1222	1120	1222	1114	1250	1140	1369	1240	1437	1297
Cardamom	184	146	203	158	210	163	215	158	217	-

* The commodity figures from respective board is not received

Appendix 4.13

Import of Rubber (1990-91 to 2004-05)

Sl.No	Year	Import (MT)		
		Natural Rubber	Synthetic Rubber	Total
	1	2	3	4
1	1990-91	49013	51715	100728
2	1991-92	15070	39210	54280
3	1992-93	17884	47362	65246
4	1993-94	19940	64338	84278
5	1994-95	8093	73860	81953
6	1995-96	51635	71735	123370
7	1996-97	19770	91050	110820
8	1997-98	32070	86389	118459
9	1998-99	29534	97548	127082
10	1999-00	20213	104842	125055
11	2000-01	8970	106923	115893
12	2001-02	49590	111323	160913
13	2002-03	26229	124475	150704
14	2003-04	44199	173784	217983
15	2004-05	68718	113095	181813

Source: Rubber Board, Kottayam

Appendix 4.14

Consumption of Rubber in Kerala & India (1994-95 to 2004-05)

(in MT)

Sl No	Year	Kerala			India		
		N.R	S.R	R.R	N.R	S.R	R.R
1	2	3	4	5	6	7	8
1	1994-95	64560	19984	6100	237440	70035	38215
2	1995-96	75200	22727	6232	525465	134085	65775
3	1996-97	67144	24575	5968	561765	142810	66585
4	1997-98	68542	27825	5270	571820	160915	70085
5	1998-99	77583	29074	6245	591545	156395	63095
6	1999-00	86849	31068	6820	628110	167220	63450
7	2000-01	88221	32978	6773	631475	170570	62260
8	2001-02	100163	32114	6583	638210	174530	63875
9	2002-03	126100	36438	6851	695425	194850	67320
10	2003-04	124630	46921	7367	719600	210200	70460
11	2004-05	6878	113095	18183	755405	224650	72905

NR- Natural Rubber SR-Synthetic Rubber RR Reclaimed Rubber

Source: Rubber Board, Kottayam

Appendix 4.15

Production, Consumption, Export and Auction Price of Tea

Year	Production			Consumption ('000 MT)	Exports		Cochin Auction Price (Rs/kg)
	India ('000 MT)	Kerala ('000 MT)	% of Kerala		India ('000 MT)	Percentage of Production	
1	2	3	4	5	6	7	8
1980	569.00	54.00	9.49	346.00	224.00	39.37	13.14
1981-85	600.00	50.00	8.33	387.00	214.00	35.67	20.50
1986-90	679.00	57.00	8.39	464.00	204.00	30.04	27.54
1991-95	740.00	65.00	8.78	567.00	174.00	23.51	38.14
1996	780.10	61.60	7.90	618.00	162.00	20.77	44.42
1997	810.00	69.80	8.62	633.00	203.00	25.08	61.57
1998	874.10	65.90	7.54	664.00	210.00	24.02	73.39
1999	824.40	67.80	8.22	650.00	192.00	23.29	62.04
2000	846.50	69.30	8.20	653.00	207.00	24.45	51.34
2001	853.70	65.10	7.70	673.00	183.00	21.44	52.21
2002	826.20	59.70	7.20	698.00	198.00	23.98	47.21
2003	857.10	56.60	6.60	714.00	173.70	20.27	45.78
2004	820.20	49.70	6.06	735.00	183.60	22.38	52.14

Source : Association of Planters of Kerala

Appendix 4.16
Average Market Price of Natural Rubber in Domestic (Kottayam) and International (Bangok) markets

Year	Kottayam (RSS - 4)	Bangok (RSS - 3)
1	2	3
1992-93	2550	2606
1993-94	2569	2510
1994-95	3639	4171
1995-96	5204	5016
1996-97	4901	4509
1997-98	3580	3221
1998-99	2994	2885
1999-00	3099	2704
2000-01	3036	2958
2001-02	3228	2793
2002-03	3918	4111
2003- 04	5040	5278
2004-05	5570	5751
2005-06*	6325	6895

Upto December 2005
Source: Rubber Board, Kottayam

Appendix 4.17
Price Trend of Rubber

Month & Year		India (Rs. per 100 kg. of RSS 4) (Kottayam)	World (Rs. per 100 kg. of RSS 3) (Bangok)
1		2	3
2004	April	5779	5973
	May	5855	6289
	June	6343	6237
	July	6560	5929
	August	5572	5772
	September	5163	5710
	October	5277	5800
	November	5207	5615
	December	5181	5248
2005	January	5311	5180
	February	5149	5524
	March	5447	5734
	Average 2004-05	5570	5751
	April	5840	5768
	May	6214	5824
	June	6173	6384
	July	6562	6881
	August	6084	7053
	September	6034	7447
	October	6555	7644
	November	6566	7366
	December	6895	7685
	Average 2005-06 *	6325	6895

**upto December 2005*
Source: Rubber Board, Kottayam

Appendix 4. 18

Monthly Average Farm Price of Important Agricultural Commodities

Commodities	Unit	2004						2005					
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Paddy	Qtl.	726	714	695	677	662	658	640	610	598	614	612	611
Coconut with husk	100 Nos	613	630	623	627	666	693	698	691	647	602	568	556
Arecanut	100 Nos.	53	45	38	34	34	35	34	34	36	40	48	53
Pepper	Qtl.	6747	6504	6114	5873	5786	6166	6127	5877	6064	5846	5686	5588
Tapioca	Qtl.	381	384	383	390	406	412	413	413	417	418	419	411
Ginger - dry	Qtl.	11226	10891	10555	10931	10029	11023	8850	8126	9627	9300	9179	9304
Banana	Qtl.	1497	1572	1349	1257	1136	917	840	818	776	897	1072	1211
Cashewnut	Qtl.	-	-	-	-	-	3500	3926	3952	3864	3582	3192	2713

Appendix 4.19

Index Number of Prices Received and Price Paid by Farmers

Year	Prices received by Farmers	Farm Cultivation Cost	Domestic Expenditure	Price Paid by Farmers	Parityas Col.2 to 5
2002	1999	6684	2542	4122	49
2003	2454	7056	2615	4295	57
2004	2651	7360	2705	4459	59
2005*	2545	7668	2755	4596	56

** Indicates Average upto June 2005*

Appendix 4.20

Consumption of Fertilizers/Ha. of gross cropped area in Kerala 1995-96 to 2004-05)

(in Kg.)

Year	N	P	K	Total (N+P+K)		N:(P+K)% (Kerala)
				Kerala	India	
1	2	3	4	5	6	7
1995-96	28.62	14.15	24.11	66.88	74.38	75
1996-97	28.33	13.59	19.60	61.52	75.49	85
1997-98	29.29	15.23	29.40	73.92	84.98	66
1998-99	29.50	14.58	18.14	62.22	87.08	90
1999-00	29.85	15.08	27.54	72.47	93.81	70
2000-01	28.43	12.66	20.82	58.32	86.34	85
2001-02	25.54	12.44	21.21	59.19	90.12	76
2002-03	29.18	13.53	26.19	68.90	86.00	73
2003-04	28.92	13.20	22.93	65.05	89.80	80
2004-05	29.87	14.14	24.2	68.21	-	78

Source: Directorate of Agriculture and CMIE

Appendix 4.21

Selected Indicators of Agricultural Development in Kerala (2003-04 & 2004-05)

Sl.No	Particulars	Unit	2003-04	2004-05
1	2	3	4	5
1	**Fertilizer consumption**			
	a) Nitrogen	MT	85430	86252
	b) Phosphorus	MT	38998	41783
	c) Potash	MT	67737	71488
	Total	MT		
2	**Plant protection measures**			
	a) Fungicide (Liquid& Solid) in terms of technical grace	MT	117.317	433.17
	b) Insecticides (Liquid& Solid) in terms of technical grace	MT	144.984	94 048
	c) Weedicide (in terms of technical grade)	MT	5 423	21.383
	d) Rodenticides(in terms of technical grade)	MT	4.2580	0 3551
	e) Area under Plant Protection coverage	Lakh Ha.	7.680	21 50
	f) Rodent control operation	Lakh Ha.	0 65	0.005
	g) Biological control of Nephantic Sennopa-parasites Laboratec	Lakh No	69.44	43.52
	h) Weed control	Lakh Ha.	0 240	0.420
3	**High Yeilding Varieties of paddy seeds**	MT	827	895
4	**Quality planting materials distributed**			
	a) Coconut seedings	Lakh No	336946	412280
	b) Rooted pepper cuttings	Lakh No.	8734896	11210895
	c) Cashew grafts	Lakh No.	553984	434759
5	**Soil testing**		284346	281211
	Soil samples analysed	No.	192165	201523

Source Directorate of Agriculture

Appendix 4.22

Average Price of Agricultural Inputs (2003-04 & 2004-05)

(in Rs.)

Sl No	Item	2003-04	2004-05
1	2	3	4
I	**Fertilizer (Price/MT)**		
a	Urea	Rs. 4630.00	Rs. 4630.00
b	Ammonium sulphate	0.00	0.00
c	Super Phosphate	Rs. 3080 00	Not fixed
d	Muriate of Potash	Rs. 9350.00	Rs. 9351 00
II	**Paddy Seed**		
a	Average NSC Price (per Qtl)		
b	State Seed Farm Price (per Qtl)	Rs. 1200.00	Rs. 1200 00
III	**Green manure seed(per Kg.)**		
a	Daincha		
b	Sannhemp		
IV	**Coconut Seedlings (Per seedling)**		
a	WCT	Rs. 20.00	Rs. 20.00
b	Hybrids	Rs. 20 00	Rs. 25.00
V	**Cashew grafts**	**Rs. 20.00**	**Rs. 20.00**
VI	**Rooted pepper cuttings(price per cuttings)**	**Rs. 1.50**	**Rs. 1.50**
VII	**Pesticides (price per litre/kg)**		
a	Phosphamidon (per lit)	Na	Na
b	Quinalphos (per lit)	215.00	215.00
c	Monocrotophos (per lit)	235.00	240.00
d	Copper sulphate (per kg)	47 50	59.88

Source Directorate of Agriculture

Appendix 4.23
Composition of Cattle Population (1977 to 2003)

(No.in 000's)

Year	Composition		Male		Female		Total	
			Nos.	%	Nos.	%	Nos.	%
1	2	3	4	5	6	7	8	9
1977	Crossbred	No	217	16.01	1138	83.99	1355	100
		%	28.82	-	50.51	-	45.08	-
	Indegenous	No	536	32.47	1115	67.53	1651	100
		%	71.18	-	49.49	-	54.92	-
	Total	**No**	**753**	**25.05**	**2253**	**74.95**	**3006**	**100**
		%	**100**	-	**100**	-	**100**	-
1992	Crossbred	No	217	14.93	1236	85.07	1453	100
		%	32.93	-	50.70	-	46.92	-
	Indegenous	No	442	26.89	1202	73.11	1644	100
		%	67.07	-	49.30	-	53.08	-
	Total	**No**	**659**	**21.28**	**2438**	**78.72**	**3097**	**100**
		%	**100**	-	**100**	-	**100**	-
1997	Crossbred	No	199	11.69	1503	88.31	1702	100
		%	39.17	-	51.54	-	49.71	-
	Indegenous	No	309	17.94	1413	82.06	1722	100
		%	60.83	-	48.46	-	50.29	-
	Total	**No**	**508**	**14.84**	**2916**	**85.16**	**3424**	**100**
		%	**100**	-	**100**	-	**100**	-
1996	Crossbred	No	232	10.14	2055	89.86	2287	100
		%	60.42	-	68.23	-	67.34	-
	Indegenous	No	152	13.73	957	86.27	1109	100
		%	39.58	-	31.77	-	32.66	-
	Total	**No**	**384**	**11.31**	**3012**	**88.69**	**3396**	**100**
		%	**100**	-	**100**	-	**100**	-
2000	Crossbred	No	144	7.36	1813	92.64	1957	100
		%	66.98	-	79.69	-	78.59	-
	Indegenous	No	71	13.32	462	86.68	533	100
		%	33.02	-	20.31	-	21.41	-
	Total	**No**	**215**	**8.63**	**2275**	**91.37**	**2490**	**100**
		%	**100**	-	**100**	-	**100**	-
2003	Crossbred	No	135	8.00	1600	92.00	1735	100
		%	74	-	82	-	82	-
	Indegenous	No	47	12.00	340	88.00	387	100
		%	26	-	18	-	18	-
	Total	**No**	**182**	**9.00**	**1940**	**91.00**	**2122**	-
		%	**100**	-	**100**	-	**100**	-

Source : Livestock Census Report

Appendix 4.24

Livestock and Poultry Population in India and Kerala - a Comparison

Species	1987			1995			2000			2003		
	India	Kerala	% share of Kerala	India (1992)	Kerala	% share of Kerala	India (1997)	Kerala	% share of Kerala	India *	Kerala	% share of Kerala
Cattle	1958.70	34.24	1.75	2045.16	33.96	1.61	1988.82	24.97	1.25	1873.80	21.22	1.13
Buffalo	789.70	3.29	0.43	842.39	1.65	0.20	899.18	1.11	0.12	966.20	0.65	0.07
Goats	904.10	15.81	1.59	1162.81	18.67	1.61	1227.21	15.95	1.30	1201.00	12.13	1.01
pigs	107.60	1.37	1.27	127.88	1.43	1.12	132.91	0.88	0.66	141.40	0.76	0.54
Poultry	2583.40	170.92	6.62	2840.25	256.46	9.03	3478.11	149.13	4.59	NA	109.92	
Ducks	234.90	8.46	3.60	220.86	11.87	5.37		10.43			6.61	

Source:Livestock Census -All India and Livestock Census-Kerala
Conference of State Ministers of AH and DD, December 2004
*Provisional

Appendix 4.25

Trend in Livestock Population of Kerala, Over the Census Periods 1966 to 2003

(No. in lakhs)

Year of Census	Cattle		Buffaloes		Goats		Pigs		Poultry		Duck		Livestock	
	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1966	28.57	0	4.71	0	11.89	0	1.12	0	95.87	0	3.19	0	46.41	0
1972	28.55	-0.04	4.72	0.21	14.68	23.47	1.29	15.18	118.44	23.54	3.62	13.48	49.36	6.36
1977	30.06	5.25	4.54	-3.81	16.83	14.65	1.72	33.33	129.56	9.39	4.3	18.78	53.19	7.76
1982	30.97	3.03	4.09	-9.91	20.04	19.07	1.27	-26.16	145.19	12.06	5.3	23.26	56.45	6.13
1987	34.24	10.56	3.29	-19.56	15.81	-21.11	1.37	7.87	170.92	17.72	8.46	59.62	55.01	-2.55
1996	33.96	-0.82	1.65	-49.85	18.6	17.65	1.43	4.38	269.46	57.65	11.87	40.31	55.77	1.36
2000	24.91	-26.65	1.11	-32.73	15.98	-14.09	0.88	-38.46	149.13	-44.66	10.43	-12.13	42.94	-23.01
2003*	21.22	-14.81	0.65	-41.44	12.13	-24.09	0.76	-13.64	122.16	-18.08	6.61	-36.63	34.81	-18.93

*Provisional

** Excluding Broiler and including dyeks etc.

Source: Livestock Census report 1966, 1972, 1977, 1982, 1987, 1996, 2000 & 2003

Appendix 4.26

Sex-wise Classification of Bovine Populationand Trend over the previous Census (1956 to 2003)

(Nos. in '000s)

Year		Cattle Population			Buffaloe Population			Total Bovine Population		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1956	No.	954	1556	2510	302	185	487	1256	1741	2997
1961	No	973	1713	2686	320	165	485	1293	1878	3171
Variation	%	1.99	10.09	7.01	5.96	(-)10.81	(-)0.41	2.95	7.87	5.81
1966	No.	913	1943	2856	295	177	472	1208	2120	3328
Variation	%	(-)6.17	13.43	6.33	(-)7.81	7.27	2.68	(-)6.57	12.89	4.95
1972	No.	780	2075	2855	269	203	472	1049	2278	3327
Variation	%	(-)14.57	6.79	(-)0.04	(-)8.81	14.69	.	(-)13.16	7.45	(-)0.03
1977	No.	753	2253	3006	254	200	454	1007	2453	3460
Variation	%	(-)3.46	8.6	5.29	(-)5.58	(-)1.48	(-)3.81	(-)4.00	7.68	4
1982	No	659	2438	3097	217	192	409	876	2630	3506
Variation	%	(-)12.48	8.21	3.03	(-)14.57	(-)4.00	(-)9.91	(-)13.0	7.22	1.33
1987	No.	508	2916	3424	131	198	329	639	3114	3753
Variation	%	(-)22.91	19.61	10.56	(-)39.63	3.13	(-)19.56	(-)27.05	18.4	7.05
1996	No	384	3012	3396	67	98	165	451	3110	3561
Variation	%	(-)24.41	3.29	(-)0.82	(-)48.85	(-)50.51	(-)49.85	(-)29.42	(-)0.13	(-)5.12
2000	No	215	2275	2490	57	54	111	272	2329	2601
Variation	%	(-)44.01	(-)24.47	(-)26.55	(-)14.93	(-)44.89	(-)32.73	(-)39.69	(-)25.[illegible]	(-)26.96
2003	No.	182	1940	2122	24	40	64	206	1980	2186
Variation	%	(-)15.34	(-)14.73	(-)14.78	(-)14.93	(-)25.93	(-)42.34	(-)24.26	(-)14.98	(-)15.96

Source: AH Department - Livestock Census Reports of Various Years

Appendix 4.27

Trend in Poultry Poppulation over Census Periods from 1982 to 2003

(No. in Lakhs)

Category	1982	1987		1996		2000		2003	
	No	No	% variation	No	% variation	No	% variation	No	% variation
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Broiler Fowls	1.11	4.63	317.00	38 79	738	34.71	- (-)10.52	21.97	(-) 36.70
Desi Fowls	65.65	153.35	134	134.93	(-)12.01	110 24	(-)18 29	77.36	(-) 29.83
Improved Fowls	79.53	17.57	(-) 77 91	121.53	592	24.13	(-)80 14	32.56	34 94
Total Fowls	**145.18**	**170.92**	**17.12**	**256.46**	**50.05**	**134.37**	**(-)34.07**	109.92	(-) 18.20
Ducks	5.30	8.46	59 53	11.87	40.35	10.43	(-)12 13	6 61	(-) 36 63
Other Poultry(Turkey	0 22	0 58	167.43	1 12	93.69	4.33	286.61	5.63	30.32
Total-Poultry	**151.81**	**184.59**	**21.59**	**308.24**	**66.99**	**183.84**	**(-)31.77**	**144.13**	**(-) 21.60**

Source: Livestock Census Reports

Appendix 4.28

Distribution of Working Bullocks* and Male calves over the Five Census Periods and Percentage Variation over Previous Census from 1982 to 2003

(In '000 Nos.)

Category	1982	% variation	1987	% variation	1995	% variation	2000	% variation	2003	% variation
1	2	3	4	5	6	7	8	9	10	11
Working Bullocks Indegenous	240.94	-29.95	120.66	-49.92	57.50	-52.35	17.46	-69.63	11.14	(-) 36.20
Cross bred	14.33	-26.89	18.70	30.50	63.68	241.60	17.13	-73.18	7.54	(-) 55.99
Total	**255.27**	**-29.79**	**139.36**	**-45.41**	**121.38**	**-12.90**	**34.59**	**-71.50**	18.68	(-) 46.00
Male calves Indegenous	135.30	6.04	112.14	-17.12	52.36	-53.31	29.63	-43.41	17.91	(-) 39.55
Cross bred	165.55	21.26	132.76	-19.81	111.30	-16.10	89.99	-19.15	92.79	3.11
Total	**300.85**	**14.93**	**244.90**	**-18.60**	**163.66**	**-33.17**	**119.52**	**-26.91**	**110.70**	**7.46**

Source: Livestock Census Report 1996 & 2000

* Includes bullocks used for work & those used for work and bre

Appendix 4.29

Trend in Distribution of Adult Female Cattle over the Census Periods from 1982 to 2003, their Percentage Distribution and Percentage Variation over the Previous Census

(In' 000 numbers)

Category	1982		1987			1996			2000			2003 (provisional)		
	No.	% distri-bution	No.	% distri-bution	% variation	No.	% distri-bution	% variation	No	% distri-bution	% variation	No	% distri-bution	% variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cattle in Milk Indegenous	392.79	45.45	451.80	44.51	15.02	329.86	29.57	-27.03	195.66	20.56	-40.64	106.64	14.94	(-) 45.49
Cross bred	471.48	54.55	563.17	55.49	19.45	785.38	70.43	39.45	756.01	79.44	-3.74	607.37	85.06	(-) 19.66
Adult Female Cattle Indegenous	785.71	51.94	812	47.73	3.35	569.53	31.71	-29.86	340.56	22.36	40.2	173.29	16.57	(-) 49.12
Cross bred	726.91	48.06	889.33	52.27	22.34	1226.36	68.29	37.89	1182	77.63	-3.62	872.54	83.43	(-) 26.18

Source: Livestock Census Reports - 199

Appendix 4.30

Production of Milk and Egg in the Major States of India (2001-02,2002-03'& 2003-04)

State	Milk					Egg				
	Production ('000 MT)			% Increase over 2001-02		Production (Million Nos)			% Increase over 2001-02	
	2001-02	2002-03	2003-04	2002-03	2003-04	2001-02	2002-03	2003-04	2002-03	2003-04
Andhra Pradesh	5814	6584	6559	13.24	12.81	13315	14862	14993	11.62	12.60
Assam	682	705	727	3.37	6.60	507	510	514	0.59	1.38
Bihar	2564	2869	3180	7.70	19.37	742	737	740	-0.67	-0.27
Gujarat	5862	6083	6421	3.77	9.54	370	385	444	4.05	20.00
Haryana	4978	5124	5221	2.93	4.88	1086	1251	1280	15.19	17.86
Jammu &Kashmir	1360	1389	1414	2.13	3.97	607	622	637	2.47	4.94
Karnataka	4797	4539	3857	-5.38	-19.60	2027	1993	1728	-1.68	-14.75
Kerala	**2718**	**2419**	**2111**	**-11.00**	**-22.33**	**2002**	**1347**	**1278**	**-32.72**	**-36.16**
Madhya Pradesh	5283	5343	5388	1.14	1.99	611	784	896	28.31	46.64
Maharashtra	6094	6238	6379	2.36	4.68	3194	3295	3376	3.16	5.70
Orissa	929	941	997	1.29	7.32	837	910	931	8.72	11.23
Punjab	7932	8173	8391	3.04	5.79	2961	3131	3068	5.74	3.61
Rajastan	7758	7789	8054	0.40	3.82	602	636	672	5.65	11.63
Tamil Nadu	4988	4622	4752	-7.34	-4.73	4224	3622	3784	-14.25	-10.42
Uttar Pradesh	14646	15288	15943	4.37	8.84	806	748	874	-7.20	8.44
West Bengal	3515	3600	3686	2.42	4.86	2710	2749	2820	1.44	4.06
All India	**84408**	**86159**	**88082**	**2.08**	**4.36**	**38729**	**39623**	**40403**	**2.82**	**4.32**

Source: Animal Husbandry Department of States

Appendix 4.31

Per Capita Availability of Milk in Major States of India - 1994-95 to 2003-04 (gms/day)

State	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Andhra Pradesh	167	167	173	170	185	192	194	209	231	238
Assam	81	80	80	79	79	71	69	70	71	71
Bihar	96	96	96	94	121	119	80	88	92	100
Gujarat	278	282	290	289	290	297	280	317	321	330
Haryana	628	611	618	627	623	631	614	645	647	643
Jammu & Kashmir	210	277	308	353	353	362	348	367	365	363
Karnataka	174	182	195	220	233	241	233	249	229	190
Kerala	194	199	203	209	221	227	219	234	203	173
Madhya Pradesh	197	196	195	197	262	261	211	240	236	233
Maharashtra	157	160	161	160	168	168	162	172	172	172
Orissa	48	53	55	53	58	66	64	69	68	71
Punjab	795	807	834	869	883	902	854	892	895	898
Rajasthan	295	307	323	348	356	367	353	376	368	371
Tamale Nadu	176	178	185	187	199	210	211	219	198	198
Uttar Pradesh	208	214	218	222	238	243	223	241	245	250
West Bengal	125	126	125	125	125	123	116	120	120	120
All India	**195**	**198**	**203**	**208**	**213**	**217**	**220**	**225**	**230**	**231**

Source National Statistics, NDDB

Appendix 4. 32

Details of milk production in the state - Results of Integrated Sample Survey (1993-94 to 2004-05)

Particulars		1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
1		2	3	4	5	6	7	8	9	10	11	12	13
Estimated no. of animals in milk (lakh)	ND*	4.688	4.661	4.072	3.905	3.105	2.927	2.496	2.132	1.698	1.892	1.428	1.159
	CB*	7.41	8.027	8.108	8.478	8.346	8.557	8.942	9.297	9.688	8.293	7.236	7.052
	Total	**12.129**	**12.708**	**12.18**	**12.383**	**11.451**	**11.484**	**11.438**	**11.429**	**11.386**	**10.185**	**8.664**	**8.221**
Estimated no. of milch animals (lakh)	ND	7.338	7.641	5.418	5.133	5.057	3.995	3.365	2.841	2.216	2.455	1.885	1.544
	CB	10.701	11.614	11.058	11.448	11.877	12.241	11.793	12.388	12.698	10.776	9.769	9.359
	Total	**18.039**	**19.255**	**16.476**	**16.581**	**16.934**	**16.236**	**15.178**	**15.229**	**14.914**	**13.233**	**11.554**	**10.903**
Average milk yield/animal in milk (kg.)	ND	1.864	1.864	2.208	2.216	2.282	2.552	2.502	2.506	2.527	2.547	2.608	2.573
	CB	5.385	5.388	5.625	5.63	6.201	6.234	6.433	6.556	6.733	6.901	7.007	7.007
	Total	**4.024**	**4.089**	**4.482**	**4.553**	**5.138**	**5.295**	**5.575**	**5.800**	**6.106**	**6.092**	**6.300**	**6.373**
Average milk yield of milch animal/day (kg.)	ND	1.191	1.142	1.862	1.686	1.401	1.869	1.845	1.879	1.936	1.963	1.976	1.932
	CB	3.745	3.724	4.124	4.169	4.357	4.358	4.878	4.920	5.137	5.310	5.190	5.28
	Total	**2.686**	**2.700**	**3.314**	**3.4**	**3.474**	**3.746**	**4.201**	**4.353**	**4.862**	**4.583**	**4.683**	**4.806**
Annual milk production in the State (lakh tonnes)	ND	3.190	3.165	3.262	3.158	2.586	2.728	2.280	1.950	1.566	1.759	1.363	1.088
	CB	14.626	15.786	16.641	17.420	18.889	19.471	20.998	22.247	23.810	20.889	18.557	18.036
	Total	**17.816**	**18.971**	**19.923**	**20.578**	**21.475**	**22.197**	**23.276**	**24.197**	**25.376**	**22.648**	**19.920**	**19.124**
	Buff.	1.1029	1.0589	0.8529	0.8182	0.7405	0.7481	0.7003	0.635	0.630	0.460	0.398	0.379
	Goat	1.0956	1.1254	1.1467	1.1844	1.2140	1.2557	1.2772	1.221	1.173	1.062	0.788	0.749
	Grand Total	**20.013**	**21.182**	**21.922**	**22.581**	**23.430**	**24.200**	**25.253**	**26.053**	**27.179**	**24.200**	**21.106**	**20.252**
Per capita per day availability of milk (gm)		**185**	**194**	**199**	**203**	**209**	**214**	**214**	**220**	**234**	**203**	**173**	**168**

* ND - Non-descript, CB - Cross bred

Source Animal Husbandry Department

Appendix 4.33

Index of Milk and Egg production in Kerala & India (1984-85 to 2004-05) (Base Year 1984-85)

Year	Index of Milk Production		Index of Egg Production	
	Kerala	India	Kerala	India
1	2	3	4	5
1984-85	100.00	100.00	100.00	100.00
1985-86	105.18	106.02	103.66	113.16
1986-87	108.34	111.08	106.48	121.46
1987-88	116.89	112.53	109.76	124.88
1988-89	124.02	118.53	111.89	133.17
1989-90	131.15	123.85	114.41	141.76
1990-91	138.52	129.88	118.14	148.06
1991-92	146.31	134.22	130.34	154.24
1992-93	154.84	141.20	135.21	160.88
1993-94	164.02	146.02	140.55	169.56
1994-95	173.61	153.73	146.04	182.25
1995-96	179.67	159.78	151.45	191.44
1996-97	188.08	164.58	154.27	192.90
1997-98	192.05	169.88	154.95	199.27
1998-99	198.38	181.20	155.79	206.82
1999-00	206.97	189.19	156.56	213.84
2000-01	213.52	193.75	155.03	257.04
2001-02	222.79	202.88	152.59	271.74
2002-03	198.36	208.41	102.67	279.42
2003-04	173.03	211.78	97.33	283.49
2004-05	164.34	218.78	91.23	288.14

Source: Animal Husbandry Department & Economic Survey

Appendix 4.34

Activities in the Animal Husbandry Sector (1996-97 to 2004- 2005)

Sl.No	Activities	'000	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10	11	12
1	Cases treated	Nos.	3851	3725	3893	3738	3865	4161	4925	4629	4879
2	Operations Performed	Nos.	116	115	119	97	117	123	145	136	138
3	Castration done	Nos.	9	8	7	6	7	6	6	6	6
4	**Vaccination done**										
	1. Livestock	Nos	355	285	691	530	461	524	1211	4414	7576
	2.Poultry	Nos.	1828	1794	1235	2073	1688	1995	3194	4554	4483
5	Anti Rabies Vaccinations done in Dogs	Nos.	98	45	132	127	102	85	118	132	113
6	Artificial Inseminations done	Nos.	1151	1259	1251	1391	1372	1249	1369	1231	1175
7	Calvings recorded	Nos.	318	327	314	349	361	333	402	354	358
8	Chicks hatched out in Department Poultry Farms	Nos	851	915	1057	1639	533	566	707	977	714
9	**Vaccines produced in Veterinary Biologicals**										
	1. Poultry	Doses	4543	797	2645	5561	3627	5410	8318	17967	18454
	2. Livestock	Doses	1026	254	303	250	202	230	203	534	329

Source: Animal Husbandry Department.

Appendix 4.35

Production and Distribution of Frozen Semen in Kerala (1994-95 to 2004-2005)

(In lakh doses)

Year	Production of Frozen Semen	Distribution inside the State	Distribution Outside the State	Total Distribution
1	2	3	4	5
1994-95	24.85	15.36	10.97	26.33
1995-96	14.93	16.27	6.61	22.88
1996-97	24.78	15.39	7.83	23.22
1997-98	24.49	15.04	7.95	22.99
1998-99	25.57	15.75	7.70	23.45
1999-00	26.17	15.74	6.80	22.54
2000-01	20.13	15.83	7.60	23.43
2001-02	28.94	15.52	5.50	21.02
2002-03	23.79	15.32	6.45	21.77
2003-04	24.33	15.05	1.24	16.29
2004-05	22.71	14.99	4.2	19.21

Source: KLD Board

Appendix 4.36

Artificial Insemination Centres in the State, as on 31.03.2005

Sl.No	Department/ Institutions	No.of A.I Centres
1	2	3
1	Department of Animal Husbandry (Both ICDP and Non-ICDP)	2445
2	Department of Dairy Development	11
3	Other Voluntary Organisations	252
4	APCOS	231
5	Tata Tea	26
	Total:	2965

Source: Animal Husbandry Department & KLD Board

Appendix 4.37

Other Important Activities of KLD Board During 2003-04 and 2004-05

Sl.No	Name of Programme	Achievement	
		2003-04	2004-05
1	2	3	4
1	Liquid Nitrogen (Lakh litres)	1.33	2.18
2	Quantity of basic fodder seeds produced (kg.)	991.2	902
3	Quantity of fodder seed supplied (MT)	15.654	10.88
4	No. of kids produced		
	(I) Malabari	177	184
	(II)Boer	79	80
5	No. of Malabari kids distributed:	146	129
6	No. of personnel trained	1562	1079
7	No. of embryos collected	38	94
8	Premium bull semen distributed		
9	No. of pigs distributed:	6045	11749
	For breeding and rearing	5285	8723
	For meat	279	232

Source: KLD Board

Appendix 4.38

Average Price of Livestock Products and Feeds in the State (2001-02 to 2004-2005)

Item		Unit	2001-02	2002-03	2003-04	Percentage increase over 2002-03	2004-05	Percentage increase over 2003-04
1		2	3		4	5		6
Meat	Chicken (Broiler)	Kg.	55.6	55.25	55.04	-0.40	58.63	6.50
	Chicken (Deal)	Kg.	70.92	71.03	74.59	5.00	84.64	13.50
	Mutton	Kg.	113	113.06	126.82	12.20	137.54	8.50
	Beef	Kg.	51	51.31	55.37	7.90	58.18	5.10
	Pork	Kg.	63	62.58	64.34	2.80	66.70	3.70
Egg	Fowl (White)	100Nos	140	137	146	6.60	155.00	6.20
	Fowl (Brown)	100Nos.	210	207	224	8.20	242.00	8.00
	Duck	100Nos.	252	266	295	10.90	310.00	5.10
Milk	Cow	Litre	12.70	12.84	13.13	2.30	13.81	5.20
	Buffalo	Litre	15.10	16.31	16.73	2.60	17.80	6.40
Feeds (price)								
	Groundnut cake	Kg.	12.20	11.11	12.49	12.40	13.29	6.40
	Coconut cake	Kg.	9.84	10.16	12.57	23.70	11.76	-6.4
	Gingely oil cake	Kg.	11.45	12.43	13.56	9.10	12.53	-7.6
	Straw	Kg.	3.61	3.49	3.54	1.40	3.81	7.60
	Grass	Kg.	2.96	2.18	2.52	15.60	2.96	17.50

Source: Animal Husbandry Department.

Appendix 4.39
Dairy Cooperatives of India at a Glance

(In numbers+)

State	1980-81	1990-91	2002-03	2003-04*	2004-05*
North					
Haryana	505	3,229	3,963	4,219	5172
Himachal Pradesh		210	235	283	387
Jammu & Kashmir		105	**	**	**
Punjab	490	5,726	7,108	6,892	6893
Rajasthan	1,433	4,976	8,364	9,643	10852
Uttar Pradesh	248	7,880	17,429	18,104	18272
Sub Total	**2676**	**22126**	**37099**	**39141**	**41576**
East					
Assam		117	54	65	66
Bihar	118	2,060	4,008	4,657	5023
Jharkhand				80	80
Nagaland		21	77	76	76
Orissa		736	1,483	1,654	1896
Sikkim		134	185	189	194
Tripura		73	84	84	84
West Bengal	584	1,223	2,012	2,287	2367
Sub Total	**702**	**4364**	**7903**	**9092**	9786
West					
Chhattisgarh				424	445
Gujarat	4,798	10,056	11,112	11,400	11615
Goa		124	164	169	174
Madhya Pradesh	441	3,865	4,911	4,699	4815
Maharashtra	718	4,535	17,376	18,349	19192
Sub Total	**5957**	**18580**	**33563**	**35041**	36241
South					
Andhra Pradesh	298	4,766	5,007	5,072	4561
Karnataka	1,267	5,621	9,050	9,293	9619
Kerala		1,016	3,114	3,208	3238
Tamil Nadu	2,384	6,871	7,452	7,631	8031
Pondicherry		71	93	96	100
Sub Total	**3949**	**18345**	**24716**	**25300**	25549
All India	**13284**	**63415**	**103281**	**108574**	**113152**

+ Organised (Cumulative)

** Provisional, includes conventional societies and Taluka unions formed earlier*

Chattisgarh and Jharkhad reported separately from 2003-04

*** Not reported*

Appendix 4.40

Performance of Kerala Co-operative Milk Marketing Federation (1997 to 2005)

Sl. No	Particulars	1997	1998	1999	2000	2001	2002	2003	2004	2005 *
1	2	3	4	5	6	7	8	9	10	11
1	No. of Apcos registered (Cumulative)	1963	2149	2235	2308	2424	2464	2535	2590	2634
2	No. of Apcos functional (Cumulative)	1826	1985	2040	2092	2130	2250	2308	2354	2376
3	No.of members in apcos (Cumulative) (lakh Nos)	5.27	5.72	5.99	6.25	6.53	6.79	6.97	7.32	7.4
4	No of Women in Apcos (Lakh Nos)	0.75	0.81	0.83	0.84	1.03	1.09	1.15	1.25	1.29
5	No.of SC/ST members in Apcos (Lakh Nos)	0.31	0.34	0.40	0.39	0.42	0.40	0.40	0.44	0.43
6	Average milk marketed/day by KCMMF (MT)	529	566	611	629	659	699	737	774	835
7	Average milk procured per day (MT) - Apcos	465	477	538	669	714	706	6.72	7.33	6.16
8	Direct employment generated (No. of persons)	5242	5565	5709	5844	7060	7210	7484	7586	7732
9	No.of Veterinary routes.	25	51	43	41	18	13	13	10	13
10	No.of cases treated (Lal	0.71	0.14	0.09	0.06	0.05	0.04	0.03	0.03	0.02
11	No.of emergency veterir	17	19	19	17	20	38	39	37	39
12	No.of cases treated(Lak	0.36	0.36	0.43	0.28	0.31	0.40	0.42	0.47	0.33
13	Cattle feed sold (MT)	38743	43480	83071	121629	116790	102626	104018	112000	76038
14	Quantity of ghee produc	1213	1220	1562	1513	1709	1832	2299	2606	1621
15	Quantity of ghee sold (M	1055	1181	1435	1493	1786	1934	2258	2438	1593

Source. *KCMMF*

** as on August 2005*

Appendix 4.41

Performance of the Dairies under Kerala Co-operative Milk Marketing Federation (2001 to 2005)

Sl.No	Dairy	Capacity lakh ltr./day	Procurement (lakh ltrs.)					Sales (lakh ltrs.)				
			2001	2002	2003	2004	2005*	2001	2002	2003	2004	2005*
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	2.00	449.97	428.66	356.54	371.04	245.45	458.67	552.11	551.31	595.07	426.90
2	Kollam	1.00	432.95	431.68	261.83	209.49	162.94	304.55	340.95	407.19	432.22	312.62
3	Alappuzha	0.66	96.37	91.51	68.33	61.81	51.34	160.54	193.91	206.15	226.93	181.66
4	Kottayam	0.40	86.92	79.82	67.38	79.98	66.23	99.13	119.02	124.22	136.70	100.34
5	Ernakulam	1.50	403.52	377.62	353.34	413.43	330.57	316.68	381.14	401.10	452.13	330.28
6	Thrissur	0.60	175.97	149.62	137.69	109.90	59.31	101.98	121.92	122.15	120.50	80.31
7	Palakkad	1.00	358.90	342.23	331.8	386.99	262.81	132.96	160.24	165.00	237.85	301.14
8	Kannur	1.00	296.14	336.67	343.66	384.94	282.43	248.54	284.64	239.85	254.75	180.20
9	Kozhikode	1.50	183.17	169.64	156.4	170.81	125.57	257.12	309.03	331.81	325.32	217.44
10	Kasaragod	0.30	0.00	4.47	23.51	29.77	27.65	0.00	15.69	102.71	107.53	74.32
	Total	9.96	2483.91	2412.01	2120.58	2216.16	1614.30	2060.17	2478.65	2650.49	2888.60	2185.21

Source : KCMMF

* as on August 2005

Appendix 4.42
Average Quantity of Milk Procured per day by APCOS (1994 to 2005)

Year	No. of Societies (Functional)	Total Procurement/ day (ltr.)	Procurement per Society/day (ltr.)
1	2	3	4
1994	1621	414730	256
1995	1722	465294	270
1996	1784	484969	272
1997	1826	464998	255
1998	1985	566247	285
1999	2040	629114	308
2000	2092	688864	329
2001	2130	714301	335
2002	2250	708137	315
2003	2308	671720	291
2004	2354	732615	311
2005*	2375	816107	344

Source: KCMMF
* As on August 2005

Appendix 4.43
Price Revision Details of Milk

Date of Revision/Region	FAT(Rs./Kg)	SNF(Rs/Kg)	Purchase Price(Rs./kg) (Average rate)	Sales price(Rs/ltr) Toned Milk
1	2	3	4	5
01/04/84	30.00	21.00	2.67	4.00
01/10/85	31.00	24.00	2.97	4.50
11/08/87	34.00	27.50	3.38	5.00
21/07/89	35.00	31.10	3.89	5.50
15/02/91	39.00	34.90	4.14	6.00
21/11/91	42.80	42.80	4.92	7.00
01/11/92	49.25	49.25	5.68	8.00
01/02/94	55.50	55.50	6.38	9.00
21/01/95	62.50	62.50	7.19	10.00
31/01/96	69.90	69.90	8.04	11.00
01/01/97	80.15	77.01	8.95	12.00
01/04/99	95.70	78.30	9.73	13.00
From 2000-01 onwards different Price Structures were adopted in the different Regional Milk Unions				
TRCMPU				
01/04/01	95.70	78.30	9.73	13.00
01/07/01	91.30	74.70	9.09	13.00
11/08/01	95.70	78.30	9.73	13.00
01/11/01	95.70	79.55	9.71	13.00
21/11/03	103.34	85.90	10.40	14.00
21/04/05	110.21	91.61	11.09	15.00
ERCMPU				
11/05/00	95.70	78.3	9.23	13
11/07/01	91.30	74.7	9.09	13
21/11/03	98.99	80.99	9.85	14
21/04/05	107.97	88.34	10.75	15
MRCMPU				
21/05/00	95.7	78.3	9.23	13
11/10/00	95.7	78.3	9.23	12.5
21/05/01	95.7	78.3	8.63	12.5
01/10/01	95.7	79.55	9.21	12.5
21/11/03	103.34	85.9	10.4	14
21/04/05	110.21	91.61	11.09	15

Source: KCMMF

Appendix 4.44
Price Spread of Milk (1993-94 to 2004-05)

(Average price per lit.in Rs.)

Year	Producer	Society	Consumer	Difference in price between producer & consumer
1	2	3	4	5
1993-94	6.14	6.56	9.09	2.86
1994-95	7.44	7.80	10.00	2.56
1995-96	8.31	8.81	11.00	2.69
1996-97	9.42	9.91	12.00	2.58
1997-98	9.22	9.64	12.00	2.78
1999-00	9.93	10.33	13.00	3.07
2000-01	9.93	10.33	13.00	3.07
2002-03				
TRCMPU&MRCMPU	10.71	10.33	14.00	3.29
ERCMPU	10.15	10.33	14.00	3.85
2005-06				
TRCMPU &MRCMPU	11.42	NA	15.00	3.58
ERCMPU	11.07	NA	15.00	3.93

Source. KCMMF

Appendix.4.45
Sale of Milk and Milk Products by KCMMF (2002-03 to 2004-05)

Sl. No	Product	2002-03	2003-04	% change over 2002-03	2004-05	% change over 2002-03
1	2	3	4	5	6	7
1	Milk (Lakh Ltr)	2663	2675	0.45	2913	9.39
2	Ghee (MT)	1992	2256	13.25	2459	23.44
3	Butter (MT)	377	296	-21.49	295	-21.75
4	Ice-cream (Ltrs)	310351	311204	0.27	236845	-23.68
5	Peda (Kg.)	79025	65304	-17.36	65360	-17.29
6	Refresh/Trays	31924	24080	-24.57	15839	-50.38
7	Card Milk/ trays	1055	0	-100.00	0	-100.00
8	Sambharam (lakh ltrs.)	14.92	72.99	389.21	13.50	-9.52
9	Curd (lakh ltr.)	103.99	116.37	11.90	132.07	27.00
10	Lassy (Ltr.)	17076	2076	-87.84	0	-100.00
11	Kulfi (Cups)	14475	12563	-13.21	0	-100.00
12	Sip up (lakh nos.)	39.4	26.05	-33.88	23.36	-40.71
13	Cream (Kg.)	146298	10,11	-99.99	158526	8.36
14	Dairy Whitener (MT)	63	16	-74.60	19	-69.84
15	Cream Roll (Nos.)	5419	0	-100.00	0	-100.00
16	Palada (Kg.)	3078	2709	-11.99	1411	-54.16
17	Milma Plus (Bot.)	1107892	755947	-31.77	889028	-19.75
18	Paneer (Kg.)	4620	0	-100.00	0	-100.00
19	Chocolik (Nos.)	135361	0	-100.00	166135	22.72
20	Yoghurt(Kgs)	22005	0	-100.00	0	-100.00
21	Skimmed Milk Powder (MT)	1	0	-100.00	0	-100.00
22	Kassatta (Nos)	0	0		539	

Source: KCMMF - Annual Reports

Appendix 4.46
Outbreaks, Attacks and Deaths due to Major Contagious Diseases

(unit in Nos)

Sl. No.	Disease	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	***Anthrax***									
	Outbreaks	0	0	11	10	0	2	3	2	4
	Attacks	0	0	463	463	0	6	4	4	7
	Deaths	0	0	22	21	0	5	4	4	7
2	***Black Quarter***									
	Outbreaks	3	1	2	0	0	1	1	1	0
	Attacks	3	1	2	0	0	1	1	1	0
	Deaths	3	1	1	0	0	1	1	0	0
3	***Hemorrhagic Septicemia***									
	Outbreaks	8	4	9	9	2	4	8	4	2
	Attacks	29	308	121	56	27	170	23	17	41
	Deaths	10	22	10	64	0	31	12		
4	***Foot & Mouth Disease***									
	Outbreaks	79	232	475	804	48	49	470	2383	132
	Attacks	2253	189	14214	19205	212	1026	9918	19207	1890
	Deaths	17	6753	0	1178	0	344	814	1302	92
5	***Rinderpest***									
	No outbreak reported after 1994									

Source: A H Dept

Appendix 4.47

District-wise Distribution of Fishermen Population in Kerala (2004-05)

Sl. No.	District	Marine				Inland				Marine & Inland Total
		Male	Female	Children	Total	Male	Female	Children	Total	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	66406	58671	52162	177239	457	530	452	1439	178678
2	Kollam	41301	34930	20472	96703	14401	13557	8695	36653	133356
3	Alappuzha	45934	41929	28409	116272	26715	25603	13733	66091	182363
4	Pathanamthitta	0	0	0	0	1075	934	435	2444	2444
5	Kottayam	0	0	0	0	10443	9913	6177	26533	26533
6	Idukki	0	0	0	0	316	319	200	835	835
7	Ernakulam	30519	28610	17864	76993	25355	24797	17909	68061	145-54
8	Thrissur	30177	30405	17310	77892	8481	7755	4889	21125	99017
9	Palakkad	0	0	0	0	925	909	934	2768	2768
10	Malappuram	33136	26944	24627	84707	1963	1710	925	4598	89305
11	Wayanad	0	0	0	0	93	100	96	289	289
12	Kozhikode	40576	35394	27102	103072	4431	4668	3630	12729	115801
13	Kannur	21913	19913	17020	58846	2633	2784	1496	6913	65759
14	Kasaragod	18193	17177	10619	45989	421	398	185	1004	46993
	State	328155	293973	215585	837713	97709	93977	59756	251452	1089195

Source: Directorate of Fisheries

Appendix 4.48
Species wise composition of Marine fish landings in Kerala
(2002-2003 to 2004-05)

(In MT)

Sl. No	Species	2002-03	2003-04	2004-05
1	Elasmobranchs	3197	3066	3044
2	Eels	181	147	148
3	Cat Fish	121	154	154
4	Chirocentrirus	293	258	258
5(a)	Oil Sardine	190443	174464	172754
(b)	Lesser Sardine	28658	99539	98303
(c)	Anchovilla	29173	35869	35312
(d)	Trissocis	4366	2320	2306
(e)	Other Clupeids	10731	13024	12791
6	Saurida & Saurus	6617	6021	5916
7	Hemirhamphus & Belone	970	647	642
8	Flying fish			
9	Perches	40119	31020	30437
10	Red Mullets	144	1584	1616
11	Polynemids	159	22	21
12	Sciaenids	6093	9056	8992
13	Ribbon fish	16082	18815	18657
14(a)	Caranx	24855	25721	25419
(b)	Chorinemus	536	1051	1049
(c)	Othe Caranxids	19118	24618	24171
15	Leiognathus	8619	5186	5136
16	Lactrious	2106	3938	3907
17	Pomfrets	2557	1412	1393
18	Mackerel	54537	43551	43017
19	Seerfish	3499	2389	2371
20	Tunnies	15444	11314	11208
21	Sphyraena	3209	1610	1592
22	Mugil	89	26	29
23	Solae	14781	8174	8631
24(a)	Penaid Prawn	53627	53361	53402
(b)	Non Penaid Prawn	3350	3370	3315
(c)	Lobsters	891	344	0
(d)	Crabs	7772	3446	413
(e)	Other Crustaceans	16889		532
26	Cephalopods	26685	18147	15939
27	Miscellaneous	17395	6859	6761
TOTAL		603288	608525	601863

Source: Directorate of Fisheries

Appendix 4.49

Species-wise Inland Fish Production in Kerala (2000-01 to 2004-05)

(In MT)

Sl.No	Species	2000-01		2001-02		2002-03		2003-04		2004-05	
		Production	%	Production	%	Production	%	Production	%	Production	%
1	2	3	4	5	6	7	8	9	10	11	12
1	Prawns	18315	21.5	16388	21.0	16178	21.6	16136	21.16	16334	21.37
2	Etroplus	4963	5.8	6998	9.0	4394	5.9	4510	5.91	4458	5.83
3	Murrels	4600	5.4	4306	5.5	4460	5.9	3657	4.79	4133	5.41
4	Tilapia	8336	9.8	6868	8.8	7449	9.9	7739	10.15	7490	9.80
5	Catfish	5278	6.2	4517	5.8	4367	5.8	4359	5.71	4740	6.20
6	Jew Fish	3078	3.6	2426	3.1	2677	3.6	2795	3.66	2766	3.62
.	Others	40668	47.7	36536	46.8	35511	47.3	37083	48.61	36531	47.78
	Total	85234	100	78039	100	75035	100	76279	100.00	76451	100.00

Source: Directorate of Fisheries

Appendix 4.50

District wise distribution of Fishing Boats, Crafts and Gears

Sl.No.	Name of District	Mechanised Boats			Traditional Crafts			Gears
		Trawlers	Liners	Total	Trawlers	Liners	Total	
1	Thiruvananthapuram	102	-	102	2559	1878	4437	7487
2	Kollam	374	-	374	597	1905	2502	2914
3	Pathanamthitta	-	-	-	2	39	41	174
4	Alappuzha	421	10	431	2026	3368	5394	28285
5	Kottayam	29	-	29	283	1228	1511	5528
6	Idukki	-	-	-	3	-	3	607
7	Ernakulam	253	-	253	960	3901	4861	11345
8	Thrissur	106	1	107	1530	1145	2675	2778
9	Palakkad	88	-	88	0	17	17	182
10	Malappuram	618	-	618	1225	619	1844	3901
11	Kozhikode	178	-	178	483	452	935	2238
12	Kannur	117	-	117	379	247	626	1273
13	Wayanad	-	-	-	-	9	9	186
14	Kasaragod	60	-	60	449	508	957	3162
	Total	2344	11	2355	10498	15314	25812	70039

Source: Kerala XVII Quinquennial Livestock Census 2003

Appendix 4.51

Details on Fishery Harbours in Kerala

(Amount in Lakh Rs.)

Sl.No	Name of Fishing Harbour	Total Estimated Cost		Year of Starting	Year of Completion targeted	Expenditure up to March 2004 - Progressive Total	Expenditure up to March 2005	Amount Released by GOI	Amount sanctined by GOI	Remarks
		Original	Revised							
1	2	3	4	5	6	7	8	9	10	11
1	Vizhinjam	704.00	1583.00 *	1967 - stage II	2004	1501.988	1538.66	690.50	704.00	* Revised estimate submitted to Government for sanction
2	Muthalapozhi	1366.00	-	2000	2005	495.822	718.291	509.49	1366.00	
3	Thangassery	1980.50	4385.50 *	1991	Commissioned in 2001	4041.401	4086.770	990.25	1980.50	
4	Neendakara	622.00	-	1982	Commissioned in 1988	821.969	836.969	311.00	622.00	
5	Kayamkulam	624.60	1970.32	1994	2005	971.425	1205.953	300.00	624.60	
6	Munambam	1167.20	1952	1998	Commissioned in 2000	1784.811	1792.944	583.60	1167.20	
7	Puthiyappa	527.00	962.5	1988	Commissioned in 1996	1185.112	1161.293	481.25	962.50	
8	Chombal	556.00	975.00 *	1992	Commissioned in 1999	898.301	902.657	370.00	556.00	
9	Mopla bay	564.00	816	1992	Commissioned in 1999	1055.048	1070.495	408.00	816.00	
10	Ponnani	2759.40	-	2001	2008	471.306	550.981	350.00	2759.40	
11	Thalai	1370.00	1970*	-	-	47.266	53.467	-	-	
12	Thottappally	1458.30		2004	2008	-	4.29	100.00	1458.30	

* Revised Estimate submitted to Government for sanction

Source : Harbour Engineering Department

Appendix 4.52

Details of Revenue Collection in various Fishing Harbours/Fish Landing Centres

(Rs. in lakhs)

Sl.No.	Name of Harbour or Landing Centre	2003-04	2004-05	Total
1	2	4	5	6
I	**FISHING HARBOURS**			
1	Neendakara	114.75	102.39	217.14
2	Puthiyappa	40.62	34.19	74.82
3	Munambam	16.10	13.69	29.79
4	Mopla Bay	3.94	5.13	9.10
5	Chompal	14.55	9.83	24.38
6	Azheekal	1.68	1.78	3.46
7	Beypore	9.34	8.41	15.75
8	Thangassery	24.07	26.83	50.89
9	Vuchinjam	27.74	9.19	36.93
II	**FISH LANDING CENTRES**			
1	Munakkadavu	0.1	0.45	0.55
2	Thottappaly	0.25	0.00	0.25
3	Neeleswaram	0.07	0.50	0.58
4	Dharmadam	0.46	0.60	1.06
5	New Mahe	1.16	1.11	2.28
6	Vellayil Beach	1.15	0.93	2.08
7	Cheruvathoor	0.12	1.38	1.5
8	Chalilgopalapettah	0.26	0.11	0.37
9	Quilandy	0.3	0.20	0.5
10	Chettuva	1.66	2.30	3.97
11	Palacode	0.00	0.00	0
12	Arthungal	0.29	0.53	0.81
13	Punnappra	0.00	0.14	0.14
14	Ponnani	0.45	0.00	0.45
15	Kattoor	0.10	0.11	0.21
	TOTAL	**259.14**	**217.80**	**477.03**

Source: Harbour Engineering Department

Appendix 4.53

Welfare Activities of Fisheries Department (2002-03 to 2004-05)

Sl.No	Particulars	2002-03		2003-04		2004-05	
		Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)
1	2	7	8				
1	NFWF Housing	177.87	445	600	1500	600	1500
2	Danida Model Sanitation	-	-	-	-	-	-
3	Theerajyothi (Electrification)	-	-	-	-	-	-
4	Group Accident Insurance Scheme for fishermen	57.9	128	56.15	138		
5	G.A is lpr allied workers	5.64	22	50.00	220279	68.38	220592
6	Fishermen Oldage Pension	472.19	27,240	512.25	27240	300	25268
7	Pension for wives of deceased fishermen	22.57	1,380	-	-	-	-

Source: Fisheries Directorate

Appendix 4.54

Details of Welfare Relief Schemes implemented by The Kerala Fishermen's Welfare Fund Board, 2004-05

(Amount in Rs.)

Sl. No	Details of Schemes	No of beneficiaries	Amount spent
1	2	3	4
1	Group Insurance Scheme		
a)	Accident Death (started on 10.09.1998)	88	8550000
b)	Permanent total disability	0	0
c)	Permanent partial disability	1	50000
d)	Medical Expenses (Hospitalisation)	0	0
2	Death while fishing or immediately there after not due to accident	22	410000
3	Financial assistance for the marriage of daughters of fishermen	334	501000
4	Financial assistance for the death of dependents	390	387000
5	Old age pension	27979	46203156
6	Temporary disability	550	221005
7	Financial assistance to the dependents for the death of fishermen	460	2292000
8	SSLC cash award to the students who score highest marks	15	45712
9	Family welfare schemes	483	236000
10			
a)	Financial assistance for treatment of fatal diseases	226	2013921
b)	Invalid pension	13	10100
11	Widow pension	3247	2223293
12	Chairman's Relief Fund	117	212000
13	Special cases sanctioned by the Board	1	5000
14	Maternity benefit scheme	577	425250
15	Matsya Board Guidance Centre	0	4250
16	Cash award for Higher Education	16	62058
17	Extension	0	0
18	Insurance Premium	0	6831904
	Total	*34517*	*70685149*
	Allied Workers Welfare Scheme		
1	Financial assistance to the dependents for the death of allied workers	35	175000
2	Maternity benefit scheme	51	38250
a)	Accidental death	7	700000
4	Old age pension	623	70726[illegible]
5	Medical Expenses (Hospitalisation)	0	0
6	SSLC cash award to the students who score highest marks	11	36524
7	Special cases sanctioned by the Board	1	16000
8	Fatal disease	38	220143
9	Marriage assistance	63	94500
10	Sterilisation Operation	16	8000
11	Insurance Premium	0	1334829
	Total	*845*	*3330531*
	GRAND TOTAL	35362	74015680

Source: National Fisherman's Welfare Fund Board

Appendix 4.55

Activity-wise Cumulative Sanction/Release of Funds to Kerala by NCDC

(Rs. in Crore)

Sl. No.	Scheme	Total Release from 1952-53 to 2000-01	% to Total release	Total release 2001-02	% to Total release	Total release during	% to Total release	Total release during	% to Total release	Total release during	% to Total release
1	2	3	4	5	6	7	8	9	10	11	12
1	Mktg. & Input Distribution	40.57	9.17	8.75	16.95	14.96	29.85	2.06	2.16	57.99	53.08
2	Agro- Processing										
	a) Sugar	1.39	0.31	-	-	-	-	-			
	b) Spinning Mills	10.05	2.27	-	-	-	-	8.04	8.33	13.77	12.60
	c) Oil Processing	74.25	16.79	-	-	-	-	-	-	-	-
	d) Powerlooms	18.53	4.18	0.95	1.85	2.46	4.90	-	-	-	-
	e) Rubber/others	34.30	7.75	0.55	1.07	1.57	3.13	5.60	6.00	7.06	6.46
3	Storage	13.54	3.06	0.81	1.57	2.41	4.80	0.02	0.02	0.33	0.30
4	Rural consumer / Student stores	20.68	4.67	1.96	3.8	10.67	21.26	1.69	1.75	1.11	1.02
5	ICDP	66.19	14.95	20.95	40.58	7.63	15.21	18.10	18.67	10.77	9.86
6	Weaker Section										
	a) Fisheries	66.92	20.08	16.69	32.15	5.63	11.22	15.21	15.75	16.27	14.89
	b) Handloom	15.72	3.55	0.72	1.39	1.11	2.21	-	-	0.06	0.05
	c) Coir	48.75	11.01	0.09	0.18	1.23	2.45	-	-	1.57	1.44
	d) SC-ST Co-ope.	2.18	0.49	-	-	0.09	0.18	-	-	0.16	0.15
	e) Poultry	0.10	0.02	-	-	-	-	-	-	-	-
	f) Dairy	0.03	0.01	-	-	-	-	-	-	-	-
7	Promotional/Development Projects	4.76	1.06	-	-	-	-	-	-	-	-
9	Credit to Co-operative Development	-	-	-	-	-	-	46.55	48.20	0.02	0.02
10	Computerisation	2.71	0.61	0.24	0.46	2.40	4.79	1.08	1.12	0.14	0.13
	Total:	442.67	100	51.61	100	50.18	100	96.57	100.00	109.24	100

Source: NCDC

Appendix 4.56
NCDC Release of Fund for Kerala
(1999-00 to 2004-2005)

(In Lakh Rs.)

Sl.No.	Name of Schemes	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8
1	Marketing Co-operatives						
	(a) Margin Money to Federation	203.000	-	300.000	1090.000	-	700.00
	(b) Share Capital to PAMS	134.270	53.630	413.130	260.060	140.000	81.29
	(c) Agro Custom Hiring-cum-service Centre of RAIDCO (Margin Money)	70.000	-	-	-		-
	(d) Farmers Service Centre	142.400	544.400	161.850	99.400	58.530	
	(e) Agricultural Implements/ Organic manuare	-	-	-	49.080	8.940	17.68
	(f) Working Capital						5000.00
2	Processing Unit						
	(a) Rubber	319.025	1967.06	55.145	158.530	580.300	390.00
	(b) Spices Powdering Unit	58.600	49.055	-	-	-	-
	(c) Fruit and Vegetables						256.00
	(d) Cattlefeed						30.00
3	Storage	79.000	35.407	61.275	241.071	2.175	33.270
4	Credit for Co-operative Development	-	-	-	-	4655.325	
5	Fisheries						
	(a) Marine	1395.484	1143.72	1859.38	562.500	1521.430	1819.63
	(b) Inland	208.466	-	-	-	-	-
	(c) Fish marketing cell	42.200	-	-	-	-	6.50
6	Coir Co-operatives	397.626	1057.087	9.320	123.349	-	156.56
7	Handloom Co-operatives	264.173	74.140	71.583	111.250	-	5.41
	(a) Spinning Mills - SC	150.000	107.990	-	-	804.020	377.00
	(b) Powerloom	382.850	551.555	95.620	245.830	-	-
8	SC/ST Co-operatives	51.965	68.310	-	8.890	-	15.75
9	Sugar Factory	-	-	-	-	-	-
10	Computerisation	249.660	270.520	23.730	24.[illegible]130	107.589	13.75
11	Tech/Promo Cell	-	-	-	-	-	
12	Project Reports Study etc. Others	-	-	-		-	
13	EEC-Coconut Development Project (KERAFED Project)	120.850	-	-	-	-	0.34
14	INTE-Co-operative Development Project (I.C.D.P)	945.517	773.632	2094.527	769.063	1610.198	1077.64
15	Consumer Schemes	443.130	205.060	188.800	1066.580	169.390	110.77
16	Student Stores	7.140	1.500	7.130	0.650	-	-
17	Animal Husbandry Department	-	-	-	-	-	-
	Poultry Co-operatives	-	-	-	-	-	-
18	Godown to dairy	2.500	-	-	-	-	-
19	Industrial Co-operatives	-	-	-	-	-	2.44
	Total:	5628.256	6904.058	5161.481	5910.[illegible]83	9[illegible]597	10924.33

Source NCDC

Appendix 4. 57

Selected Indicators of Performance of the Primary Agricultural Credit Societies

Sl.No.	Indicators	Unit	2001	2002	2003	2004	2005
1	2	3	4	5	6	7	8
1	Average membership per society	No.	12671	13377	13882	14420	15970
2	Average Share Capital per Society	Lakh Rs.	20.00	21.00	31.00	24	29.59
3	Average deposit per society	Lakh Rs	386.00	427.00	536.00	579	771.88
4	Average deposit per member	Rs	3043.16	3192.4	3860.08	4012.27	4834.3
5	Average working capital per society	Lakh Rs.	507.05	555	653.04	772.5	1039
6	Average loan per member	Rs	2593.24	2599.54	3871.90	3788.38	4181
7	Percentage of borrowing members to total	%	44.44	42.09	44.13	40.15	55.43
8	Average loan advanced per advancing society	Lakh Rs.	328.58	347.75	537.5	546.28	667.62
9	Average loan advanced per borrowing members	Rs	5835.03	6175.93	8215.21	9037.1	7544
10	Percentage of overdue to demand	%	21.67	23.84	25.36	34.8	19.78
11	Percentage of overdue to outstanding	%	25.67	23.54	25.36	28.73	23.74

Source: *Registrar of Co-operative Societies, Kerala*

Appendix 4.58

Selected Indicators of theCredit Operations of the Primary Agricultural Credit Socities

Sl.No.	Indicators	Unit	2002	2003	2004	2005
1	2	3	4	5	6	7
1	No.of Societies	Nos.	1685	1628	1655	1594
2	No.of Members	No. in crores	2.2541	2.28	2.30	2.50
	(i) of which SC	No. in lakhs	8.951	9.69	12.48	17.95
	(ii) of which ST	No. in lakhs	1.1987	1.31	1.46	2.52
3	Paid up share capital	Rs. in crores	361.3958	508.35	409.44	471.05
4	Reserves	Rs. in crores	372.2008	925.34	569.87	720.55
5	Deposits	Rs. in crores	7195.935	8723.77	9811.41	12269.3
6	Working Capital	Rs. in crores	9351.775	10631.50	13233.32	16543.97
7	Loans Issued	Rs. in crores	5859.624	8750.50	8984.99	10628.44
	(i) short-term	Rs. in crores	3748.013	6301.10	5742.51	7011.81
	(ii) Medium-term	Rs. in crores	1606.113	1859.43	2673.49	3183.31
	(iii) Long - term	Rs. in crores	507.498	589.97	568.99	433.22
8	Loan Outstanding	Rs. in crores	6287.657	8802.23	7901.65	9919.27
9	Loan Overdue	Rs. in crores	1475.175	1724.97	2260.25	2354.38
10	S.T Loan for agricultural purpose alone	Rs. in crores	1401.557	3739.29	1839.75	1911.73
11	S.T Loan for non-agricultural purpose	Rs. in crores	2593.476	2561.81	3505.28	5100.19
12	M.T loan for Agricultural purpose	Rs in crores	504.465	560.88	650.72	881.75
13	M T loan for non-Agricultural purpose	Rs. in crores	1125.818	1298.54	1541.96	2301.56
14	L.T Loan for Agricultural	Rs. in crores	194.66	254.79	173.95	201.31
15	L T. Loan for non-agricultural purpose	Rs. in crores	310.048	335.18	287.68	386.10
16	Value of Fertilizers Sold	Rs. in crores	284.793	52.28	194.10	273.80
17	Value of Agricultural Produce Marketed	Rs. in crores	74.506	206.17	85.66	118.21
18	Dormant Societies	No.	109	27	28	24
19	Societies on Profit	No.	863	754	745	722
20	Profit Amount	Rs. in crores	116.063	94.27	123.53	235.93
21	Societies on loss	Nos.	913	874	940	828
22	Loss Amount	Rs. in crores	397.443	203.70	388.40	338.17
23	Societies without profit or loss (U/L)*	No.	0	0	17	20
24	Societies having paid Secretaries	No.	1558	1560	1573	1639
25	Societies having own Godowns	No.	1309	1313	1309	1288
26	Societies having Hired Godowns	No.	176	172	157	147
27	Viable Societies	No.	1347	754	1483	1421
28	Computerised societies	No.	428	452	578	717
29	Self Help Group Formed by PACS	No.	5878	7384	9048	13163
30	State Contribution to SHGs	Rs. in Lakhs	90.93	31.30	356.92	238.37
31	Assistance for insurance	Rs.in Lakhs	0	0	-	1.04

*U/L. Under Liquidation

Source: *Registrar of Co-operative Socishes, Kerala.*

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Appendix 4.59

Important Activities of Major Co-operatives (2002-03 to 2004-05)

Schemes	Unit	2002-03	2003-04	2004-05
Procurement of Natural Rubber by RUBCO	MT	12805	4847	365
	Lakh Rs.	5089	2435	200
Sales of Natural Rubber				
a) Domestic	MT	1048	253	269
	Lakh Rs.	355	256	144
b)Export	MT	13415	4478	95
	Lakh Rs.	4434	1778	46.58
Hewai Chappel Sales Turnover	Lakh Rs.	440.69	-	449.84
Cycle Tyre and tubes	MT	-	-	827
	Lakh Rs.	-	-	441.77
Matresses	MT	-	-	1470
	Lakh Rs	-	-	1703
Furniture	Lakh Rs.		1551	1434
Rubber Mark				
a) Rubber procured marketed	MT	-	-	13509
	Lakh Rs.	-	-	7907
b)Sales turnover	Lakh Rs.			88.9

Source : Annual reports of major co-operatives

Appendix. 5.1

Water Resources Potential of the River Basins of India

Sl No.	Name of the River Basin	Average annual potential in river (BCM)	Utilisable Surface flow (BCM)	Replenishable Ground flow (BCM)
1	Indus (up to border)	73.31	46.0	26.49
2	a) Ganga	525.02	250.0	170.99
	b) Bhramaputra Barak & Others	585.60	24.0	26.55
3	Godavari	110.54	76.3	40.65
4	Krishna	78.12	58.0	26.41
5	Cauvery	21.36	6.8	12.30
6	Pennar	6.32	6.9	4.93
7	East Flowing Rivers Between Mahanandi & Pennar	22.52	13.1	18.84
8	East Flowing Rivers Between Pennar and Kanyakumari	16.46	16.7	18.22
9	Mahanadi	66.88	50.0	16.46
10	Brahmani & Baitarni	28.48	18.3	4.05
11	Subernarekha	12.37	6.8	1.82
12	Sabarmati	3.81	1.9	..
13	Mahi	11.02	3.1	8.52
14	West Flowing Rivers of Kutch, Sabarmati including Luni	15.10	15.0	11.23
15	Narmada	45.64	34.5	10.83
16	Tapi	14.88	14.5	8.27
17	West Flowing Rivers from Tapi to Tadri	87.41	11.9	
18	West Flowing Rivers from Tadri to Kanyakumari	113.53	24.3	17.69
19	Minor River Basin Drainage into Bangladesh &Burma	31.00	..	..
	TOTAL	1869.37	690.3	431.42

Source: Ministry of Water Resources

Appendix 5.2

Central Loan Assistance Released under AIBP to States from 1996-97 to 2003-04

(Rs. Crores)

Sl. No.	State	CLA Released during								
		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	Total
1	Andhra Pradesh	35.25	74	79.67	65.015	95.02	281.66	33.196	205.53	869.331
2	Arunachal Pradesh	0	0	0	7.5	7.5	15	1.5	20	51.5
3	Assam	5.23	12.4	13.95	14.54	24.077	14.521	16.274	19.2015	120.1935
4	Bihar	13.5	5.15	36.185	129.695	148.44	3.42	14.481	74.644	425.515
5	Chhattisgarh	0	4.5	9.5	10.52	13.93	48.2	104	74.63	265.28
6	Goa	0	5.25	0	3.5	61.65	58	0	2	130.4
7	Gujarat	74.773	196.9	423.82	272.7	421.85	581.69	1000.33	650.359	3622.422
8	Haryana	32.5	12	0	0	0	0	18	7.735	70.235
9	Himachal Pradesh	0	6.5	5	11.047	18.015	3.244	8.15	14.692	66.648
10	Jammu & Kashmir	1.3	0	0	4.68	10.46	11.07	34.999	21.545	84.054
11	Jharkhand	0	8.69	11.64	14.345	9.05	10.82	9.67	1.833	66.248
12	Karnataka	61.25	90.5	94.5	157.14	171	492.5	620.85	266.478	1954.218
13	Kerala	3.75	15	0	0	22.4	11.275	5.665	31	89.09
14	Madhya Pradesh	63.25	110	81.25	95.325	151.328	215.41	220	568.44	1505.003
15	Maharashtra	14	55	50.86	49.875	97.02	39.1	133.134	164.395	603.384
16	Manipur	4.3	26	10.76	21.81	1.5	9.36	19.5	15.5	108.75
17	Meghalaya	0	0	0	2.694	5.512	4.47	1.5	1.088	15.264
18	Mizoram	0	0	0	1.433	1.433	2	0.75	9.3	14.916
19	Nagaland	0	0	0	2.73	5	5	2.659	8	23.389
20	Orissa	48.45	85	71.5	90.25	100.32	168.475	179.57	154.685	898.25
21	Punjab	67.5	100	0	42	55.62	113.69	36.66	0	415.47
22	Rajasthan	2.675	42	140.05	106.665	78.467	96.315	174.385	499.837	1140.394
23	Tripura	3.773	5.1	3.975	34.653	13.883	21.063	13.395	13.377	109.219
24	Tamilnadu	20	0	0	0	0	0	0	0	20
25	Uttar Pradesh	43.5	78	76.5	286	315.9	354.69	359	274.785	1788.375
26	Uttaranchal	0	0	0	0	0	0	25.163	25.5525	50.7155
27	West Bengal	5	20	10	25	26.825	38.608	28.133	3.144	156.71
28	Sikkim	0	0	0	1.36	0	2.4	0.75	0.75	5.26
	Total	500.001	952.19	1119.18	1450.477	1856.2	2601.981	3061.704	3128.501	14670.23

Appendix 5.3

Physical Achievements under Minor Irrigation Schemes

(Area in Ha.)

Sl.No.	Name of Schemes	Physical Achievement (net area)				
		2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7
1	Minor Irrigation - class -I	924	714	1630	2947	2609
2	Minor Irrigation - class -II	821	587	834	1758	353
3	Lift Irrigation	512	160	458	181	95
4	Jaladhara Padhathy	–	--	557	--	
5	Repairs to MI Structures	-	--	--	--	16

Source : Department of Water Resources

Appendix 5. 4

Ground Water Resources of Kerala as on 31.03.1999 (GEC-1997 Methodology)

(Figures in MCM)

Sl. No.	District	Total Annual Ground Water Recharge	Natural Discharge during Non-Monsoon Season	Net Annual Ground Water Availability	Existing Gross Ground Water draft for Irrigation	Existing Gross Ground Water for Domestic and Industrial uses	Existing Gross Ground Water draft for all uses	Allocation for domestic and industrial water supply for next 25 years	Net Ground Water Availability for future irrigation development	Existing stage of Ground Water Development (%)
	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	308.51	30.48	278.03	84.20	94.59	178.79	111.58	82.25	64.31
2	Kollam	495.61	47.36	448.25	114.03	88.75	202.78	111.84	222.28	45.24
3	Pathanamthitta	347.00	30.44	316.56	49.86	42.03	91.69	56.05	208.85	28.96
4	Alappuzha	466.08	46.62	419.46	61.06	67.46	128.52	92.37	286.03	30.64
5	Kottayam	521.06	50.20	470.86	62.89	67.43	130.32	92.52	315.45	27.68
6	Idukki	269.04	22.72	246.32	41.77	41.64	83.41	57.08	147.47	33.86
7	Ernakulam	618.43	50.59	567.84	197.59	86.44	284.03	112.21	258.04	50.02
8	Thrissur	774.99	72.19	702.80	228.27	101.36	329.63	130.24	344.29	46.90
9	Palakkad	823.92	73.55	750.37	140.47	159.85	300.32	191.81	418.09	40.02
10	Malappuram	557.29	49.66	507.63	165.45	115.23	280.68	158.50	185.68	55.29
11	Kozhikod	366.41	21.60	344.81	104.86	86.80	191.66	112.83	127.32	55.58
12	Wayanad	324.39	32.44	291.95	34.40	28.67	63.07	40.40	217.15	21.60
13	Kannur	591.89	51.27	540.62	107.29	76.52	183.81	101.38	331.95	34.00
14	Kasargod	376.18	32.64	343.54	204.08	40.59	244.67	43.06	96.38	71.22
	TOTAL	6840.80	611.76	6229.04	1595.02	1097.36	2693.38	1411.79	3221.23	43.24

Source, Water Resources Department (GWD)

Appendix 5.5

Physical Achievements under Ground water development Schemes

Sl.No	Items	Unit	2002-03	2003-04	2004-05
1	2	3	4	5	6
1	Detailed hydrological survey(Site selection)	No.	3058	5423	.
2	Siting and providing technical assistance for open wells	No	850	882	5048
3	Siting and construction of different types of drilled wells	No.	510	934	1119
4	Creation of additional irrigation facilities	ha.	1027	2637	2000
5	Training of personnel	No	108	41	71
6	Water sample analysis	No.	2140	2545	2548

Source: Water Resources Department (GWD)

Appendix 5.6

Physical Achievements Under Command Area Development Programme

Sl No.	Item	Achievement				
		Unit	2001-02	2002-03	2003-04	2004-05
1	2	3	6	7	8	
1	Construction of field channels	ha.	926	776	2170.65	1998
2	Construction of field drain	ha.	8207	15580	5369.34	6156
3	Warabandhi works	ha.	-	578	-	-
4	Training Programme for farmers	No.	129	298	84	89
5	Adaptive Trials	ha	-	635	122	10
6	Large scale demonstration	ha.	5201	8045	1984	-
7	Subsidy to small & marginal farmers	No.	40	456	-	-
8	Beneficiary farmers associations organised and registered	No	2	5	64	35
9	Detailed Soil survey conducted	ha.	-	1320	-	-
10	Land levelling & shapping	ha	31.75	52	23	-
11	Bench mark and Evaluation Survey conducted	ha.	1262.8	1167.27	1793.15	2308
12	Crop Estimation Survey	ha	7248	-	-	-
13	Yield Estimation survey on Principal Crops	No	1348	1111	775	851
14	Evaluation Reports published	No.	3	4	3	3
15	Reclamation of water logged areas	ha.	1635	3462	4409.2	1133

Source: CADA

Appendix 5.7

Major Physical Cumulative Achievements under CAD Programme as on March 2005

(in Ha.)

Sl No	Name of Project	Total CCA	Physical Achievements			
			Field Channel	Field drain	Warabandhi	Reclamation
1	2	3	4	5	6	7
1	Mangalam	3639.00	3639.00	3490.00	3639.00	378.67
2	Peechi	18623.00	18623.00	18623.00	18623.00	3001.69
3	Vazhani	5182.00	5182.00	5182.00	5182.00	281.70
4	Cheerakuzhy	1619.00	1349.00	1188.00	1619.00	
5	Chalakudy	19696.00	19696.00	14910.81	19696.00	1045.63
6	Neyyar	12013.00	12013.00	7853.72	11655.00	2085.18
7	Chitturpuzha	15700.00	15700.00	15638.00	10976.00	1389.38
8	Kuttiyadi	15540.00	15249.40	14214.00	12776.00	2439.38
9	Periyar Valley	32800.00	32800.00	22225.00	32800.00	1261.00
10	Pamba	21195.00	6504.00	145.00	13348.00	864.00
11	Malampuzha	21732.00	21732.00	18969.00	21732.00	2215.59
12	Walayar	4122.00	4122.00	2387.00		506.00
13	Pothundy	5466.00	5466.00	5185.00	5466.00	381.81
14	Gyathri	5466.00	5466.00	4902.00	5466.00	431.95
15	Kanhirapuzha	9710.00	3600.00	4517.00		1218.00
16	Pazhassi	11530.00	149.00	1279.00		124.00

Source: CADA

Appendix 5.8

Storage levels in Reservoirs of completed projects in Kerala

Sl.No.	Name of Reservoir	01.06.2004	01.10.2004	01.01.2005	01.06.2005	01.10.2005	01.1.2006
		Storage (Mm^3)	Storage (Mm^3)	Storage (Mm^3)	Storage (Mm^3)	Storage (Mm^3)	Storage (Mm^3)
1	Malampuzha	26.445	189.45	61.954	16.703	218.875	138.27
2	Neyyar	56.271	103.106	95.592	60.452	94.401	102.66
3	Kallada	177.4	417.25	408.8	110	459.6	485.04
4	Kanhirapuzha	25.414	60.214	46.101	15.607	61.051	64.68
5	Kuttiyadi	70.348	105.686	108.982	15.088	100.45	108.605
6	Pothundy	3.889	40.522	19.996	5.381	43.405	25.94
7	Mangalam	5.632	24.811	8.342	0.327	25.22	11.665
8	Vazhani	1.15	15.53	9.17	1.29	15.49	7.59
9	Peechi	5.619	73.308	41.309	8.492	77.359	60.14
10	Walayar	1.562	7.473	1.718	1.584	17.014	13.2
11	Meenkara	1.076	8.467	4.614	6.654	10.775	10.775
12	Chulliyar	1.004	11..723	4.997	5.605	13.7	10.47
13	Chimoni	35.819	140.1	147.4	56.25	134.32	122.85
	Total	**411.829**	**1185.915**	**981.165**	**325.833**	**1271.56**	**1151.88**

Source : Water Resource Department

Appendix 5.9

District-wise population covered by Water Supply Schemes as on 1/4/2005

Sl.No	District	Rural Population covered	% to Total Rural population	Urban population covered	% to Total Urban Population	Total Population covered	% to Total population
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	1505503	70.26	958617	87.81	2464120	76.19
2	Kollam	1141060	53.84	453781	97.38	1594841	61.69
3	Pathanamthitta	662802	59.70	107700	87.00	770502	62.44
4	Alappuzha	1182805	79.51	521854	83.97	1704659	80.82
5	Kottayam	930058	56.24	292663	97.62	1222721	62.59
6	Idukki	559858	52.24	55262	95.95	615120	54.47
7	Ernakulam	1487368	91.32	1303990	88.26	2791358	89.88
8	Thrissur	1628740	76.29	785387	93.56	2414127	81.17
9	Palakkad	1374796	60.8	340964	95.62	1715760	65.55
10	Malappuram	1712383	52.38	344880	96.82	2057243	56.74
11	Kozhikode	621123	34.93	795762	72.27	1416885	49.21
12	Wayanad	623847	83.07	14835	50.10	638682	81.82
13	Kannur	588099	49.17	708332	58.40	1296431	53.82
14	Kasaragod	653242	67.32	143298	61.32	796540	66.15
	TOTAL	14571684	62.24	6827305	82.59	21498989	67.52

Source: Kerala Water Authority

Appendix 5.10

District - wise and Category-wise Number of Water Supply schemes in Operation as on 1/4/2005

Sl.No.	Name of District	No. of Urban Water Supply Schemes	Rural Water Supply Schemes		Total
			Multi Panchayat	Single Panchayat	
1	2	3	4	5	6
1	Thiruvananthapuram	6	42	80	128
2	Kollam	3	35	55	93
3	Pathanamthitta	3	17	33	53
4	Alappuzha	6	1	72	79
5	Kottayam	5	55	95	155
6	Idukki	1	102	85	188
7	Ernakulam	13	56	82	151
8	Thrissur	9	142	93	244
9	Palakkad	4	132	33	169
10	Malappuram	5	109	24	138
11	Kozhikode	2	118	61	181
12	Wayanad	0	30	28	58
13	Kannur	6	50	88	144
14	Kasaragod	2	63	49	114
	Total	65	952	878	1895

Source: Kerala Water Authority.

Appendix 5.11

District wise details of Service Connections and Street taps as on 1.4.2005

Sl.No	Name of District	Water Supply Connections				Street taps		
		Domestic	Non-Domestic	Industrial	Total	Panchayat	Cor'/Mun'	Total
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	197968	22473	57	220498	10871	4182	15053
2	Kollam	64832	377	112	65321	13613	2828	16441
3	Pathanamthitta	20375	2142	11	22528	5108	1275	6383
4	Alappuzha	59294	2930	67	62291	13061	4747	17808
5	Kottayam	67524	5537	44	73105	15697	2290	17987
6	Idukki	12677	1395	3	14065	4231	506	4737
7	Ernakulam	229447	17297	316	247060	25695	9798	35493
8	Thrissur	80158	3244	36	83438	20681	3901	24582
9	Palakkad	54814	3721	93	58628	12606	2873	15479
10	Malappuram	34847	2417	9	37273	8037	2831	10868
11	Kozhikode	42415	3151	43	45609	4123	2524	6647
12	Wayanad	5989	884	3	6873	3931	220	415[illegible]
13	Kannur	23761	3561	50	27372	3555	1446	500[illegible]
14	Kasarayod	12519	733	11	13263	2310	291	2601
	Total	906617	69852	655	977324	143519	39712	183231

Source: Kerala Water Authority

Appendix 5.12

WATER TARIFF

CONSUMPTION PER MONTH	TARIFF FROM 01/04/1999
A. DOMESTIC CATEGORY	
Upto 10,000 litres	Rs. 20.00 per month Minimum charge
10,000 to 30,000 litres	Rs.20.00 plus Rs.3.00 per 1,000 litres in excess of 10,000 litres
30,000 to 50,000 litres	Rs.80.00 plus Rs.5.00 per 1,000 litres in excess of 30,000 liters.
Above 50,000 litres	Rs.180.00 plus Rs.7.35 per 1000 litres in excess of 50,000 litres
B.NON-DOMESTIC CATEGORY	
Up to 50,000 litres	Rs.7.35 per 1,000 litres Minimum charge Rs.100
Above 50,000 litres	Rs.368.00 plus Rs.10.60 per 1,000 litres in excess of 50,000 litres
C.INDUSTRIAL CATEGORY	
For entire consumption	Rs.10.60 per 1,000 litres Minimum Charge Rs.200
D.LOCAL BODIES	
Panchayat	Rs. 1750 per tap per year
Municipality	Rs.2628 per tap per year

Source: Kerala Water Authority

Appendix 5.13
Details of Income from Water Charges (2000-01 to 2004-05)

(Rs. in lakhs)

Year	Urban Schemes			Rural Comprehensive Schemes			Rural Single Panchayat Schemes			
	Domestic, Non-domestic & Industrial	Street Taps	Total	Domestic, Non-domestic & Industrial	Street Taps	Total	Domestic, Non-domestic & Industrial	Street Taps	Total	Grand Total
1	2	3	4	5	6	7	8	9	10	11
2000-01	4389	1393	5782 (61.83)	1097	1030	2127 (22.74)	549	894	1443 (15.43)	9352 (100)
2001-02	5184	1011	6195 (64.96)	1296	748	2044 (21.44)	648	649	1297 (13.60)	9536 (100)
2002-03	5633	1190	6823 (64.50)	1406	880	2288 (21.60)	704	763	1467 (13.90)	10578 (100)
2003-04	6030	1370	7400 (63.97)	1520	1012	2532 (21.89)	759	877	1636 (14.14)	11568 (100)
2004-05	8132	133	8625 (71.73)	2051	98	2149 (18.65)	1023	86	1109 (9.62)	11523 (100)

Note:- (1) Figures in brackets denote percentage to total

(2 KWA used to get an average amount of Rs. 25 to 30 crores every year towards water charges due from the local self governments of the state by way of adjustment from the share of stamp duty payable to the LSG's. The practice of adjusting the stamp duty against water charges of LSG's was dispensed with affect from the financial year 2004-05. This had badly affected the water charges collection from the LSG's during the year 2004-05.

Source:- Kerala Water Authority.

Appendix 5.14

Receipts of Kerala Water Authority from various sources from 1999-00 to 2004-05

(Rs. In Lakhs)

Year	Revenue from Water/ Sewerage rates	State Govt.		Govt. of India	Loan from LIC/ HUDCO	Others	Total
		Plan	Non-Plan				
1	2	3	4	5	6	7	8
1999-00	7794	15181	5513	3668	3621	313	36090
2000-01	9354	11460	4780	3846	2777	304	32521
2001-02	9537	9899	6186	5695	100	299	31516
2002-03	10580	10400	6196	6204	5029	302	38701
2003-04	11568	9738	6124	4341	1000	375	33148
2004-05	11523	7621	9626	5885	300	385	35340

Source: Kerala Water Authority

Appendix 5.15

Plan & Non Plan Expenditure of Kerala Water Authority from 1995-96 to 2004-05

(Rs. in lakhs)

Items	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10	11
I. Plan Expenditure										
State Plan Schemes	6713	7139	12138	12140	5381	5748	3965	5105.87	5162.58	9589.63
ARP Schemes	1498	2875	3916	3533	4228	4383	4233	4391.71	4197.43	4157
LIC/HUDCO	3236	2473	673	2930	6437	3346	4140	3706.07	3360.64	1500
Others (AUWSP-Central share, JBIC and PMGY)	132	288	171	132	0	0	0	1416.21	1337.04	2060.82
Sub Total	11579 (47.62%)	12775 (50.32%)	16898 (53.63%)	18735 (52.66%)	16046 (40.53%)	13477 (35.22%)	12338 (31.89%)	14559.86 (35.45)	14057.69 (33.46%)	17307.45 (36.96%)
II. Non Plan Expenditure										
Salary & Establishment	5490	4742	5153	5950	9520	10069	9561	10259	10551	11395
Power	1940	2101	2900	3664	5451	5491	7438	8100	8400	9000
Operation and Maintenance	1826	2191	2329	2439	3015	3068	3107	3131	3285	3350
Interest on Loans (excluding GOK)	2225	2217	2515	2859	3309	3422	3567	3521	3290	3273
Repayment of Loans (Excluding GOK)	884	948	1172	1287	1660	2177	2026	929	1858	1926
Others	372	413	542	517	588	558	649	566	573	580
Sub-Total	12737 (52.38%)	12612 (49.68%)	14611 (46.37%)	16696 (47.12%)	23543 (59.47%)	24785 (64.78%)	26348 (68.11%)	26505 (64.55%)	27957 (66.54%)	29524 (63.04%)
Grand Total	24316	25387	31509	35431	39589	38262	38686	41065.86	42014.69	46831.45

Note: Figures in brackets denote percentage to total

Source:- Kerala Water Authority

Appendix 5.16

District wise & category wise number of water supply schemes under implementation as on 1/4/2005

Sl. No	Name of District	Rural Water Supply Schemes							Urban Water Supply Schemes					
		ARWSP	TSI	PMGY	State Plan	LIC	NABARD	JBIC	AUWSP	State Plan	JBIC	LIC/ HUDCO	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Thiruvananthapuram	15		9	5	12					1	4		46
2	Kollam	4	1	7	2	7		1				1		23
3	Pathanamthitta	25		32	7	4						1		69
4	Alappuzha	150		30	19	1		1		1		0		202
5	Kottayam	38		24	13	4						2		81
6	Idukki	16		2	2	4	1					0	1	26
7	Eranakulam	17		24	6	12	2		1	2		4	2	70
8	Thrissur	22	2	12	3	4			5			5		53
9	Palakkad	35	2	14	1	6						3		61
10	Malappuram	63		23	0	9	1					3		99
11	Kozhikode	116	1	16	2	4					1	3		143
12	Wayanad	19		5	1	0	1					1		27
13	Kannur	43		6	4	0	3	1	1			8		56
14	Kasaragod	13	3	1	0	5			1			0		23
	Total	576	9	205	85	72	8	3	8	3	2	35	3	989

Source: Kerala Water Authority.

Appendix 5.17

District-wise Population Covered by Water Supply Schemes Implemented by KRWSA as on 01-04-05

Sl. No.	Name of District	No of Schemes in Operation	No. of Water Supply Connections			Population Covered
			Domestic	Non Domestic	Street Taps	
1	2	3	4	5	6	7
1	Palakkad	307	15973	6	46	83439
2	Thrissur	250	13138	66	33	69810
3	Kozhikode	331	12568	67	6	60473
4	Malappuram	320	15758	71	30	97336
	Total	**1208**	**57447**	**210**	**115**	**311058**

Source : Kerala Rural Water Supply and Sanitation Agency.

Appendix 6.1

Notified Wetlands in India

Name of Wetland	State	Water Spread (Post Monsoon) Ha.
1	2	3
Bhoj	Madhya Pradesh	32.29
Harike	Punjab	8,280
Kanjli	-do-	3,79
Ropar	-do-	220,60
Wular	Jammu & Kashmir	11562.5
Tso Morari	-do-	12,838
Pichola	Rajsthan	604
Sambhar	-do-	2,270
Chilika	Orissa	9,400
Ujni	Maharashtra	27,935
Ashtamudi	**Kerala**	5071.07
Sasthamkotta	**-do-**	**354.69**
Kolleru	Andhra Pradesh	28,375
Loktak	Meripur	1,166
Sukhna	Chandigarh	153
Renuka and Pong dam (combined)	Himachal Pradesh	27,878
Chandratal	-do-	
Kabar	Bihar	82
Nalsarovar	Gujarat	14818.75
East Calcutta	West Bengal	11067.5

Source: Quoted in Parkh and Dahye, 2003.

Appendix 6.2
Area under Mangroves 2001

(in Sq. Km.)

State	Area
Andhra Pradesh	333
Goa	5
Gujarat	911
Karnataka	2
Maharashtra	118
Orissa	219
Tamil Nadu	23
West Bengal	2081
Andaman and Nicobar	789
Pondicheri	1
Total	4482

Source: Forest Survey of India, 2002

Appendix 6.3

Salient features of the Floristic 'Hot Spots' of Kerala

Agasthyamala	Anamali – High ranges	Silent Valley - Wayanad
1. Highest peak – Agastyakundom (1868 M)	1. Highest peak – Anamudi (2694 M)	1. Wet evergreen, moist decidious, shola, and grasslands forests, the main types of vegetation.
2. Rainfall on the windward side – 3000 to 5000 mm/annum	2. Rainfall on the windward side – 3000 to 7000 mm/annum	2. Five endemic genera – *Chandrashekhararia, Baeolepis, Kanjerum, Meteromyrtus, and Silent Valleya*
3. *Aenhenrya*, an endemic orchid genus – exclusively occurring in the region	3. Endemic genera – *Haplotaxonia, Pseudoglochidon and Urlaria.*	3. Major centres of genetic reaources of Turmeric, Pepper, Canes and Aroids
4. About 189 endemic species, occur in small population over narrow ranges	4. Mountain folds form a mosaic of microclimatic islands due to unique physiography, high latitude, heavy rainfall and diurnal temperature.	4 Area comprises of Palakkad gap, Silent Valley, Wayanad and adjacent forests of Kannore district
5. Recent surveys have discovered 35 new species.	5 Plantation of Tea, Cardamom and Rubber, have destroyed major components of wet evergreen and deciduous forests.	5. About 40,000 Ha. of contiguous forests and one of few area in India with out human habitation and large-scale intervention.
6 5 wild life sanctuaries in the region	6. Eravikulam National Park and 7 Wild Life Sanctuaries in the region.	6 Wild life which has almost eliminated from other parts of the country such as the *Nilgiri Languor, Giant Squirrel* and *Lion tailed Macaque* being survived here.
7. Serious human interference due to poaching, smuggling and pilgrim influx.		

Source: STEC, 1997

Appendix 6.4

Details of River Sand Mining from Various River Basins of Greater Kochi Region

River Basin	River Length (Km.)	Drainage Area (Km.^{2})	Estimated Sand reserve (10^6 m^3)	Panchayats involved in Sand mining	Volume of Sand extracted (10^6 m^3 / year)	Sustainable yield (M^3/year)	No. of labourers
1	2	3	4	5	6	7	8
Periyar	244	5398	26.7	15	3.11	50708	7000
Pamba	176	2235	10.62	14	0.40	17883	995
Muvattupuzha	121	1554	7.56	12	0.33	41827	1147
Manimala	90	847	3.18	10	0.47	14200	1300
Chalakkudi	130	1704	4.91	5	0.15	7810	1200
Meenachil	78	1272	3.12	-	-	-	-
Achankoil	128	1484	5.8	-	-	-	-

Source: Quoted by NEERI, 2002

Appendix 6.5

Estimated greenhouse gas emissions from major sources in Kerala

Gas	Source	Emission (Gg/year)	Total (Gg/year)	CO_2 equivalent (Tg/year)	Percentage total
Carbon dioxide	Petroleum products	10,020			
	Firewood	9,300	19,320	19.32	80.47
	Petroleum products	1			
	Firewood	49			
	Wetlands	22			
Methane	Agricultural soils	20			
	Rice paddy	2			
	Coconut husk retting	12			
	Ruminant animals	97	203	4.22	17.58
	Petroleum Products	0.0002			
Nitrous oxide	Agricultural soils	0.0012	1.5	0.47	1.95
Total from all above				24.01	100.00

Methane emission from firewood was computed based on conversion to charcoal.
Source. SOE, 2005

Appendix 6.6
Details of industries in Periyar River Basin

Industry/location	Type/products	Wastewater generated
1	2	3
Travancore Rayons Ltd Perumbavur	Cellulose yarn & film	46,000 m^3/d
Periyar Chemicals Ltd, Edayar	Formic acid, sodium sulphate	330 m^3/d
Binani Zinc Ltd, Edayar,	Zinc, Cadmium, Sulphuric acid	550m^3/d
FACT Ltd, Eloor	Nitrogen & Phosphorus Fertilisers, Oleum & Ammonium Sulphate	25,400 m^3/d
FACT, Petrochemical	Caprolactam, Nitric acid, Ammonium sulphate, Soda ash	5,040 m^3/d
Trancore Cochin Chemicias	Hydrochloric acid	6,880 m^3/d
Indian Aluminium Company, Eloor	Aluminium products,	2,700 m^3/d
Trava Chemical & Mfg Kalamassery	Copper products	720 m^3/d
United Catalysts Ltd, Edayar	Chemicals, Catalyusts	537 m^3/d
Hindustan Insecticides, Eloor	DDT, BHC, Endosulfan, Ditocol	1,000 m^3/d
Indian Rare Earths, Eloor	Rare earths, Tri sodium phosphate	3,000 m^3/d

Source: Draft Status of the Environment in Kerala, KSPCB, 2000

Appendix – 6.7
Districtwise details of health care institution, beds and waste generation

District	No. of Health Care Institutions	Number of beds	Waste generated kg/day
Alappuzha	343	8835	11486
Ernakulam	546	15819	20565
Idukki	194	4096	5325
Kannur	392	5149	6694
Kasaragod	209	2107	2739
Kollam	704	7530	9789
Kottayam	440	9323	121209
Kozhikode	342	9034	11744
Malappuram	327	5030	6539
Palakkad	316	4925	6403
Pathanamthitta	310	5096	6625
Thiruvananthapuram	411	12910	16783
Thrissur	434	12991	16888
Wayanad	127	2307	2999
Total	**5095**	**105152**	**136699**

Source: SOE, 2005

Appendix 6.8

Wastelands in Kerala

(in Ha.)

Sl. No.	District	Wasteland Area	% Total
1	Thiruvananthapuram	6658	4.6
2	Koilam	8072	5.57
3	Alappuzha	1550	1.07
4	Pathanamthitta	7731	5.34
5	Kottayam	4880	3.37
6	Idukki	34813	24.44
7	Ernakulam	8454	5.84
8	Thrissur	7198	4.97
9	Palakkad	28356	19.58
10	Malappuram	12367	8.54
11	Wayanad	5184	3.58
12	Kozhikode	2761	1.91
13	Kannur	6980	4.82
14	Kasaragod	9814	6.78
KERALA		**144818**	**100**

Source: Land Use Board & KSRSEC

All India Total - 638.52 lakh ha

Kerala - 1.45 lakh ha.

% to All India 0.23%

Appendix 6.9
State-wise Wastelands of India

(Area in Sq.Kms.)

Sl. No	State	No. of Districts Covered	Total Geog. Area of districts Covered	Total Wasteland area in districts Covered	% of Wastelands to total geog. Area
1.	Andhra Pradesh	23	275068.00	51750.19	18.81
2	Arunachal Pradesh	13	83743.00	18326.25	21.88
3	Assam	23	78438.00	20019.17	25.52
4	Bihar	55	173877.00	20997.55	12.08
5	Goa	02	3702.00	613.27.00	16.57
6	Gujarat	25	196024.00	43021.28	21.95
7	Haryana	19	44212.00	3733.98	8.45
8	Himachal Pradesh	12	55673.00	31659.00	56.87
9	Jammu & Kashmir *	14	101387.00	65444.24	64.55
10	Karnataka	27	191791.00	20839.28	10.87
11	Kerala	14	38863.00	1448.18	3.73
12	Madhya Pradesh	62	443446.00	69713.75	15.72
13	Maharashtra	32	307690.00	53489.08	17.38
14	Manipur	09	22327.00	12948.62	58.00
15	Meghalaya	07	22429.00	9904.38	44.16
16	Mizoram	03	21081.00	4071.68	19.31
17	Nagaland	07	16579.00	8404.10	50.69
18	Orissa	30	155707.00	21341.71	13.71
19	Punjab	17	50362.00	2228.40	4.42
20	Rajasthan	32	342239.00	105639.11	30.87
21	Sikkim	04	7096.00	3569.58	50.30
22	Tripura	04	10486.00	1276.03	12.17
23	Tamil Nadu	29	130058.00	23013.90	17.70
24	Uttar Pradesh	83	294411.00	38772.80	13.17
25	West Bengal	18	88752.00	5718.48	6.44
26	Union territories	20	10973.00	574.30	5.23
	TOTAL	**584**	**3166414.00**	**638518.31**	**20.17**

- *Un-surveyed area (J&K)* *120849.00*
- *Total geographical area* *3287263.00*

Source: 1:50,000 scale wasteland maps prepared from Landsat Thematic Mapper/IRS LISS II/III Data

10,000 sq.kms = 1 Million Ha.

Appendix 6.10
Central Rural Sanitation Programme: TSC

Sl. No.	Name of district	Date of sanction	Project cost (in lakhs)	Approved Share (Rs.in lakhs)			Components Sanctioned (Units)				
				Central	State	Bene	IHHL	WC	School Toilets	Balawadi toilets	RSM
1.	Alappuzha	29.1.02	1656.13	1100.05	322.2	233.88	161871	125	377	0	10
2.	Ernakulam	12.3.03	1058.43	514.16	274.1	270.17	54585	100	450	565	9
3.	Idukki	12.3.03	622.19	266.75	167.4	188.04	44896	16	103	0	4
4.	Kannur	12.3.03	804.18	349.09	219.29	235.8	559.14	14	327	0	5
5.	Kasaragod	15.1.01	1111.86	429.26	261.98	420.62	82200	100	281	0	4
6.	Kollam	10.1.01	895.00	597.7	174.55	122.75	85000	400	225	0	10
7.	Kozhikkode	12.3.03	833.86	374.81	225.67	233.38	54024	21	444	0	7
8.	Malappuram	29.1.02	759.86	510.98	152.36	96.52	69217	80	380	0	10
9.	Palakad	12.3.03	1177.89	499.85	320.42	357.62	83059	49	289	0	7
10.	Pathanamthitta	12.3.03	773.96	336.29	208.53	229.14	53799	25	172	100	5
11.	Thiruvananantha Puram	29.1.02	749.61	506.90	149.76	92.95	67320	60	350	0	10
12.	Thrissur	12.3.03	546.46	258.45	144.83	143.18	33216	10	316	0	9
13.	Wayanad	29.1.02	535.19	355.32	103.25	76.62	54927	40	78	0	3
			11524.62	6099.61	2724.34	2700.67	900028	1040	3792	665	93

Source : Commissionerate of Rural Development, Thiruvananthapuram
Abbreviations: IHHL: Individual Household Latrines, WC: Women Complex,
RSM: Rural Sanitary Mart

Appendix 6.11
Capital Cost for Introduction of MSW System

Sl. No.	Item	Number	Amount Rs. in lakhs
01	House hold bins @ Rs. 50	60,000	30.00
02.	Hand cart of 300 lit. capacity @ Rs. 0.15 lakhs	60	9.00
03.	Tricycle for house to house collection @ Rs. 0.20 lakhs	40	8.00
04	Community bin		
	i) Dumper container of 25000 lit. @ Rs. 0.01 lakhs	85	0.85
	ii) Containers 2.5 m3 @ Rs. 0.30 lakh	24	7.20
	iii) Liner bins @ Rs. 0.01 lakhs	50	0.50
05	Cost of sweeping tools		
	i) Containerised cart @ Rs. 3000	75	2.25
06.	Transportation		
	Dumper placer @ Rs. 10 lakhs	2	20.00
	Dual loader @ Rs. 8 lakhs	1	8.00
07.	Home Vermi Composting for a family of five members @ Rs. 600/pit (90cm dia of 45 cm deep, 1:2:4 concrete 2 pits)	20,000 x 2	24.00
08	Aerobic Composting 50 tonnes/day Processing area 100 x 90m 21 windrows each of 50 tonnes and maturity yard of 600 m2 for storing raw compost (30 days storage) capital cost	-	60.00
09	Sanitary land fill	-	20.00
10.	Bio medical waste treatment common facility	1	
	i) Incineration of double chamber of capacity 30 Kg/hr, 3 shifts		15.00
	ii) Autoclave of capacity 30 Kg/hr, 2 shifts		15.00
	iii) Shredder, 3000 Kg/hr		3.00
	iv) Land development and civil works		15.00
	v) Sundries		2.00
11.	Civil work – flooring container stations, bin locations; Processing/Disposal plant accessories		5.00
	1. Site development		
	Weigh Bridge		15.00
	Compost Plant		8.00
	Vermi Compost Unit		4.00
	Support to home composting - vermi kits		2.00
			3.00
12.	Setting up basic tools for vehicle repair		3.00
13.	Community awareness/ Training for staff		3.00
14	Sundries		1.20
	Sub Total		284.00
	Less Cost of home composting unit/ household bins and bio-medical waste		104.00
	Total		**180.00**

(Abstract of cost excluding land cost)

Appendix 6.12
Operation and Maintenance
(Cost per annum)

Sl. No.	Item	Amount Rs. in lakhs
i)	House to house collection @ Rs. 20 per month in 20,000 households	48.00
ii)	Street Sweeping – 152 labour @ Rs 4,000 per month	72.90
	i) Containerised cart 6 bins, 50 lit. = 75 No. @ Rs.3000	2.25
	ii) Long handle broom 100 nos. @ Rs. 75 each	0.075
	iii) Metal tray, fork and metal plate 100 nos @ Rs. 200/set	0.05
	iv) Shovel for drain cleaning, wheel barrow @ Rs. 400/100 nos	0.10
	v) Protective gear such as gloves, boots etc. 16 nos. @ Rs. 500 per set	0.8
iii)	Transportation @ Rs. 1000 per day/ vehicle	7.20
iv)	Aerobic Composting	
	a) Labour	
	i) Turning, breaking windrows, sorting 30 men @ 50,000/year/head	15.00
	ii) Plant operation, 7 men @ 50,000/year/head	3.50
	iii) Driver/@ 80,000/year	
	b) Tools and equipment	0.80
	i) Maintenance replacement	
	ii) Fuel, power	1.00
	iii) Packing, marketing	1.50
	iv) Management supervision	3.00
	c) Amortisation @ 20% of capital cost	5.00
		12.00
v)	**Sanitary Landfill**	
	i) Cell formation - internal road	2.00
	ii) Cover material	3.25
	iii) Labour for leveling, covering	3.50
	iv) Hiring of dozer for immediate compaction intermediate cover – twice annually	3.00
	Leachate control monitoring - cut off drains	2.25
vi)	Bio-medical Waste treatment at common facility center	30.00
vii)	Sundries	6.90
	Sub Total	**221.00**
	Less House to house collection and biomedical waste management	78.00
	Total	**143.00**

Source. S.W M: Reading Material: 2002 KTSHM

Appendix 6.13

Per capita Consumption of Plastic in some selected Countries of World during 1996

(In kg.)

Sl. No.	Country	Per capital Consumption
1	India	1.60
2	Vietnam	1.50
3	China	6.00
4	Indonesia	8.00
5	Mexico	13.00
6	Thailand	18.00
7	Malaysia	22.00
8	Western Europe	60.00
9	Japan	70.00
10	North America	78.00

Source: Central Pollution Control Board

Appendix 6.14
ACCESS TO SAFE DRINKING WATER IN HOUSEHOLDS IN INDIA

Sl. No.	States/Union Territories	Tap/Handpump/Tubewell								
		1981			1991			2001		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Jammu & Kashmir	40.3	28.0	86.7	NA	NA	NA	63.2	54.9	95.7
2	Himachal Pradesh	84.5	39.6	89.6	77.3	75.5	91.9	88.6	87.5	97.0
3	Punjab	84.6	81.8	91.1	92.7	92.1	94.2	97.6	96.9	98.9
4	Chandigarh	99.1	94.4	99.4	97.7	98.1	97.7	99.8	99.9	99.8
5	Uttranchal							86.7	83.0	97.8
6	Haryana	55.1	42.9	90.7	74.3	67.1	93.2	86.1	81.[illegible]	97.3
7	Delhi	93.0	62.3	94.9	95.8	91.0	96.2	97.2	90.1	97.7
8	Rajasthan	27.1	13.0	78.7	59.0	50.6	86.5	68.2	60.4	93.5
9	Uttar Pradesh	33.8	25.3	73.2	62.2	56.6	85.6	87.8	85.5	97.2
10	Bihar	37.6	33.8	65.4	58.8	56.5	73.4	86.6	86.1	91.2
11	Sikkim	30.3	21.7	71.9	73.1	70.8	92.8	70.7	67.0	97.1
12	Arunachal Pradesh	43.9	40.2	67.9	70.0	66.9	88.2	77.5	73.7	90.7
13	Nagaland	45.6	43.4	57.2	53.4	55.6	45.5	46.5	47.5	42.3
14	Manipur	19.5	12.9	38.7	38.7	33.7	52.1	37.0	29.3	59.4
15	Mizoram	4.9	3.6	8.8	16.2	12.9	19.9	36.0	23.8	47.8
16	Tripura	27.3	22.2	67.9	37.2	30.6	71.1	52.5	45.0	85.8
17	Meghalaya	25.1	14.3	74.4	36.2	26.8	75.4	39.0	29.5	73.5
18	Assam	NA	NA	NA	45.9	43.3	64.1	58.8	56.8	70.4
19	West Bengal	69.7	65.8	79.8	82.0	80.3	86.2	88.5	87.0	92.3
20	Jharkhand							42.6	35.5	68.2
21	Orissa	14.6	9.5	51.3	39.1	35.3	62.8	64.2	62.9	72.3
22	Chhattisgarh							70.5	66.2	88.8
23	Madhya Pradesh	20.2	8.1	66.7	53.4	45.6	79.4	68.4	61.5	88.6
24	Gujarat	52.4	36.2	86.8	69.8	60.0	87.2	84.1	76.9	95.4
25	Daman & Diu	54.5	46.4	67.0	71.4	56.9	86.8	96.3	94.9	98.9
26	Dadra & Nagar Haveli	19.4	16.8	54.3	45.6	41.2	91.0	77.0	70.5	96.1
27	Maharashtra	42.3	18.3	85.6	68.5	54.0	90.5	79.8	68.4	95.4
28	Andhra Pradesh	25.9	15.1	63.3	55.1	49.0	73.8	80.1	76.9	90.2
29	Karnataka	33.9	17.6	74.4	71.7	67.3	81.4	84.6	80.5	92.1
30	Goa	22.5	8.6	52.3	43.4	30.5	61.7	70.1	58.3	82.1
31	Lakshadweep	2.2	1.0	3.7	11.9	3.4	18.8	4.6	4.6	4.6
32	Kerala	12.2	6.3	39.7	18.9	12.2	38.7	23.4	16.9	42.8
33	Tamil Nadu	43.1	31.0	69.4	67.4	64.3	74.2	85.6	85.3	85.9
34	Pondicherry	80.6	76.9	84.2	88.8	92.9	86.1	95.9	96.6	95.5
35	Andaman & Nicobar Islands	51.6	36.3	92.0	67.9	59.4	90.9	76.7	66.8	97.8
	ALL INDIA	38.2	26.5	75.1	62.3	55.5	81.4	77.9	73.2	90.0

N.A. – Not available as no census was carried out in Assam during 1981 and in Jammu & Kashmir during 1991

* *Created in 2001. Uttranchal Pradesh, Jharkhand and Chhattisgarh for 1981 and 1991 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively.*

Source: Economic Survey 2005-2006

Appendix 5.15

Western Ghat Development Programme for Natural Resource Management (Physicial and Financial Achievements, 2004-05)

I. Financial Achievement

Sl. No.	Component	Expenditure (in lakh Rs.)
1	Watershed projects	910.00
2	Forestry Schemes	131.50
3	Foot Bridges	90.00
4	Others	181.50
	TOTAL	1313.00

II. Major Physical Achievements

Sl. No	Component	Unit	Achievement
1	Soil Conservation	Ha.	2884
2	Distribution of Milk Cows	Nos	596
3	Fodder Development	Ha.	499
4	Construction of Wells/Ponds	Nos	158
5	Check Dams/Cross Bars/ Weirs/Foot slaps	Nos	201
6	Foot Bridges	Nos	48

Source: Western Ghat Development Cell

Appendix 5.16

Division-wise Area of Forest in Kerala (as on 31- 03 - 2005) - Provisional

(Area in Sq.kms)

Sl. No	Division	Reserve Forest	Proposed for Reserve Forest	Vested Forest	Total
1	2	3	4	5	6
1	Thiruvananthapuram	359.124	5.825	3.651	368.600
2	Thenmala	123.432	-	7.736	131.168
3	Achenkovil	268.794	-	0.206	269.000
4	Ranni	1,050.336	7.160	1.568	1059.064
5	Punalur	280.051	-	0.169	280.220
6	Konni	320.643	11.021	-	331.664
7	Kothamangalam	316.845	-	0.158	317.003
8	Munnar	670.293	44.582	10.000	724.875
9	Kottayam	655.486	5.257	31.409	692.152
10	Vazhachal	413.944	-	-	413.944
11	Chalakkudy	279.710	-	-	279.710
12	Malayattoor	617.241	0.525	-	617.766
13	Thrissur	204.293	-	5.715	210.008
14	Mannarkkad	209.982	-	319.578	529.560
15	Nilambur North	57.920	0.017	340.703	398.640
16	Nilambur south	267.389	-	97.763	365.153
17	Palakkad	73.410	-	162.162	235.572
18	Nenmara	205.517	-	150.603	356.120
19	Kozhikode	24.164	22.966	243.086	290.216
20	Wayanad North	.134.024	15.064	65.853	214.941
21	Wayanad South	67.519	6.845	273.140	347.503
22	Kannur	207.392	5.193	.90.196	302.782
23	Thiruvananthapuram WL	181.000	-	-	181.000
24	Idukki	130.524	-	-	130.524
25	Periyar East	616.000	-	-	616.000
26	Periyar West	157.000	-	-	157.000
27	Agasthyavanam	30.447	1.553	-	32.000
28	Parambikulam	274.141	-	-	274.141
29	Wayanad	344.440	-	-	344.440
30	Silent Valley	89.517	-	-	89.517
31	Sendurney	166.420	-	4.580	171.000
32	Eravikulam	254.685	-	-	254.685
33	Peechi	201.725	-	-	201.725
34	Aralam	22.357	-	32.643	55.000
	Total:	9277.7650	126.0000	1840.9160	11244.6910

Source : Forest Department

Appendix 6.17

Species-wise Area Under Forest Plantation

(in ha)

Sl.No.	Name of Species	2000-01	2001-02	2002-03	2003-04	2004-05*	% to total (2004-05)
1	2	3	4	5	6	7	8
1	Teak	75443.147	74871.625	74777.939	74912.807	74186.972	36.30
2	Eucalyptus	24268.775	23148.450	21927.942	21927.942	12127.848	5.90
3	Softwood	8450.309	8349.954	11199.360	11144.78	26115.747	12.78
4	**Mixed Plantation**						
	Cashew	6242.878	6258.961	6393.560	6393.56	6447.339	3.15
	Fuelwood	217.700	217.700	217.700	217.7	106.100	0.05
	Agavu				46.7	48.830	0.02
	Accacia				5005.85	5772.819	2.82
	Alnus				118.2	65.270	0.03
	Palm trees				13.5	0.000	0.00
	Others				54601.863	66336.465	32.46
	Sub Total	**6460.578**	**6476.661**	**6611.260**	**66397.173**	**78776.623**	**38.55**
5	Bamboo	2673.714	2387.714	2530.740	2614.74	5628.698	2.75
6	Wattle	3387.160	3387.160	3387.160	3387.16	4580.920	2.24
7	Hardwood	1134.270	1575.273	1580.273			
8	Pepper	309.940	309.940	309.940	309.94	504.510	0.25
9	Mahagany	78.630	78.630	93.870	93.87	161.520	0.08
10	Pine	182.400	182.400	182.400	182.4	562.236	0.28
11	Rosewood	422.284	448.550	549.730	549.73	506.496	0.25
12	Sandal wood	73.100	100.820	100.820	100.82	100.840	0.05
13	Others	2604.660	2767.840	3573.290	3565.29	1115.997	0.55
	Total	**125488.967**	**124085.217**	**126824.724**	**185186.832**	**204368.407**	**100.00**

** Provisional*

Source : Forest Department

Appendix 5.18

Production of Major Forest Produce (1995-96 to 2004-05)

Sl. No.	Item	Unit	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05*
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Timber(round logs)	Cum.	61430	51972	19246	26664	44519	31299	39915	62591	116280.850	78024.595
2	Timber(round poles)	No.	381179	683391	287243	275050	455369	129349	245254	433670	759025.000	649677.000
3	Timber(Sawn & Squard)	Cum	30	4	2	10	7	3	9	11	128.310	31.912
4	Fire wood	MT	45336	29877	11291	18424	14191	8105	11182	19065	31575.181	13714.954
5	Cardamom	Kg	3155	1233	1717	2758	4249	4687	2911	3739	1146.150	498.320
6	Honey	Kg.	74787	72161	71214	21376	41734	47976	57069	36310	40050.850	51041.810
7	Reeds	No.	49615070	56640410	63229268	62708610	39576143	49047940	32610487	33078299	42945235.000	33598930.000
8	Bamboo	No	1339741	4829421	2338472	2088407	627805	1390456	1305620	151722	946626.000	274194.000
9	Jungle Wood Poles	No.	64	289	7054	670	...	212	2397	7685	10464.000	1746.000
10	Sandal wood	Kg.	133847	103523	171252	17762	97028	405	23968	10098	66817.238	54622.300

Source : Forest Department

* Provisional

Appendix 6.19

Santuaries, National Parks, Biosphere Reserves and other Protected Areas in Kerala

Sl. No.	Name of National Park/ Wildlife Sanctuary/ BiosDhere Reserve	Area in Sq. Km.	Year of Formation
1	Peryar Wildlife Sanctuary	777	1950
2	Neyyar Wildlife Sanctuary	128	1958
3	Peechi-Vazhani Wildlife Sanctuary	125	1958
4	Parambikulam Wildlife Sanctuary	285.00	1973
5	Wayanad Wildlife Sanctuary	344.44	1973
6	Eravikulam Wildlife Sanctuary	97	1978
7	Idukki Wildlife Sanctuary	70	1976
8	Thattekkad Bird Sanctuary	25	1983
9	Peppara Wildlife Sanctuary	53	1983
10	Chimmony Wildlife Sanctuary	85	1984
11	Chinnar Wildlife Sanctuary	90.44	1984
12	Shendurney Wildlife Sanctuary	100.32	1984
13	Aralam Wildlife Sanctuary	55	1984
14	Silent Valley National Park	89.52	2003
15	Anamudi Shola National Park	7.5	2003
16	Mathikettan Shola National Park	12.82	2003
17	Pambadum Shola National Park	1.32	2003
18	Mangalavanam Bird Sanctuary	0.0274	2004
	TOTAL	2346.3874	
1	Nilgiri Biosphere Reserve	1455.4	1986
2	Agasthyavanam Biosphere Reserve	1701	2002

Source : Forest Department

Appendix 6.20

Different groups of wild fauna in the protected areas (PA) of Kerala

	Number of species reported				
Name of the PA	**Mammals**	**Birds**	**Reptiles**	**Amphibians**	**Fishes**
Aralam WLS	23	171	22	23	39
Wayanad WLS	45	203	45	30	59
Silent Valley NP	31	97	35		
Parambikulam WLS	39	268	61	24	47
Chinnar WLS	26	225	52	15	13
Eravikulam NP	20	132		18	
Peechi-Vazhani WLS	39	176	31	17	40
Chimmony WLS	39	160	25	14	31
Periyar TR	62	320	45	27	38
Idukki WLS	30	201	9		
Thattekkad WLS	34	270	30	15	47
Shendruney WLS	34	245	35	22	42
Neyyar WLS	43	217	46	13	27
Peppara WLS	43	233	46	13	27

Source: Ramesh et. al (2003), quoted in
Source: SOE, 2005

Appendix 7.1

Growth of Kerala Power System at a Glance - 2004 and 2005

Sl. No.	Particulars	Position as on	
		31.3.2004	31.3.2005
1	2	3	4
1	Installed Capacity -MW	2614.22	2617.22
2	Maximum Demand _ (System) MW	2426	2420
3	Generation Per Annum-M.U	4488.06	6757.7
4	Import Per Annum -M.U	8015.41	6265.11
5	Export Per Annum - M.U	0	119.43
6	Energy Sales Per Annum-M.U	8910.84	9384.4
7	Energy Losses of Percentage of Energy Available for Sales	28.46	26.22
8	Per capita Consumption- Kwh	366.00	400
9	220 K.V Lines- CT Km	2582.15	2594.35
10	110 K.V Lines- CT Km	3730.64	3802.5
11	66K.V Lines- CT Km	2943.33	2948.37
12	11 K.V Lines- CT Km	33280.22	34235.7
13	L.T. Lines- CT Km	201637.62	207711
14	Step up Transformer Capacity -MVA	2363.63	2363.63
15	No. of EHT Sub Stations	205	212
a	400 KV	1	1
b	220 KV	12	13
c	110 K.V	100	107
d	66 KV	92	91
	33 KV (LT)	24	39
16	Step down Transformer Capacity -MVA	11826.90	12432
17	Distribution Transformers		
	a) Numbers	34758	36660
	b) Capacity - MVA	4710.78	4858.175
18	No. of Villages Electrified	1364	1364
19	No. of Consumers(in lakhs)	73.00	77.9
20	Connected Load -M.W	9910.15	10333.51
21	No of Street Lights	854584	908016
22	No. of Irrigaition pumps	430449	446366
23	Total Revenue per Annum(Rs. Lakhs)	406817.39	369977.12
24	Total revenue per annum (Rs.Lakhs) Sale of Power	275609.27	291736.21

Source KSEB

Appendix 7.2

Profile of on-Going Hydro-Electric Projects in the State

Sl. No	Name of Schemes	District	Energy Potential (MU)	Project Sanctioned on	Major works commenced on	Original Estimated cost (Rs. In lakhs)	Latest Estimated cost (Rs. In lakhs)	Expnditure up to 31.3.05(Rs. In lakhs)	Outlay for-2005-06(Rs.In lakhs)	Expected Year of commissioning
1	2	3	4	5	6	7	8	9	10	11
1	Malankara 10.5 MW	IDK	65	1986	Oct-99	780	4113.00	1883.55	60.00	Jul-05
2	Chembukadavu I SHE scheme 2.75 MW	KKD	6.59	1989	Jul-00		1138.00	1275.24		Commissioned on 25.1.2004
3	chembukadavu II (3.75 MW)	KKD	9.03	1989	Jul-01		1272.00	1537.82		
4	Urumi I 3.75 MW	KKD	9.72		Aug-01		1320.00	1129.91		
5	Urumi II -2.40 MW	KKD	6.28		Nov-01		1095.00	1209.81		
6	Vadakkepuzha Diversion	IDK	12	1985		131	514.00	407.91	20.00	31.7.2003
7	Vazhikkadavu Diversion	IDK	24	1989	23-2-00	185	1599.00	1609.98		commissioned on May 2002
8	Kuttiyadi Tail Race-3.75 MW	KKD	15	1989	19-10-2000	397	1494.00	895.2	450.00	June-06
9	Kuttiayar Diversion	IDK	37	1989	May-92	214	880.00	507.28	250.00	Jun-06
10	Athirapally HE project-163 MW	TCR	386	1999		10254	31590.00	268.49	500.00	Clearance obtained
11	Bhoothathannikettu (Private)16MW	IDK	61.5	1994	30-12-94	3283	3283.00			2006
12	Karikkayam(SHEP) (pvt)-15MW	PTA	72.5	1994	Dec-04	3880				
13	Kuttiyadi Addl.Extension(100 MW)	KKD	240	1998	Apr-00	6200	22050.00	6.05	3000.00	2007
14	Kutiyadi Augementation	KKD	223	1980		1305	19294.00	15067	800.00	Partially commissioned
15	Lower Meenmutty(3.5 MW)	TVM	7.63	1994		495		463.25	400.00	2006

Source:KSEB

Appendix 7.3

Power Projects and Power Generation as on 31-3-2005

Sl. No.	Name of Projects and Districts	Installed Capacity (MW)	Firm Power (MW)	Units Generated during 2004-05(MU) Gross Energy
1	Pallivasal - Idukki	37.50	32.5	222.89
2	Sengulam- Idukki	48.00	20.8	168.09
3	Neriamangalam- Idukki	48.00	27.0	232.62
4	Panniyar -Idukki	30.00	18.0	142.58
5	Peringalkuthu + Peringal kuthu LBE Thrissur	48.00	29.4	288.13
6	Sabarigiri- Pathanamthitta	300.00	153	1223.01
7	Sholayar- Thrissur	54	20.6	263.88
8	Kuttiedy - + Kuttyadi Extension-KZD	125	39.2	370.63
9	Idukki - Idukki	780	280.2	2007.07
10	Idamalayar-Ernakulam	75	43.3	339.32
11	Kallada- Mini-Kollam	15	6.05	78.11
12	Kanjikode Wind Farm - Palakkad	2	0.4	2.45
13	Peppara- TVPM	3	1.30	5.8
14	Lower Periyar- Idukki	180	56.3	513.08
15	Brahmaputam- Ernakulam	107	73	136.22
16	Madupetty - Idukki	2	0.7	4.75
17	Kakkad- Pathanamthitta	50	30	209.8
18	*Kayamkulam(NTPC)-Alappuzha	359.58	0	253.05
19	KDPP-Kozhikode	128	102.4	160.75
20	KPCL. (IPP)-Kasargode	20.44	0	15.10
21	Maniyar (Private)Pathanamthitta	12	3.70	34.69
22	Kuthungal (Hydro-Captive)- Idukki	21	9.02	36.11
23	BSES(-IPP) -Ernakulam	157		110.16
24	Malampuzha- Palakkad	2.5	0.64	2.95
25	Urumi I & II - Kozhikode	6.15		1.52
26	Chembukadavu I & II - Kozhikode	6.45		5.93
	Grand Total	**2817.22**	**947.5**	**8828.70**

Source KSEB

*Generation-Kerala share only considered.

Appendix 7.4
Average Tariff Rate

Sl.No	Consumer Category	Average Tariff(in paise/unit)	
		2003-04	2004-05
1	2	3	4
1	Domestic	176.13	177
2	Commercial	658.54	669
3	Public Lighting	170.00	183
4	Agriculture	97.43	98
5	Public Water Works	-	-
6	*Industry (LT)	407.07	414
7	Industry (HT & EHT)	390.80	391
8	Railway Traction	364.42	367
9	License (HT & EHT)	307.72	272
10	Inter State		
	Overall Average	309.59	311.1

Source KSEB

**Includes public water works*

Appendix 7.5
Average Realisation from Sale of Power

Sl.No	Category of Consumer	Average Realisation (in paise per unit) (Including Eleictricity duty)	
		31-3-2004	31-3-2005
1	2	3	4
1	Domestic		
	(a) Paying Group	191.01	190.45
2	(b) Non-paying Group	-	-
3	Commercial	713.37	730.77
4	Public lighting	170.13	182.95
5	Irrigation and Dewatering	106.01	109.5
6	Public Water works		
	Industrial		
	* a)LT	439.13	446.39
7	b) HT & EHT	399.50	400.49
8	Bulk Supply	307.72	272.38
9	Outside Supplies		
10	Railway Traction	364.22	367.53
11	Inter State		
	Overall Average	327.2	328.9

**Includes Public Water Works*

Source: KSEB

Appendix 7.6

Pattern of power consumption and revenue collected during 2004-05

Sl. No.	Category	No.of Consumers as on 31-3-2005	Connected Load as on 31-3-2005 (MW)	Energy Sold (MU)	Consumption as % to total	Revenue Collected (Rs. Lakhs)	Revenue As percentage to Total
1	2	3	4	5	6	7	8
1	Domestic						
	(a) Paying Group.	6143228	6237.44	4253.40	45.32	75160.85	25 76
	(b) Non-paying Group	-	14.06	8.90	0 09		
2	Commercial L.T.+HT Non Industrial HT	1124041	1204.72	947 60	10.10	63365.56	21 72
3	Public lighting	2325	84.98	182.70	1.95	3338.69	1.14
4	Irrigation&Dewatering-LT+HT	412602	723.15	190.80	2.03	1882.90	0.65
5	Public Water Works.L.T. *						
6	Industrial						
	(a) LT	115056	1208.16	782 90	8.35	32471 54	11.13
	(b)HT & EHT	2011	605.00	2763.00	29 45	108153 51	37.07
7	Railway Traction	4	25.00	43 60	0.46	1602.43	0.55
8	Bulk Supply to licencee	9	31 00	211.50	2.25	5760.75	1.98
9	Outside Supply(TNEB Sales)						0.00
10	Miscellaneous						
	Total	7789276	10333.51	9384.40	100	291736.23	100
	Total excluding NPC	7789276	10319.45	9375.5	99.91	291736.23	100

* Industrial L T includes Public Water works

Source: KSEB

Appendix 7.7

Sources of funding of the power programmes of KSEB for the year 2004-05

(Rs. Lakhs)

No.	Particulars	2003-04	2004-05
1	2	3	4
1. a)	Loan from State Government under Section 64 of Electricity Supply Act 1948	0.00	0.00
b)	Loan from Rural Electrification Corporation Ltd.	26812.10	18370.54
2	Borrowings under Section 65	0.00	0.00
a)	Loan from LIC of India	0.00	0.00
b)	Assistance from IDBI	3153.23	867.28
c)	Loan from PFC	1815.68	1257.57
d)	Loans from Banks through REC	20000	0.00
e)	Loan from SIDBI	370.05	0.00
f)	Foreign Currency Loan	651.11	622.53
g)	Loan from PFC/STL	20000	11000
h)	OECF	0.00	0.00
3	Non-SLR Bonds	0.00	0.00
4	Receipts under OYEC Scheme/Service Connection Charges/Contribution from Panchayats	18526	20123
5	Medium Term Loan	0.00	2000
6	Borrowings and Reserves	0.00	0.00
a)	Pension Fund/Provident Fund	961	6122.95
b)	Deposits and other Debit Heads	61066	65233
7	Other Internal Resources	-203319	-108373
8	Loan from Kerala PFC	71416	9742.5
9	EDC Kuttiyadi		84.18
10	EDC-PSP	56.44	0
11	Loan from State Government for APD R P	1564.5	4271
12	Loan from State Government for PMGY (RE)	0	0
13	Short Term Loan	55500	10000
	Total	**78573.11**	**43321.55**

Source-KSEB

Appendix 8.1
Index of Industrial Production 2002-03 & 2003-04

Base (1980-81=100)

Sl. No.	Item	Weight	Index for 2002-03	Index for 2003-04
1	2	3	4	5
	General Index	**100 00**	**267.355**	**262.59**
1	Manufacture of food products	8 82	130 38	140 83
2	Manufacture of beverages, tobacco and	1 46	230 71	159 91
3	Manufacture of cotton textiles	6 02	113 81	99 04
4	Manufacture of wool, silk and man made	1 26	32 92	32 93
5	Manufacture of textile products	3 26	18 72	20 25
6	Manufacture of wood and wood products	1 35	39 74	25 12
7	Manufacture of paper and paper products	3.16	0 00	0 00
8	Manufacture of basic chemicals and	19 78	274 85	267 15
9	Manufacture of rubber, plastic, petroleum	10.00	197 99	368 69
10	Manufacture of non-metallic mineral products	3 42	176.35	163 14
11	Manufacture of Basic metals and alloys	3 43	77 90	55 83
12	Manufacture of metal products and parts	0 50	640 28	353 85
13	Manufacture of machinery and equipment	9 46	1240 27	1080.97
14	Manufacture of transport equipment and	2 67	19.41	2 05
15	Other manufacturing industries	1 42	28.65	23 93
16	Electricity generation, transmission and	21 93	172 18	164 33

Source Directorate of Economics & Statistics, Trivandrum

Appendix 8 2
Growth of Working Factories and Average Daily Employment in Kerala - 1995-2004

Year	No. of Factories			No. of Employment		
	Private	Public	Total	Private	Public	Total
1	2	3	4	5	6	7
1995	14840	491	15331	263878	*11270	375148
1996	15906	528	16434	293923	*11144	405067
1997	16803	533	17336	317592	*11248	428840
1998	17177	542	17719	334143	*09698	443841
1999	17955	549	18504	318729	*17747	436474
2000	17956	558	18544	336895	101855	438750
2001	18001	553	18554	329230	107180	436410
2002	17727	535	18262	313260	95553	408813
2003*	17711	528	18239	309938	94319	404257
2004 (p)	17742	529	18271	310884	94367	405251

* Revised

(p) provisional

Source . Directorate of Economics and Statistics , Thiruvananthapuram

Appendix 8.3

Districtwise Distribution of Registered Working Factories in Kerala from 1995 to 2004

No	Districts	1995	1996	1997	1998	1999	2000	2001	2002	2003*	2004(p)
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	809	850	868	892	923	898	897	890	892	896
2	Kollam	1498	1654	1735	1787	1899	1927	1905	1899	1895	1897
	Pathanamthitta	363	382	430	470	498	526	532	504	505	504
4	Alappuzha	1024	1059	1111	1140	1194	1211	1213	1214	1241	1245
5	Kottayam	1180	1247	1283	1293	1302	1294	1297	1258	1255	1259
6	Idukki	290	303	305	303	341	325	326	332	333	335
7	Ernakulam	2364	2543	2686	2700	2924	2931	2937	2928	2930	2935
8	Thrissur	1944	2084	2188	2364	2547	2557	2559	2519	2516	2526
9	Palakkad	1620	1774	1972	1966	2028	1993	1975	1893	1867	1870
10	Malappuram	815	894	912	924	963	995	1003	1014	1014	1012
11	Wayanad	128	151	180	176	139	140	141	134	133	133
12	Kozhikode	1582	1656	1778	1777	1749	1764	1769	1723	1707	1714
13	Kannur	1473	1579	1614	1636	1738	1716	1729	1694	1696	1690
14	Kasaragod	241	258	274	291	259	267	272	260	255	255
	Total	15331	16434	17336	17719	18504	18544	18554	18282	18239	18271

* Revised

(p) Provisional

Source. Directorate of Economics & Statistics, Thiruvananthapuram

Appendix 8.4

Districtwise Distribution of Employment in Kerala - 1995 to 2004

Sl.No.	District	No.of Employment									
		1995	1996	1997	1998	1999	2000	2001	2002	2003*	2004(p)
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	26431	29013	28300	29582	29502	29123	29188	30129	30024	30252
2	Kollam	103706	120973	139283	143957	134112	137014	135518	128322	128773	129641
3	Pathanamthitta	8522	9302	9863	10880	11873	12325	12660	9429	9447	9485
4	Alappuzha	22366	23719	24058	24839	25149	26359	26216	25432	26614	26696
5	Kottayam	17482	17544	17692	18369	17436	17504	17508	16674	16505	16581
6	Idukki	6269	7668	7958	7887	7982	8032	7842	8343	8358	8513
7	Ernakulam	65626	70117	70340	71988	64949	64815	64102	64315	62654	62774
8	Thrissur	40376	36381	38261	41336	37599	36206	36213	35287	34957	34782
9	Palakkad	19552	23036	24329	24442	24425	24462	24337	24811	23336	23269
10	Malappuram	9144	9869	9954	10344	12917	13357	13409	9861	9196	8966
11	Kozhikode	30358	31506	28978	29371	26653	25822	17004	21902	20141	20259
12	Wayanad	2377	2759	3367	2600	16983	17001	25722	6546	6528	6528
13	Kannur	18595	20286	23278	23807	23810	23582	23484	24658	24804	24585
14	Kasaragod	2344	2914	4159	4417	3084	3168	3207	3104	2920	2920
	TOTAL:	375148	405067	429840	443841	436474	438750	436410	408813	404257	405251

* Revised

(P) Provisional

Source:- Directorate of Economics and Statistics, Thiruvananthapuram

Appendix 8.5

Industrial Disputes Arose, Handled, Settled etc. in Kerala (2000-01 to 2004-05)

Sl.No.	Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7
1	No. of disputes pending at the beginning of the year	2409	2241	2263	2768	2667
2	No. of disputes that arose during the year	4123	3356	4005	4555	4019
3	No. of disputes handled during the year (1+ 2)	**6532**	**5597**	**6268**	**7323**	**6686**
4	No. of disputes settled during the year					
a	By voluntary negotiation between parties	791	578	866	883	810
b	By conciliation	1210	922	1391	1876	1608
c	By withdrawal	1834	1428	1230	1376	1178
d	Referred for Arbitration	0	0	0	521	432
e	Referred for Adjudication	456	406	392	0	0
f	Total number of disputes settled (a to e)	**4291**	**3334**	**3879**	**4656**	**4028**
5	Number of disputes pending at the year (3 - 4)	2241	2263	2389	2667	2658
6	Number of disputes led to					
a	Strike (including pending previously)	21	9	7	22	14
b	Lockout including pending previously	40	38	49	35	30
c	Total (a + b)	**61**	**47**	**56**	**57**	**44**
7	No. of workers affected due to					
a	Strike	198040	29827	403510	47887	15202
b	Lockout	8553	6700	12412	8858	82175
c	Total (a + b)	**206593**	**36527**	**415922**	**56745**	**97377**
8	Mandays lost					
a	Strike	279914	392172	6404348	93854	150134
b	Lockout	0	1405805	1772811	1799224	1979708
c	Total (a + b)	**279914**	**1797977**	**8177159**	**1893078**	**2129842**

Source. Office of the Labour Commissioner - Thiruvananthapuram

Appendix 8.6

Central Sector Investment in Kerala

(Rs crore)

Years as on 31st March	Investment Gross Block		% of column(3) to column(2)
	All India	Kerala	
1	2	3	4
1970	3795	116	3.06
1975	6242	202	3.24
1980	18161	423	2.33
1985	47323	831	1.76
1990	113430	1701	1.50
1995	227349	2906	1.28
1996	256200	3390	1 32
1997	284330	3992	1 40
1998	319829	4717	1 50
1999	353660	5962	1.69
2000	381365	6826	1 79
2001	411865	9893	2 40
2002	490397	13504	2 75
2003	525301*	14550*	2.77
2004	596725	15301	2 56

* Revised

Source. *Reports of the Public Enterprises Survey. Government of India.- 2003-04.*

Appendix 8 7

Central Sector Investment in Selected States as on 31-

Name of State	As on 31-03-2004	
	Gross Block (Rs. Crores)	Employment (Lakh Nos)
1	2	3
Kerala	15301	0.45
Karnataka	29573	0.83
Andhra Pradesh	42431	1 03
Madhya Pradesh	27655	1 10
West Bengal	29378	2.19
Rajasthan	15400	0.31
Gujarat	39153	0.53
Maharashtra	107826	2.08
Orissa	31415	0.68
Uttarpradesh	39934	0 89
Assam	26335	0 53
Tamilnadu	38518	0 88
Jharkhand	22869	2.49
Delhi	20255	0.76
All India	596725	17.67

Source Survey of Public Enterprises, Govt. of India, 2003-04

Appendix 8.8

Capital Investment and Employment in respect of Government of India Companies functioning in Kerala

(Rs. Lakh)

Sl.No	Name of Company	Investment in capital as on		Employment as on	
		31-3-2004	31-3-2005	31-3-2004	31-3-2005
1	2	3	4	5	6
1	Hindustan Organic Chemicals Ltd	3342.00	3342.00	451	442
2	Hindustan Newsprint Ltd.	8254.00	NA	1125	NA
3	Cochin Refineries Ltd	60824.00	52595.00	1947	1926
4	Hindustan Latex Ltd	1553.50	1553.50	1873	1850
5	Hindustan Machine Tools Ltd.	5021.43*	5657.32	863	831
6	Fertilizers and Chemicals Travancore Ltd.	97420.15	NA	4402	NA
7	Alagappa Textiles(Cochin) Mills	1915.00	NA	792	NA
8	Instrumentation Ltd	3343.08	3736.33	346	491
9	Cannanore Spinning & Weaving Mills	757.23	912.69	411	360
10	Indian Rare Earths Limited	13920.04	13920.04	1039	1031
11	Hindustan Insecticides Ltd.	6593.80	NA	514	NA
12	Cochin Shipyard Ltd	38118.29	45799.98	2175	2106
13	Kerala Lekshmi Mills	114.46	255.24	493	493

* Revised

Source: *Reports of Companies Concerned*

Appendix 8.9

Performance of Government of India Companies in Kerala in Terms of Value of Production and Sales Turnover

(Rs. Lakh)

Sl.No.	Name of Company	Value of Production		Total Sales Turnover	
		2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6
1	Hindustan Organic Chemicals Ltd.	27760	45498	28628.07	48141.90
2	Hindustan Newsprint Ltd	25099	NA	25268	NA
3	Cochin Refineries Ltd	984770	1321430	1171583*	1544027
4	Hindustan Latex Ltd*	15039*	17815	16254	19431
5	Hindustan Machine Tools	4651	4698	4410	4708
6	Fertilisers and Chemicals Travancore Ltd	97594	NA	9679*	NA
7	Alagappa Textiles (Cochin) Mills Ltd	1306	NA	1318	NA
8	Instrumentation Ltd.	3554	4505	4127	4963
9	Cannanore Spinning and Weaving Mills	1737	2105	1503	1842
10	Indian Rare Earths Limited	6203*	4812	11923.57	9446.69
11	Hindustan Insecticides Ltd.	7367.3	NA	6092	NA
12	CochinShipyard Ltd	22188	27829	22844	27648
13	Kerala Lekshmi Mills	1806.71	2660.56	1706.76	2366.03

* Revised

Source: Reports of Companies Concerned

Appendix 8.10

Production and Capacity Utilisation in Government of India Companies Functioning in Kerala

Sl.No	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2004	31-03-2005	31-03-2004	31-03-2005	31-03-2004	31-03-2005
1	2	3	4	5	6	7	8	9	10
1	Hindustan Organic Chemicals Ltd	Phenol	M.T	40000	40000	40034.00	48400.00	100.00	121.01
		Acetone	M.T	24840	24840	25057.00	30277.00	102.00	122.88
		H2O2(100%)	M.T	5225	5225	5979.00	4983.00	114.39	95.31
		Propylene	MT			27744.00	32884.00	.	
		Cumene	MT		.	63538.00	70788.00		
2	Hindustan News Print Limited	Newsprint	MT	100000		112555.00	.	113.00	..
3	Cochin Refineries Ltd	Petroleum/Petrochemical Products- Crude. Throughput(MMT)	Million MT	7.6	7.5	7.85	7.92	105.00	105.60
4	Hindustan Latex Ltd	1 Condom	MPcs	670	670	856.12	926.30	127.78	138.21
		2 B Bags	MPcs	2	3.6	3.50	3.51	162.00	97.50
		3 Saheliflion Steroidal O C Pl	M Tab	30	30	13.00	15.48	42.60	51.60
		4 Mala-D/N (Steroidal OCP)	M cycles	30	30	55.00	55.00	183.00	183.33
		5 CU T	MPcs	4	4	0.34	4.20	8.50	105.00
		6 Hydrocephalus Shunt	Nos Pcs	5000	5000	1739.00	3386.00	35.00	67.76
		7 Emergency Pills	M Tabs			2.00	.		
		8 Suture	M Pcs	1.5	1.5	0.17	0.36	11.30	24.00
5	HMT Ltd	Machine Tools,Primary and cutting machines, accessories and spares	Nos	366	453	233.00	253.00	63.93	55.85
6	Fertilisers & Chemicals Travancore Ltd	Udyogamandal division							
		1 Ammonium Sulphate	MT	225000		190266.00	..	85.33	.
		2 Factamfos	MT	633500		567878.00	.	90.00	
		Cochin division							
		3 Urea	MT	330000		0.00			.
		Petrochemical division							
		4 Caprolactam	MT	50000	..	41794.00		84.00	.
7	Alagappa Textiles(Cochin) Mills	Cotton, Yarn/Blended yarn	Kgs(Lakh)	42753 (Spindles)	.	14.31	..		
8	Instrumentation Ltd	1 Process control valves	Nos	7500	7500	4196.00	5472.00	56.00	72.96
		2 Safety relief valves & Pr.Reducing Valves	Nos	2000	2000	245.00	146.00	12.00	7.30
		3 Orifice plates & Flow measuring Devices	Nos	500	500	246.00	182.00	49.00	36.40

Appendix 8.10 (Contd.)

Production and Capacity Utilisation in Government of India Companies Functioning in Kerala

Sl.No.	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2004	31-03-2005	31-03-2004	31-03-2005	31-03-2004	31-03-2005
1	2	3	4	5	6	7	8	9	10
9	Cannanore Spinning & Weaving mills	Yarn in different counts	Kgs(Lakhs)	24800 (spindles)	24800 (spindles)	13.20	15.15	.	..
10	Indian Rare Earths Limited	Ilmanite	MT	154440	154440	108456.00	83224.00	70.00	53.89
		Zircon	MT	11220	11220	8638.00	7713.00	77.00	68.74
		Rutile	MT	9900	9900	4505.00	4031.00	46.00	40.72
		Sillimanite	MT	7080	7080	5022.00	7159.00	71.00	101.12
		Leucoxene	MT	1440	1440	0.20	0.00	0.01	0.00
		Zirfor	MT	5000	5000	3818.00	4460.00	75.00	89.20
		Rare Earth Chloride	MT	3000	3000	2854.92*		0.00	
		Trisodium Phosphate	MT	4050	4050	3976.39*	.	69.00	-
		Rare Earth Flouride	MT	120	120	96.70	85.15	80.58	70.95
		Rare Earth Oxide	MT	40	40	30.49	28.87	75.22	72.16
		Cerium Oxide	MT	60	50	32.99	10.27	54.98	17.12
		Thorium Concentrate	MT	6000	6000	555.19	1050.92	9.25	17.52
		Neodymium	MT	120	..	1.06	0.44	0.88	
		Evaporated Lye	MT	600	600	602.74	.	100.46	.
		Cerium Hydrate (Wet)	MT	400	400	8.80	13.90	2.20	3.48
		Cerium Hydrate (Dry)	MT	200	200	56.00	14.60	28.00	7.30
		Yellow Cake	MT	40	40	16.41	29.88	41.02	72.20
		Lanthanum Concentrate	MT				2000.00		.
11	Hindustan Insecticides Ltd	Tech DDT	MT	.	..	676.62			.
		Form DDT	MT			1191.00		.	
		Tech Endosulphan	MT	.		1549.18			.
		Form Endosulphan	KL	..	..	782.43			
		Dicofol Tech	MT			91.50		.	
		Dicofol Form	MT			55.08			
		Tilbar	MT		.	153.45		.	-
		Mancozeb	MT		.	199.57		.	...
12	CochinShipyard Ltd	Ship (Building)	DWT	150000	150000	75125.00	62517.00	17.00	41.68
13	Kerala Lakshmi Mills	Yarn in different counts		41328 Spindles	41328 Spindles	1504097 Kgs	2015824 Kgs	.	.

*Revised

Source: Reports from Companies concerned

Appendix 6.11

District-wise break up of Medium and Large Scale Industries in Kerala as on 31-03-2005

Sl.No	Districts	Central Sector	State Sector	Co - Operative Sector	Joint Sector	Private Sector	Total
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	2	14	2	4	67	89
2	Kollam	2	7	2	..	20	31
3	Alappuzha	.	7	.	3	27	37
4	Kottayam	1	2	2	.	28	33
5	Pathanamthitta	..	1	1	1	5	8
6	Idukki	..	.	1	1	15	17
7	Ernakulam	12	8	2	4	228	254
8	Thrissur	2	8	1	7	48	66
9	Palakkad	2	2	2	6	74	86
10	Malappuram	.	5	1	2	22	30
11	Kozhikode	.	3	1	1	24	29
12	Wayanad	..	..	..	.	7	7
13	Kannur	1	7	5	..	16	29
14	Kasaragod	.	1	1	..	2	4
	Total	22	65	21	29	583	720

Source. Kerala State Industrial Developmet Corporation (KSIDC), Thiruvananthapuram

Appendix 6.12

Units Assisted by K.S.I.D.C as on 31-3-2005

Sl.No.	Districts	No of Units		Project Cost	
		Public Sector	Private Sector	Public Sector	Private Sector
1	2	3	4	5	6
1	Thiruvananthapuram	9	39	13701	22827
2	Kollam	4	10	26	2982
3	Alappuzha	3	28	2168	25125
4	Pathanamthitta	..	5	.	981
5	Idukki	..	14		6615
6	Kottayam	1	18	644	20420
7	Ernakulam	4	151	20916	204593
8	Thrissur	4	39	2006	28899
9	Palakkad	1	76	1373	103267
10	Malappuram	..	21	.	6206
11	Kozhikode	3	16	1628	6391
12	Wayanad	..	6		1132
13	Kannur	1	9	148	17891
14	Kasaragod	1	1	87	178
	TOTAL:	31	444	42697	447607

Source KSIDC, Thiruvananthapuram

Appendix 3.13

Capital Invested and Employment in Respect of Govt. Owned Companies in Kerala

Sl.No.	Name of Company	Capital Invested (Rs.lakh)		Employment (Nos.)	
		as on 31-3-2004	as on 31-3-2005	as on 31-3-2004	as on 31-3-2005
1	2	3	4	5	6
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	8256.17	8391.85	1038	1040
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	30488.75*	32699.78	1521	1493
3	Malabar Cements Ltd, Palakkad	3037.71	5037.68	1072	1077
4	Kerala Clays & Ceramics Products Ltd, Kannur	.131.82	131.62	348	330
5	Sitaram Textiles Ltd, Thrissur	3265.26*	3596.46	369	257
6	Kerala Hitech Industries Ltd, Thiruvananthapuram	2056	NA	243	NA
7	Kerala Automobiles Ltd, Thiruvananthapuram	1110.92	1110.92	370	360
8	Steel Industrials Kerala Ltd, Thrissur	8259.07*	8364.15	328	306
9	Kerala State Textile Corporation Ltd, Thiruvananthapuram	4805.90*	5776.06	918	674
10	Kerala Minerals and Metals Ltd, Kollam	3093.27	3093.27	1426	1310
11	Steel and Industrial Forgings Ltd, Thrissur	1040*	1040	262	260
12	Foam Mattings India Ltd, Alappuzha	515.23	NA	176	NA
13	Kerala Garments Limited	52.40*	52.4	256	118
14	Kerala Agro Machinery Corporation Limited	161.46	161.46	558*	565
15	Kerala State Cashew Development Corporation	36071.70*	36614.7	15841	149*6
16	Trivandrum Rubber Works, Thiruvananthapuram	213.62	NA	186	NA
17	Meat Products of India	281.09	287.87	105	105
18	Autocast Limited	6295.43	6295.43	342	342
19	Kerala State Bamboo Corporation	1169.25	1207.03	249	249

* Revised

Source:- Reports of Companies Concerned

Appendix 8.14

Performance of Govt. Owned Companies in Kerala in Terms of Value of Production and Sales Turnover

(Rs Lakhs)

Sl. No.	Name of Company	Value of Production		Sales Turnover	
		2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	4918.63	5552.84	5393.53	5458.93
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	3784.17	4274.10	7969.62*	6672.31
3	Malabar Cements Ltd. Palakkad	16402.56	16892.12	16487.41	16752.83
4	Kerala Clays & Ceramics Products Ltd, Kannur	276.22	315.78	354.19	398.46
5	Sitaram Textiles Ltd. Thrissur	555.29	639.93	635.93*	673.83
6	Kerala Hitech Industries Ltd. Thiruvananthapuram (KELTEC)	NA	NA	1099.89	NA
7	Kerala Automobiles Ltd, Thiruvananthapuram	4265.06	4787.47	4461.51*	4871.36
8	Steel Industrials Kerala Ltd, Thrissur	125.30*	138.80	1292.04	1516.71
9	Kerala State Textile Corporation Ltd, Thiruvananthapuram	3152.90*	3505.60	3328.69	3532.55
10	Kerala Minerals and Metals Ltd, Kollam	23348.63	27073.69	28689.20	28554.26
11	Steel and Industrial Forgings Ltd, Thrissur	2065.00	2666.00	2287.00	3083.00
12	Foam Mattings India Ltd, Alappuzha	NA	NA	535.91	NA
13	Kerala Garments Limited	60.00	25.00	13.24*	6.03
14	Kerala Agro Machinery Corporation Limited	5166.91*	5810.01	8815.40	7934.39
15	Kerala State Cashew Development Corporation	1221.73	5635.89	1222.31	3587.13
16	Trivandrum Rubber Works, Thiruvananthapuram	51.17	NA	45.00	NA
17	Meat Products of India	404.65	461.60	440.57	473.02
18	Autocast Limited	1025.00	1418.00	1076.12	1419.79
19	Kerala State Bamboo Corporation	1199.88	870.16	892.90	966.45

* Revised

Source:- Reports of Companies Concerned

Appendix 6.15

Production and Capacity Utilisation of Government Owned Companies in Kerala during 2003-04 and 2004-05

Sl. No.	Name of Company	Name of products	Unit	Installed Capacity as on		Production During		Capacity Utilization (%)	
				31-3-2004	31-3-2005	31-3-2004	31-3-2005	31-3-2004	31-3-2005
1	2	3	4	5	6	7	8	9	10
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	Distribution of Transformers	KVA	120000	120000	299240	474500	249.37	395.42
		Steel Structures	Tonnes	1200	1200	696	181	58.00	15.08
		HRC Fuses	Nos	120000	120000	.	.	..	..
		Cast Iron Specials	Tonnes	1500	1500	.	..	.	.
		Alternators (TL)	Nos	1500*	1500	999*	994	123.00	66.27
		Electrical & Wiring Accessories	Nos	133000	133000	96147	45719	72.00	34.38
		Alternators(G.P) & D.G Sets	Nos	3000	..	923*	1210	29.00	.
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	Various Electronic Products	Production is reported in terms of value and not in terms of quantity						
3	Malabar Cements Ltd. Palakkad	Portland Cement	M Ts	620000	620000	538330	561114	87	91
4	Kerala Clays and Ceramic Products Ltd, Kannur	ChinaClay	M.Ts	N.A	N.A	10348	11314	.	..
		Bricks	Nos	N.A	N.A	242169	259229	..	.
		Laterite	M.Ts	N.A	N.A	12564	18405	..	..
5	Sitaram Textiles Ltd, Thrissur	Cotton Yarn	Kg	12064 (spindles)	12064 (spindles)	431440 (Kg)	502501 (Kg)	.	.
		Cotton Fabrics	mts.	.		.		..	.
6	Kerala Hitech Industries Ltd, Thiruvananthapuram (KELTEC)		Not available						
7	Kerala Automobiles Ltd, Thiruvananthapuram	Autorickshaw	Nos	.		6005	6725		
8	Steel Industrials Kerala Ltd. Thrissur	Structural Steel Fabrication	M Ts	3000	3000	12196	48398	4	1.61
		Cast Iron	M Ts	1200	1200	304*	290	75	24.17
9	Kerala State Textile Corporation Ltd. Thiruvananthapuram	Cotton/Blended Yarn	Spindles	86236	86236	1692726 kg	1656706 kg		.
10	Kerala Minerals & Metals Ltd. Kollam	Titanium Dioxide	M Ts	22000	22000	25467	30662	116	139.37
		Ilmenite	M Ts	51600	51600	50554	47650	98	92.34
		Rutile	M.Ts	2400	2400	3894	3332	162	138.83
		Zircon	M.Ts	1500	1500	1629	2056	109	137.07
11	Steel and Industrial Forgings Ltd Thrissur	Steel Forgings	M.Ts	7500	7500	2471	2486	33	33.15

Appendix 8.15 (Contd.)

Production and Capacity Utilisation of Government Owned Companies in Kerala during 2003-04 and 2004-05

Sl. No.	Name of Company	Name of products	Unit	Installed Capacity as on -		Production During		Capacity Utilization (%)	
				31-3-2004	31-3-2005	31-3-2004	31-3-2005	31-3-2004	31-3-2005
1	2	3	4	5	6	7	8	9	10
12	Foam Mattings (India) Ltd Alappuzha	Mattings plant	M2	475000	.	136000	.	28.63	
		Latex backing plant	M2	1200000		322000	.	27	.
		Dyeing Plant	M Ts	840		896.76	.	107	..
		Powerloom Plant	M2(Lac)	1.9		0.57	..	30	..
13	Kerala Garments Limited	Readymade Garments	Nos	315000	315000	80292*	35000	25	11.11
14	KAMCO	Power Tiller	Nos	6000	6000	6775	7587	113	126.12
		Power Reapers	Nos	.		475	525	.	..
		Power stone cutter	Nos	.	.	..	2		..
15	Kerala State Cashew Development Corporation	Kernals	MTs	12000	12000	758.6	2432.4	6	20.27
16	Trivandrum Rubber Works	Precured Tread	Kg	684000	.	22006	.	3.21	..
		Bonding Gum	Kg	360000	.	3340	..	0.93	..
		Vulcanising Cement	Lts	90000	..	2331	.	2.59	..
		Foam Products	Nos	54000	..	..	.	.	.
		Rubber Sheeting	Tons	120000	.	1507kg	..	..	.
		Retreaded Tyre	Nos	10800	.	5320		49.26	.
17	Meat Products of India	Meat	MTs	300	300	332.80	323.75	110.93	107.92
		Feed	MTs	7200	7200	1142.26	1497.27	15.83	20.80
18	Autocast Limited	GI / SG. Castings	MTs	23000	23000	1562	1378		5.99
		SG Windmill Castings	MTs	.	..	771	1269	.	..
19	Kerala State Bamboo Corporation	Bamboo Ply	Sq. ft.	64.5	64.5	40.09	34.58	62.16	53.58
		Bamboo Matts	Sq. ft	..	..	307.09	200.22	.	.
		Reech	Nos	..	..	80.42	81		.

* Revised

Source: Reports of the Companies Concerned

Appendix 8.16

Capital Invested and Employment in respect of Govt. Majority Companies in Kerala

Sl. No.	Name of Company	Capital Invested (Rs.		Employement (Nos.)	
		2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6
1	Traco Cable Company Ltd. Kochi	3376.60*	3376.60	641	625
2	Travancore Titanium Products Ltd, Thiruvananthapuram	176.75	176.75	1257	1218
3	The Travancore Cochin Chemicals Ltd, Kochi	7020.57	7224.00	870	813
4	Keltron Electroceramics Ltd, Malappuram	507.25*	487.61	93	90
5	The Travancore Cements Ltd. Kottayam	50.00*	50.00	591	576
6	The Metal Industries Ltd, Shoranur	260.96	NA	94	NA
7	The Travancore Sugars and Chemicals Ltd	300.48*	291.48	123	119
8	Forest Industries (Travancore) Ltd, Aluva	284.89*	303.08	130	121
9	Keltron Magnetics Ltd, Kannur	373.09	403.05	29	29
10	Transformers and Electricals Kerala Ltd.	1385.81	1470.01	1236	1132
11	Keltron Resistors Ltd, Cannanore	276.80	289.62	47	47
12	Keltron Component Complex Ltd.	1499.47*	1594.26	315	301
13	Keltron Crystels Ltd.	1268.95	1426.78	106*	106
14	Kerala State Handloom Development Corporation	2652.91	2691.91	405	400
15	Kerala Ceramics Ltd.	1895.75	NA	243	NA

* Revised

Source. *Reports of the Companies Concerned*

Appendix 8.17

Performance of Government Majority Companies in Kerala in Terms of Value of Production and

(Rs Lakh)

Sl. No.	Name of Company	Value of Production		Sales Turnover	
		2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6
1	Traco Cable Company Ltd, Kochi	2403.28	4271.04	2464.61	4173.70
2	Travancore Titanium Products Ltd, Thiruvananthapuram	11420.37	13266.84	12896.00	11941.00
3	The Travancore Cochin Chemicals Ltd, Kochi	10440.00	10234.00	10929.05	10651.00
4	Keltron Electroceramics Ltd. Malappuram	239.18*	293.97	323.52	410.71
5	The Travancore Cements Ltd, Kottayam	*924.00*	2017.00	2790.00*	2779.00
6	The Metal Industries Ltd. Shoranur	202.66	NA	211.90	NA
7	The Travancore Sugars and Chemicals Ltd.	119.33*	487.25	174.10	617.51
8	Forest Industries (Travancore) Ltd, Aluva	569.98	615.48	589.98	615.48
9	Keltron Magnetics Ltd, Kannur	232.42	255.32	291.23	338.35
10	Transformers and Electricals Kerala Ltd.	8404.00	8806.00	9332.94	9416.00
11	Keltron Resisters Ltd., Cannanore	97.65	95.73	96.62	149.33
12	Keltron Component Complex Ltd.	2518.04	2285.35	3089.85	2448.60
13	Keltron Crystals Ltd.	87.63	73.89	86.74	80.48
14	Kerala State Handloom Development Corporation	511.00*	680.00	1640.85*	1603.84
15	Kerala Ceramics Ltd	546.02	NA	602.13	NA

* Revised

Source: Reports of companies concerned

Appendix 8.18

Production and Capacity Utilisation of Government Majority Companies in Kerala during 2003-04 and 2004-05

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2004	31-3-2005	31-3-2004	31-3-2005	31-3-2004	31-3-2005
1	2	3	4	5	6	7	8	9	10
1	Traco Cable Company Ltd, Kochi	1.AAC / ACSR	MT	1500	1500	1074.81*	1454.46	71.65	96.96
		2.PVC Covered Conductors	MCM	32.92	32.92	0.335*	0.94	1.02	2.85
		3.JFTC (IBM)	LCKM	2.50	2.50	0.17*	0.00	6.80	0.03
		4.JFTC (TVLA)	LCKM	15.00	15.00	2.36*	3.27	15.73	21.80
2	Travancore Titanium Products Ltd. Thiruvananthapuram	Titanium Dioxide	M.T	15000	15000	16251.00*	18359.00	108.34	122.39
3	The Travancore Cochin Chemicals Ltd, Kochi	1.Caustic Soda Lye	MT	74250	52250	55285.00	47201.00	74.46	90.34
		2.Chlorine Products	MT	65785	46295	48983.00	41820.00	74.46	90.33
4	Keltron Electroceramics Ltd, Malappuram	1.Ceramic Capacitors	Lakh Nos	1100	1100	353.62	409.57	32.15	37.23
		2.N.T.C Thermistors	Lakh Nos	10	10	3.50	2.97	35.00	29.70
		3.Buzzers/Ringers/ Flasher	Lakh Nos	5	5	1.57	1.05	31.40	21.00
		4.Metaloxide varistors	Lakh Nos	20	20	12.26	25.76	61.30	128.80
5	The Travancore Cements Ltd.	1.White Cement	M.T	30000	30000	23123.00	23965.00	77.08	79.88
		2.Cement Paint	M.T	1050	1050	1062.00*	884.00	101.14	84.19
6	The Metal Industries Ltd. Shoranur	1.Mammaties	MT	272.00	NA	86.57	NA		
		2.All Axes	MT			10.65			
		3.Pick Axes	MT			34.47			
		4.Crow Bar	MT			7.16			
		5.Sledge Hammer	MT			95.46			
		6.Others	MT			10.72			
7	Travancore Sugars & Chemicals Ltd	1.Spirit	B.L	2820000	2820000	28073.00*	56023.00	1.00	1.99
		2.I.M.F.L (lakh)	B.L.			352687.00*	463971.00		
8	Forest Industries (Travancore) Ltd. Aluva	Wooden Furniture and Joineries	m^3	1500	1500	418.42	419.37	27.89	27.96

Appendix 5.15 (Contd.)

Production and Capacity Utilisation of Government Majority Companies in Kerala during 2003-04 and 2004-05

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2004	31-3-2005	31-3-2004	31-3-2005	31-3-2004	31-3-2005
1	2	3	4	5	6	7	8	9	10
9	Keltron Magnetics Ltd, Kannur	1.Servo Controlled Voltage Stabilizer	Nos	100	100	-			0 00
		2.Uninterrupted Power Supply Systems	Nos.	50	50			..	0 00
		3 MPPCAPS	Nos	720000	1140000	1151259 00	1224152 00	159 90	107.38
10	Transformers and Electricals Kerala Ltd. Ernakulam	1 Power Transformer	MVA	4500	4500	3159.00	3590 00	70 20	79.78
		2 Current and Potential Transformers	No	1000	1000	294.00	353 00	29 40	35.30
		3 Gas Circuit Breakers	No	100	100	36.00		36.00	
11	Keltron Resistors Ltd , Cannanore	Carbon & Metal Film Resistors	M Nos	217	217	90.09	102 93	41.52	47 43
12	Keltron Component Complex Ltd	Alu Electrical Capacitors	M.Nos	150	150	204 47	160 27	136.31	106 85
13	Keltron Crystals Ltd., Cannanore	1 Piezo Electric Quartz Crystals	Nos (000)	2084	2084	421 00	390 00	20 20	18.71
		2 Lead Taps for aluminium electrolitic capacitors	M Nos	240	240	198 00	171 00	81 67	71 25
14	Kerala State Handloom Development Corporation	Handloom Fabrics	Metres	2500 (looms)	2600 (looms)	12 (lakh metres)	15 43 (lakh metres)		
15	Kerala Ceramics Ltd	Kaolex	MT	18000	..	10280.00		57 16	

* Revised

Source Reports of the companies concerned

Appendix 8.19

Details of Joint Stock Companies Working in Kerala

Sl.No	Particulars	Private Limited	Public Limited	Total
1	2	3	4	5
1	Number of Joint Stock Companies in Kerala as on 31.3.2004	12378	1461	13839
2	Number of Companies newly registered during 2004-05	1038	34	1072
3	Number of Companies transferred from other States during 2004-05	1	1	2
4	Number of Companies wound up dissolved / struck off/amalgamated during 2004-05	198	56	254
5	Number of Companies transferred to other States during 2004-05	4	Nil	4
6	Net addition to the total No.of Joint Stock Companies in Kerala during 2004-05 [(2+3)-(4+5)]	837	(-) 21	816
A	No of companies converted from public to private	...	...	...
B	No.of companies converted from private to public	...	5	5
7	Total No of Joint Stock Companies in Kerala as on 31.3.2005 (Item 1+6)	13210	1445	14655
8	Total No.of Government Companies registered in Kerala as on 31-3-2005	60	51	111
9	Total No of Government Companies registered in Kerala during 2004-05	1	Nil	1
10	No.of government Companies wound up during 2004-05	1	Nil	1
11	Net addition to the total No.of Government Companies in Kerala during 2004-05 (Item 9-10)	Nil	Nil	Nil
12	Total No.of Government Companies in Kerala as on 31.3.2005 (Item 8+11)	60	51	111
13	Name of Government Companies, newly registered in Kerala during 2004-05	Vizhinjam International Seaport Ltd.		
14	Name of Government Companies, wound up during 2004-05	Trivandrum Spinning Mills Ltd.		
15	No of other major companies wound up during 2004-05	...	...	...

Source : Registrar of Joint Stock Companies, Kochi.

Appendix 8.20

District-wise Details of Small Scale Industrial Units Registered in Kerala During the Year 2004-05

District	Number of SSI units promoted by					Investment (Rs. lakhs)	Value of goods and services produced (Rs. lakhs)	Employment provided (Nos.)	Total no. of units commenced commercial operations
	SC	ST	Women	Other	Total				
1	2	3	4	5	6	7	8	9	10
Thiruvananthapuram	11	3	142	284	440	1372.19	29050.14	2347	440
Kollam	2	..	240	273	515	1245.90	4517.26	1997	515
Pathanamthitta	12	.	60	128	200	460.44	1311.00	712	200
Alapuzha	1	..	161	391	553	1662.53	6336.96	2607	553
Kottayam	2	...	119	242	363	2526.83	17946.41	1281	363
Idukki	5	1	82	116	204	31.35	1368.91	1136	204
Ernakulam	..	...	129	324	453	5616.17	25914.32	3117	453
Thrissur	24	1	186	490	701	2113.92	6218.52	3071	701
Palakkad	2	.	73	160	235	1107.56	2276.98	1172	235
Malappuram	3	.	22	204	229	984.08	7801.72	1154	229
Kozhikode	5	...	49	394	448	1058.72	4418.18	1673	448
Wayanad	..	...	7	17	24	325.97	26.16	119	24
Kannur	..	..	91	384	475	982.77	5610.91	1746	475
Kasaragod	..	...	17	78	95	394.98	1588.54	453	95
Total	67	5	1378	3485	4935	19383.41	116366.03	22585	4935

Source : Directorate of Industries & Commerce, Tvpm.

Appendix 6.21

District-wise Details of Small Scale Industrial Units Registered in Kerala as on 31st March 2005

District	Number of SSI units promoted by				Total investment	Value of goods and	Employment provided (Nos)
	SC/ST	Women	Others	Total			
1	2	3	4	5	6	7	8
Thiruvananthapuram	1337	6224	22276	29837	35580.54	150283.38	118917
Kollam	1674	6775	18748	27397	35716.28	91770.24	172364
Pathanamthitta	793	2967	9865	13615	13125.84	31003.49	45834
Alapuzha	763	5620	19145	25528	29383.34	110945.68	117606
Kottayam	596	4818	23115	28519	34916.80	91815.15	94294
Idukki	466	2477	4566	7509	8158.91	28179.44	26995
Ernakulam	855	5252	29955	36062	93826.85	508391.62	170265
Thrissur	1290	4621	23923	29774	56724.53	171994.56	120533
Palakkad	712	3970	17183	21865	32484.72	62234.93	101325
Malappuram	879	1940	10382	13201	22292.41	85796.65	52797
Kozhikode	464	2905	17451	20820	23758.97	94390.18	87166
Wayanad	308	1646	2656	4610	5703.11	10699.91	18982
Kannur	339	1767	12582	14687	20914.24	108507.18	95361
Kasaragod	165	899	6096	7160	9419.39	25397.16	38778
Total	**10770**	**51971**	**217843**	**280584**	**423003.13**	**1571409.57**	**1260007**

Source : Directorate of Industries & Commerce

Appendix 6.22

Working Status of Small Scale Units as on 31st March 2005

District	Total No. of Units	Number of units identified as			Units revived by DIC during 2004-05
		Sick	Registered	Revived	
1	2	3	4	5	6
Thiruvananthapuram	20918	510	275	124	2
Kollam	14793	539	293	137	6
Pathanamthitta	6827	271	59	55	...
Alappuzha	17170	489	234	198	5
Kottayam	19309	661	324	259	5
Idukki	4787	204	55	29	4
Ernakulam	23786	1623	283	125	...
Trissur	21485	586	151	68	2
Palakkad	14171	494	128	65	3
Malappuram	9804	221	87	11	...
Kozhikode	15616	470	257	109	...
Wayanad	2806	88	50	20	3
Kannur	9482	288	122	42	...
Kasaragod	4802	121	4	5	...
Total	**187678**	**6875**	**2312**	**1247**	**30**

Source . Directorate of Industries & Commerce

Appendix 8.23

Achievement under Self Employment Programme during 2004-05(PMRY)

District	Target	Applications sanctioned and amount disbursed during 2004-05			
		Sanctioned		Disbursed upto 9/05	
		Number	Amount (Rs. lakhs)	Number	Amount (Rs. lakhs)
1	2	3	4	5	6
Thiruvananthapuram	2300	2364	800.93	1956	674.82
Kollam	2300	2334	989.45	1939	906.30
Pathanamthitta	1050	1105	644.95	874	508.84
Alappuzha	1750	1777	957.85	1506	795.02
Kottayam	2300	2206	958.44	1453	618.87
Idukki	870	946	502.87	846	394.47
Ernakulam	2600	2605	1330.20	2149	1120.05
Trissur	2500	2580	1139.99	2100	940.14
Palakkad	2650	2792	951.50	2393	988.30
Malappuram	2200	1864	1179.15	1324	816.46
Kozhikode	2200	2288	1284.00	1773	932.77
Wayanad	620	645	244.51	469	152.71
Kannur	1450	1474	894.78	1369	776.88
Kasaragod	710	605	388.45	464	272.28
TOTAL	**25500**	**25585**	**12267.07**	**20615**	**9797.91**

Source : Directorate of Industries & Commerce

Appendix 8.24

Industrial Co-operative Societies in Kerala as on 30.6.2005

District	Industrial Co-operative societies registered	Total number of Industrial Co-operative Societies as on 30.6.2005			
		SC/ST	Women	Others	Total number of societies
1	2	3	4	5	6
Thiruvananthapuram	7	54	71	104	229
Kollam	...	72	34	41	147
Pathanamthitta	1	8	33	11	52
Alappuzha	1	35	42	44	121
Kottayam	...	8	39	5	52
Idukki	...	19	1	21	41
Ernakulam	...	11	56	17	84
Trissur	1	13	33	27	73
Palakkad	...	35	25	15	75
Malappuram	2	24	32	23	79
Kozhikode	...	17	13	28	58
Wayanad	...	41	61	63	165
Kannur	...	11	11	9	31
Kasaragod	...	1	14	28	43
TOTAL	**12**	**349**	**465**	**436**	**1250**

Source : Directorate of Industries & Commerce

Appendix 8.25

Outstanding Credit to Various Sectors by Banks in Kerala(Rs. Crores)

Year	Total Credit	Primary Sector	SSI Sector	Other Priority Sector	Non Priority Sector
1	2	3	4	5	6
2001	19180	2747	2262	3885	10286
2002	22062	3035	2540	4557	11930
2003	27007	3507	2562	5798	15140
2004	31867	4502	2818	8605	16142
2005	40948	5809	3128	11972	20045

Source : State Level Bankers' Committee.

Appendix 5.26

District-wise Number of Handloom Co-operative Societies in the State

Sl. No.	District	No. of societies													
		2002-03							2003-04						
		SC		ST		Others		Total	SC		ST		Others		Total
		Women	General	Women	General	Women	General		Women	General	Women	General	Women	General	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Thiruvananthapuram	5	14	1	7	46	290	363	5	14	1	7	46	290	363
2	Kollam	...	7	...	1	1	70	79	...	7	...	1	1	70	79
3	Pathanamthitta	...	3	...	...	...	6	9	...	3	...	...	...	6	9
4	Alappuzha	2	1	...	...	2	21	26	2	1	...	...	2	21	26
5	Kottayam	...	2	...	...	2	12	16	...	2	...	...	2	12	16
6	Idukki	1	...	...	4	...	7	12	1	...	...	4	...	7	12
7	Ernakulam	...	2	1	...	...	29	32	...	2	1	...	...	29	32
8	Thrissur	1	5	...	...	...	25	31	1	5	...	...	...	25	31
9	Palakkad	...	6	...	4	1	35	46	...	6	...	4	1	35	46
10	Malappuram	1	2	...	...	...	10	13	1	2	...	...	...	10	13
11	Kozhikode	...	2	...	...	...	41	43	...	2	...	...	...	41	43
12	Wayanad	...	2	...	2	...		4	...	2	...	2	...	...	4
13	Kannur	...	2	...	...	...	71	73	...	2	...	...	...	71	73
14	Kasaragod	...	...	...	...	...	11	11	...	...	...	...	...	11	11
	Total	10	46	2	18	52	628	756	10	48	2	18	52	628	756

Source : Directorate of Handloom & Textiles, Tvpm.

Appendix 8.27

Production and Productivity under Handloom Industry in Kerala

Sl.No	Item	2003-04	2004-05
1	Co-operative Sector		
i	Number of looms	46024	47200
ii	Production of Handloom cloth (M M)	58.38	59.90
iii	Value of Production (Rs. crores)	262.71	269.55
iv	Productivity (MUA)	1268.50	1266.07
v	No. of weavers in the co-operative sector	129025	129250
vi	Employment generated (mandays in lakhs)	448	457
vii	No. of women employed	27548	27610
2	Corporate sector/ unorganised private sector		
i	Number of looms	2800	3000
ii	Production of Handloom cloth (M M)	2.10	2.40
iii	Value of production (Rs. crores)	9.45	10.80
iv	Productivity (MUA)	750	800
v	No. of weavers	6100	6200
vi	Employment generated (mandays in Lakhs)	24.64	28.00
vii	No. of women employed	1188	1200
3	Total: Co-operative, corporate and unorganised sector		
i	Number of looms	48824	50200
ii	Production of Handloom cloth (MM)	60.48	62.30
iii	Value of Production (Rs. crores)	272.16	280.35
iv	Productivity (MUA)	1238.74	1241.04
v	No. of weavers	135125	135450
vi	Employment generated (mandays in Lakhs)	472.64	485
vii	No. of women employed	28736	28810
4	Assistance Extended by way of loan and grant for the development of Handloom Industry (Rs. lakhs)		
a	Loan		
i	State Government	65.00	83.85
ii	Central Government	0.00	0.00
iii	N C D C NABARD HUDCO	0.00	39.60
	Total (a)	65.00	123.45
b	Grant		
i	State Government	1166.24	545.91
ii	Central Government	1150.12	1072.50
iii	N C D C, NABARD,HUDCO	0.00	0.00
	Total (b)	2316.36	2019.41
c	Amount spent as Rebate on the sale of Handloom cloth		
i	State Government	149.99	150.00
ii	Central Government (MOA) 50% CSS	0.00	287.50
	Total (c)	149.99	437.50
5	Value of unsold stock (Rs. crores)		
i	In the Cooperative Sector	107.39	110
ii	In the Corporate Sector	16.87	24
iii	Unorganised private sector	NA	NA
6	Number of Co-operative societies		
a	Factory type:		
i	working	112	112
ii	Dormant	26	28
iii	Under liquidation	11	11
iv	Not started working	6	6
	Total (a)	155	155
b	cottage type:		
i	Working	440	440
ii	Dormant	60	60
iii	Under liquidation	81	81
iv	Not started working	22	22
	Total (b)	603	603
	Total (6)	758	758

Source : Directorate of Handlooms & Textiles.

Appendix 8.28

Working Results of Handloom Apex Society (Hantex)

Sl.No	Particulars	2003-04*	2004-05
1	2	3	4
1	Sales turnover (Rs. crores)	16.93	16 13
2	Value of cloth produced (Rs. crores)	10 46	8.75
3	Value of Yarn Purchased (Rs. Crores)	7 63	8 82
4	Value of Yarn distributed (Rs. crores)	7.82	8.98
5	No of Exhibitions conducted	11	14
6	No. of primary societies registered as members (cumulative)	459	463
7	Paid up share capaital (Rs. lakhs)	1311.33	1347.35

* Revised

Source: HANTEX

Appendix 8.29

orking Results of Kerala State Handloom Development Corporation (HANVEEV

(Rs lakhs)

Sl.No	Particulars	2003-04*	2004-05(P)
1	2	3	4
1	Paid up capital (as at the end of the year)	1331.48	1355 48
2	Total Borrowing (as at the end of the year - Including interest)	2654 51	2856.61
3	Gross Block (as at the end of the year)	405 56	413.56
4	Value of production through clusters and sponsored societies (as at the end of the year)	8.96	11.18
5	Income through sales of products (as at the end of the year)(Less discount yarn fabrics etc.)	1640.85	1603.84
6	Other income:-		
a	Prior Period Adjustment	10 40	...
b	Grants, MDA, Interest, Processing charges etc.	129.77	104 10
7	Expenditure on Raw Materials		
a	Yarn	506.51	424.16
b	Dyes and Chemicals	23 86	27.26
c	Fabrics	506 78	761.33
8	Expendiutre on personal payments	398 27	435 67
9	Provision of Depreciation	12.74	12.10
10	Expenditure towards interest and bank charges	185.39	189 55
11	Other Expenses		
	Provision for bad debts	13.67	...
	Prior Period Adjustment	308.61	...
	Trading Expenses	129.00	133.40
	Administration and Selling Expenses	136.34	145.67
12	Stock differential	(-) 236.11	14.49
13	Net Profit (+)/Net loss(-)	(-) 685.02	(-) 417 89
14	Accumulated loss at the end of the year	2085.64	2503 53

* Revised

(P).Provisional

Source : Directorate of Handlooms & Textiles, Tvpm.

Appendix 8.30

Production and Productivity under Powerloom Industry

Sl.No	Items	2003-04	2004-05
1	2	3	4
	1 Total no. of powerlooms in the State	3800	3800
	2 No. of looms in the co-operative sector	1381	1381
	3 Percentage of (2) to (1)	36.34	36.34
	4 No. of powerloom co-operative societies in the State	33	33
	5 No. of members in the co-operative sector	6600	6600
	6 No. of women employed in powerloom sector	1223	1223
	7 Co-operative sector		
a	Production of cloth (lakh metres)	60.00	62.15
b	Value of production (Rs. Lakh)	735.00	761.34
c	Productivity (Mete/loom)	4344.68	4500.00
	8 Unorganised/private sector	NA	NA
	9 Total (Co-operative and Unorganised/private sectors)		
a	Production of cloth (lakh metres)	60.00	62.15
b	Value of production (Rs. Lakh)	735.00	761.34
c	Productivity (Meter/loom)	1578.95	1635.53

Source : Directorate of Handlooms & Textiles, Tvpm

Appendix 8.31

Coir Co-operative Societies in Kerala

Sl No	Type of Society	No. of Societies as on 31-3-2004	No. of Societies as on 31-3-2005
1	2	3	4
1	**Primary Coir Co-operative Societies**		
a)	Working	362	375
b)	New Societies which have not started working	8	11
c)	Dormant societies	177	114
	Total (1)	547	500
2	**Manufacturing Societies**		
a)	Working (Started production)	42	35
b)	New Societies which have not started working	16	15
c)	Dormant societies	3	6
	Total (2)	61	56
3	**Small Scale Producers Co-operative Societies**		
a)	Working	16	14
b)	New Societies which have not started working	10	7
c)	Dormant societies	0	3
	Total (3)	26	24
4	**Husk Procurement and Distribution Societies**		
a)	Working	0	1
b)	New Societies which have not started working	1	2
c)	Dormant societies	1	0
	Total (4)	2	3
5	**Fibre Societies (Defibering Mill Societies)**		
a)	Working	31	30
b)	New Societies which have not started working	16	24
c)	Dormant societies	4	20
	Total (5)	51	74
6	Co-operative Coir Marketing Federation	1	1
7	**Total number of coir Co-operative societies**		
a)	Working	451	455
b)	New Societies which have not started production	51	59
c)	Dormant societies	185	143
d)	Societies under liquidation	166	145
	Grand Total	853	802

Source : Directorate of Coir Development, Tvpm

Appendix 8.32

Activities of Coir Co-operative Societies

a.Yarn Sector

Year	No.of working Societies	No.of Workers (1000)	Husk purchased		Fibre purchased		Yarn produced		Wages paid (Rs lakhs)
			Number (in lakhs)	Value (Rs.lakhs)	Qty (Tonnes)	Value (Rs.lakhs)	Qty (Tonnes)	Value (Rs.lakhs)	
2003-04	362	152.00	266.37	113.90	1300.5	412.95	3389	4179.76	591.06
2004-05	365	244.10	199.92	131.84	3285.46	762.52	2494.29	1222.04	642.19

b.Product Sector

Year	No of working Societies	No.of Workers	Value of Production (Rs. lakhs)	Wages paid (Rs. lakhs)
2003-04	89	2113	534.48	459.85
2004-05	81	6057	2123.71	283.83

Source : Directorate of Coir Development, Tvpm

Appendix 8.33

District-wise Details of Coir Co-operative Societies

Sl. No	District	Project Offices	No. of Coir Societies as on 31-3-2005		
			Working & New	Dormant	Total
1	2	3	4	5	6
1	Thiruvananthapuram	Chirayinkil	42	23	65
2	Kollam	Kollam	68	27	95
3	Alappuzha	Alappuzha	132	15	147
		Kayamkulam	59	22	81
4	Kottayam & Idukki	Vaikom	28	2	30
5	Ernakulam	North Paravoor	21	5	26
6	Thrissur	Thrissur	26	8	34
7	Malappuram/Palakkad	Ponnani	24	5	29
8	Kozhikode	Kozhikode	70	14	84
9	Kannur/ Kozhikode	Kannur	44	12	56
	Total		514	133	647

Source : Directorate of Coir Development, Tvpm.

Appendix 8.34

Export of Coir and Coir Products from India during 2003-04 & 2004-05

Sl.No.	Items	2003-04		2004-05	
		Qty (Tonnes)	Value (Rs.Lakh)	Qty (Tonnes)	Value (Rs.Lakh)
1	2	3	4	5	6
1	Curled Coir	76.54	14.02	68.00	11.97
2	Coir Fibre	1120.75	142.44	1350.45	186.03
3	Coir Rugs & Carpet	1684.56	1071.36	1727.34	1002.64
4	Coir Pith	29179.35	1975.92	43420.54	3042.41
5	Coir Rope	308.88	111.46	299.67	116.91
6	Coir (other sorts)	490.21	196.90	502.40	199.38
7	Coir Yarn	12364.43	3498.71	10987.59	3358.16
8	Coir Geo-textiles	2599.54	1184.74	2323.19	1049.76
9	Handloom Mat	36303.89	22133.69	40127.35	25129.27
10	Powerloom Mat	1026.28	672.13	1433.22	931.16
11	Tufted Mat	11772.50	6359.52	16502.27	9499.05
12	Handloom Matting	4545.56	2838.66	3516.90	2334.04
13	Powerloom Matting	309.04	215.44	186.94	138.92
14	Rubberised Coir	461.78	334.67	475.92	340.57
	Total	102253.41	40749.66	122926.78	47340.27

Source : Coir Development Department, Tvpm.

Appendix 8.35

Foregin Exchange Earnings of India from Cashew Industry

(Rs. Crore)

Year	Export Value		Total	Import Value of Cashewnuts	Net Foreign Exchange earned
	Cashew Kernels	Cashewnut shell liquid			
1	2	3	4	5	6
2000-2001	2049.60	3.89	2053.49	960.84	1092.65
2001-2002	1788.68	5.93	1794.61	949.25	844.60
2002-2003	1933.02	9.26	1942.28	1236.57	705.71
2003-2004	1804.43	7.03	1811.46	1400.93	410.53
2004-2005	2709.24	7.91	2717.15	2183.26	533.89

Source: Cashew Export Promotion Council, Kochi

Appendix 8.36

Import of Raw Cashewnuts into India

Year	Kerala*		India	
	Quantity (MTs)	Value (Rs. crores)	Quantity (MTs)	Value (Rs. crores)
1	2	3	4	5
2000-01	152516	552.74	249318	960.84
2001-02	191579	502.46	355443	949.25
2002-03	249970	772.47	400659	1236.57
2003-04	294552	909.45	452398	1400.93
2004-05	283149	1055.08	578884	2183.26

* Import through Cochin Port

Source: Cashew Export Promotion Council, Kochi.

Appendix 6.37

Production, Sales, Employment, and Wages paid during 2003-04 & 2004-05

(Rs. Lakh)

Sl. No.	Name of Industry	Value of production		Value of sales		Employment(Nos)		Wages paid	
		2003-04	2004-05	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10
I	Khadi	494.46	479.10	1130.53	1152.24	4880	4919	311.99	350.68
II	Village Industries								
1	Cottage Match	995.00	1001.70	1000.00	1008.30	6592	6570	410.00	412.10
2	Agarbathy	256.00	252.90	265.00	267.80	1394	1379	72.00	87.86
3	Village Leather	1674.00	1558.00	1747.00	1684.00	1605	1572	370.00	197.50
4	Fibre & Screwpine	551.00	551.70	552.00	554.95	57198	57161	463.50	445.10
5	Rubber based industry	1723.00	1750.00	2221.00	2227.00	1608	1613	233.00	280.80
6	Handmade paper	323.00	323.00	346.00	345.00	481	482	61.00	67.80
7	Village pottery	1964.00	1968.00	2407.00	2412.00	21050	21029	800.00	825.50
8	Gurkhandasari	182.00	167.50	181.00	170.30	2050	1820	74.00	162.50
9	Service Industry	425.00	436.00	440.00	436.00	920	923	350.00	390.80
10	Non-edible oil & Soap	814.00	562.00	969.00	855.00	1202	1179	123.00	124.40
11	Village oil	1372.00	1358.00	1610.00	1609.00	1050	1023	172.00	179.00
12	Textile	1009.00	1014.50	1014.00	1023.00	8142	8124	390.00	449.50
13	Palmgur	194.00	190.00	193.00	186.50	8130	8094	83.00	628.70
14	Bee-keeping	222.85	231.20	284.00	288.38	17754	17739	151.50	160.70
15	Processing of cereals & pulses	766.00	765.00	776.00	788.50	14450	14438	669.00	660.70
16	Ayurvedic medicines	168.00	169.00	175.00	180.50	1088	1087	34.00	87.20
17	Fruits & Vegetable Preservation	549.00	547.00	560.00	553.00	3104	3085	170.00	181.70
18	Lime	1586.00	1618.50	1596.00	1651.50	9095	9075	783.00	843.00
19	Cane & Bamboo	239.00	238.70	243.00	245.70	3118	3109	155.00	158.00
20	Carpentry & Blacksmithy	1712.00	1730.50	1738.00	1743.50	6405	6389	1140.00	1078.60
21	Aluminium industry	687.00	680.20	700.00	683.20	880	868	140.00	178.30
22	Electronics	363.00	370.50	380.00	381.00	880	871	46.00	63.00
23	Polyvastra	64.25	55.13	71.77	100.86	725	710	50.84	45.16
24	PVC	140.00	148.70	141.00	150.60	226	227	28.00	32.20
	Total II	**17979.10**	**17890.73**	**19609.77**	**19535.59**	**167147**	**166887**	**6968.84**	**7720.11**
	Grand Total	**18473.56**	**18169.83**	**20740.30**	**20687.83**	**172007**	**171586**	**7280.83**	**8070.79**

Source: Khadi & Village Industries Board, Thiruvananthapuram

Appendix 8.38

Districtwise number of sales outlets & sales under KVIB during 2004-05

Sl. No.	Name of project	No. of sales outlets	Sales during 2004-05 (Rs. Lakh)
1	Thiruvananthapuram	21	63.77
2	Kollam	19	63.14
3	Pathanamthitta	12	15.71
4	Alappuzha	18	48.03
5	Kottayam	17	59.02
6	Idukki	4	14.65
7	Ernakulam	11	128.17
8	Thrissur	17	31.07
9	Palakkad	18	64.33
10	Malappuram	12	18.21
11	Kozhikkodu	29	99.27
12	Payyannur Khadi Centre	45	365.61
	Total	**223**	**970.98**

Source: Khadi & Village Industries Board, Thiruvananthapuram.

Appendix 8.39

Physical Achievement under Sericulture for the year 2003-04 & 2004-05

Sl. No.	District	Mulberry Cultivation (acres) (Cumulative)		No. of farmers (Cumulative)		DFLs supplied (Nos.)		Cocoon Production (in Kg.)		Silk production (in Kg.)	
		2003-04*	2004-05	2003-04*	2004-05	2003-04*	2004-05	2003-04*	2004-05	2003-04*	2004-05
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	19.35	20.00	36	27	4220	2175	772.35	460.90		
2	Kollam	37.05	39.05	45	71	5965	6395	1645.80	2038.00		
3	Pathanamthitta	25.90	21.85	46	38	4095	4610	1093.35	1502.00		
4	Alappuzha	36.25	22.75	58	41	6275	6385	1535.63	2103.71	1394.20	1247.73
5	Kottayam	37.15	25.00	68	42	5070	5350	1602.95	1671.25		
6	Ernakulam	30.55	20.95	70	37	11340	12095	4236.48	4520.44		286.62
7	Idukki	121.75	111.52	142	204	11350	11620	4405.10	4457.45		
8	Thrissur	33.85	20.15	64	29	21645	28200	10022.70	13741.75		
9	Palakkad	56.25	48.80	62	52	21265	27450	9338.63	11625.08	974.08	911.80
10	Malappuram	30.10	30.00	54	58	17275	28975	6739.05	11435.25		
11	Kozhikkodu	30.05	25.85	42	45	4340	8390	1789.90	2469.25		
12	Kannur	32.30	16.25	68	30	17460	17575	7090.25	8141.10		
13	Wayanad	50.90	41.00	59	50	19500	22365	7725.50	10541.80		
14	Kasaragod	25.15	16.75	38	24	5845	9430	2037.40	4007.80	1673.50	1665.38
	Total	**568.70**	**453.92**	**850**	**748**	**156645**	**187035**	**60035.29**	**78715.78**	**4041.76**	**4111.53**

* Revised

Source: SERIFED, Thiruvananthapuram.

Appendix 8.40

Kerala State Industrial Development Corporation - Physical & Financial Performance 2004-05

(Rs. Crores)

Sl. No.	Particulars	2004-05
A	**Physical**	
1	Projects Completed	
a.	No. of projects	11
b.	Aggregate cost	30
c.	Employment (Nos.)	401
2	Projects under implementation (31.03.2005)	
a.	No. of projects	28
b.	Aggregate cost	670
c.	Employment (Nos.)	1731
3	Projects cleared by KSIDC Board	
a.	No. of projects	25
b.	Aggregate cost	192
c.	Employment (Nos.)	1467
4	MOU signed with private parties	
a.	No. of projects	3
b.	Estimated aggregate cost	8450
B	**Financial**	
a	Gross sanction	91
b	Disbursement	24
c	Recovery	55
d	Operating profit	13

Source : Kerala State Industrial Development Corporation Thiruvananthapuram

Appendix 8.41

Kerala Financial Corporation: Loan Operations as on 31.3.2005

(Rs.Lakhs)

Sl.No	Particulars	During the year 2004-05						Since Inception upto 31.3.2005					
		S.S.I		Others		Total		S.S.I		Others		Total	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Application pending as on 1.4.2004	13	375.4	8	762.0	21	1137.4	0	0.00	0	0.00	0	0.00
2	Application Received during 2004-05	248	6406.35	220	12413.64	468	18819.99	29116	201881.60	18502	176340.03	47618	378221.63
3	Total application for consideration	261	6781.75	228	13175.64	489	19957.39	29116	201881.60	18502	176340.03	47618	378221.63
4	Application withdrawn rejected or otherwise disposed off	20	1324.12	37	3327.89	57	4652.01	4378	32798.50	1533	24084.92	5911	56883.42
5	Application Sanctioned (Gross)	214	3952.5	173	7028.76	387	10981.26	23507	140018.02	17007	143486.55	40514	283486.57
6	A. Application cancelled/reduced out of current year's sanction	1	13.48	1	1	2	30.48	0	0.00	0	0.00	0	0.00
	B. Application cancelled/reduced out of previous year's sanction	16	2683.81	6	889.86	22	3573.67	0	0.00	0	0.00	0	0.00
	C. Total cancellation/ reduction (6A+B)	17	2697.29	7	906.86	24	3604.15	3127	19905.14	1350	10079.26	4477	29984.40
7	Application sanctioned effectively (5-6A)	213	3939.02	172	7011.76	385	10950.78	0	0.00	0	0.00	0	0.00
8	Net Sanctions (5-6C)	197	1255.21	166	6121.9	363	7377.11	20673	119912.88	15669	133489.29	36382	253402.17
9	Amount disbursed along with number of newly assisted units	187	4096.58	155	4451.26	342	8547.82	21164	109768.50	15077	106830.04	36241	216598.54
10	Application pending sanction as on at the end of the period	27	1505.13	18	2818.99	45	4324.12	0	0.00	0	0.00	0	0.00

Source Kerala Financial Corporation, Tvpm.

Appendix 8.42

District-wise details of Disbursement of Loan by KFC 2004-05

(Rs.lakhs)

Particulars		Effective Sanction		Disbursement					
				SSI		Others		Total	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10
Backward Districts									
Category - A									
	Idukki	7	104.60	1	6.80	3	54.52	4	61.32
	Wayanad	14	117.91	5	62.75	9	56.56	14	119.31
Category - B									
	Alappuzha	14	331.90	10	133.13	6	103.57	16	236.70
	Malappuram	38	897.64	21	233.29	16	325.12	37	558.41
	Kannur	16	218.55	6	60.23	3	130.01	9	190.24
	Kasaragod	8	50.30	4	24.95	4	46.47	8	71.42
Category - C									
	Thiruvananthapuram	26	2101.36	8	163.82	13	843.66	21	1007.48
	Thrissur	78	2193.59	44	915.85	24	820.42	68	1736.27
	Total	**201**	**6016.15**	99	**1600.82**	78	**2380.33**	**177**	**3981.15**
Non Backward Districts									
	Pathanamthitta	9	693.50	6	165.05	4	87.49	10	252.54
	Kollam	29	465.50	13	138.53	18	568.68	31	707.21
	Kottayam	17	267.91	5	111.85	8	196.54	13	308.39
	Ernakulam	43	1756.87	17	1383.96	17	331.16	34	1715.12
	Perumbavoor	18	320.06	12	190.14	6	75.30	18	265.44
	Palakkad	17	543.64	12	176.44	3	199.40	15	375.84
	Kozhikode	37	536.49	21	325.77	13	267.48	34	593.25
	Thodupuzha	14	128.56	2	4.00	8	344.88	10	348.88
	Total	**184**	**4934.63**	88	**2495.74**	77	**2070.93**	165	**4566.67**
GRAND TOTAL		**385**	**10950.78**	187	**4096.56**	155	**4451.26**	342	**8547.82**

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.43

Industry-wise Classification of Loan sanctioned and Disbursed by the Kerala Financial Corporation as on 31-3-2005 (Rs. Lakh)

Sl.No	Type of Industry	Amount Sanctioned	% of total loans sanctioned	Amount disbursed	% of total loan Disbursed
1	2	3	4	5	6
1	Mining	8849.44	3.27	7557.52	3.46
2	Crude Petroleum	264.39	0.10	119.73	0.05
3	Petroleum Refining	13.37	0.00	11.31	0.01
4	Other Food Products	21764.23	8.03	19954.74	9.13
5	Textiles	7681.30	2.83	5146.30	2.35
6	Paper & Paper Products	5942.48	2.19	5092.08	2.33
7	Leather & Leather Products	566.33	0.21	544.40	0.25
8	Rubber Products	18412.19	6.79	15138.96	6.93
9	Chemical & Chemical Products	6991.67	2.58	5745.33	2.63
10	Cement	110.20	0.04	84.07	0.04
11	Basic Metals				
	a) Iron & Steel	4564.46	1.68	2449.02	1.12
	b) Non Ferrous	773.11	0.29	603.58	0.28
12	Metal Products	6110.63	2.25	4005.76	1.83
13	Capital Goods				
	a) Non-Electrical Machinery	2002.09	0.74	1754.96	0.80
	b) Electrical Machinery	2501.81	0.92	2051.78	0.94
	c) Transport Equipment	1574.82	0.58	1038.52	0.48
14	Electricity Generation	114.04	0.04	35.24	0.02
15	Services				
	a) Motels & Shopping Complex	62893.88	23.21	48448.03	22.18
	b) Hospitals	11915.38	4.40	8536.53	3.91
	c) Others	44007.94	16.24	42600.92	19.49
16	Others	63973.85	23.60	47669.76	21.81
	Total	271027.61	100.00	218598.54	100.00

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.44

Progress of the Working of Kerala Financial Corporation at a Glance

(Rs.lakh)

Year	Loans sanctioned cumulative*	Loans disbursed cumulative*	Loans - outstanding*	Profit before taxation	Profit after taxation
1	2	3	4	5	6
1995-96	23729	13975	50919	979	694
1996-97	21550	18861	81549	1453	1070
1997-98	26035	19944	73731	1148	900
1998-99	20969	19129	82850	1148	922
1999-00	17612	14971	91020	719	520
2000-01	29246	22689	104730	1801	1354
2001-02	16382	17594	120309	105	82
2002-03	15573	11231	113738	115	89
2003-04	16958	11902	113071	953	744
2004-05	10581	8548	177136	53	40

* Revised

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.45

Selected Indicators of the Activities of SIDCO

Sl. No.	Activities	Unit	2003-04
1	2	3	4
1	**Raw Material Distribution**		
1.1	SSI units assisted for procurement of raw materials	Nos	2400
1.2	Quantity of Raw Materials Distributed		
a	Iron and Steel including pig iron	M.T	4556.000
b	Cement	M.T	1345.000
c	Coal	M.T	...
d	Paraffin wax	M.T	965.305
e	Titanium Dioxide	M.T	43.525
f	Others		
	i) Pipe	Mtrs	429.740
	ii) IPCL	M.T	690.250
	iii) Aluminium sheet	M.T	...
	iv) IOC products		
a	Lubricants	Litre	21756.500
b	Bitumen	M T	4077.026
2	**Over dues**		
a	No of Units	Nos.	...
b	Amount of over dues	Rs. Lakhs	...
3	**Marketing of SSI products**		
3.1	SSI Units assisted in marketing of products	Nos	72/month
3.2	Value of SSI products marketed through SIDCO		
a	Domestic	Rs Lakhs	1533
b	Export	Rs. Lakhs	Nil
c	Total	Rs. Lakhs	1533
4	**Industrial Estates & Infrastrucutre Development**		
4.1	Major Estates		
a	Major Estates	Nos	17
b	Sheds available	Nos	527
c	Shed occuiped	Nos	503
d	SSI Units	Nos	769
	i. Working	Nos	692
	ii) Defunct, Idling or closed	Nos	77

Source: SIDCO, Thiruvananthapuram

Figures for 2004-05 are not available.

Appendix - 8.46

Small Industries Service Institute (SISI) - Achievement during 2004-05

Sl.No	Name of Activity	Unit	Achievement
1	2	3	4
1	Units visited for providing technical assistance	Nos	325
2	Visitors rendered assistance at SISI premises		
	a. Assistance to prospective entrepreneurs	Nos	2114
	b. Assistance to existing entrepreneurs	Nos	325
3	Preparation of State profile	Nos	1
4	Preparation of Status Reports for Kerala	No. of products	4
5	Project Profiles	Nos	34
6	Ancillary Development Programmes		
a	Ancillary Project Profile	Nos	5
b	Vendor Development Programme	Nos	1
7	Awareness Programmes Conducted	Nos	6
8	Motivation campaigns	Nos	24
9	EDPs - 4/6 weeks duration		
i	Courses undertaken	Nos	22
ii	Persons trained	Nos	484
10	Management Development Programmes		
i	Courses undertaken	Nos	11
ii	Persons trained	Nos	284
11	Common Facility Workshop/Lab performance		
i	Training (including skill development programme)	Nos	17
ii	Persons trained	Nos	173
12	Self-financing Programmes		
a	Programmes organised	Nos	10
b	Persons trained	Nos	321
13	No of units registered under KSX	Nos	23
14	Revenue earned by SISI	Rs. Lakhs	18.06

Source : Small Industries Service Institute, Trissur.

Appendix - 8.47

Small Industries Development Bank of India's Assistance to Small Scale Industries

(Rs. Crore)

year	Sanction and Disbursement				Performance of Kerala as % of All India	
	All India		Kerala			
	Sanction	Disbursement	Sanction	Disbursement	Sanction	Disbursement
1	2	3	4	5	6	7
2000-2001	10821	6441	556	389	5.14	6.04
2001-2002	9026	5919	535	396	5.93	6.69
2002-2003	10904	6789	614	214	5.63	3.15
2003-2004	8246	4414	162	133	1.96	3.00
2004-2005	9091	6188	221	142	2.43	2.29

Source : SIDBI, Ernakulam

Appendix 8.48

DA/DP under DIC as on 9/2005

District	Name of DA/DP	Total area acquired (acres)	Allotable area (acres)	Area allotted (acres)	No. of working units	No. of closed units	Total no. of units
2	3	4	5	6	7	8	9
Thiruvananthapuram	DA, Veli	109.63	89.28	89.28	94	15	109
	DP, Mamala	27.53	22.69	22.68	43	8	57
Kollam	DP, Mundakkal	20.667	18.06	18.05	43	10	53
Alappuzha	DA, Kolakkadavu	16.22	15.47	15.47	34	6	40
	DP, Chengannur	5.51	4.28	4.28	19	4	23
	DA, Punnapra	57.28	53.00	53.00	51	2	53
	DA, Coir Park-I, Cherthala	23.40	21.20	21.10	10	2	12
	DA, Coir Park-II, Cherthala	17.06	16.54	16.54	3	..	3
	CIE, Aroor	15.80	12.33	12.33	18	1	19
	DA, Aroor	47.17	41.78	41.78	46	2	48
Kottayam	DP, Poovarthuruth	41.25	37.39	37.39	189		189
	DP, Athirampuzha	1.00	0.86	0.86	10		10
	DP, Vaikom	3.75	3.27	3.27	11	3	14
Pathanamthitta	DP, Kurnamthanam	20.94	15.62	15.50	1	.	1
Idukki	DA, Muttom	5.00	4.58	4.58	10	3	13
	DP, Thudangared	17.50	17.50	2.50	..	..	..
Ernakulam	DA, Aluva	64.41	59.15	59.15	75	15	90
	DA, Edayar	435.24	376.70	376.70	263	55	318
	DA, Angamaly	219.52	214.52	214.52	14	13	27
	DA, Vazhakkulam	15.28	12.16	12.16	26	17	43
	DP, Angamaly	31.91	26.52	26.52	51	9	60
	DP, Kalamassery	78.12	64.74	64.74	146	32	178
Thrissur	DP, Athani	48.286	43.28	43.28	71	13	84
	DP, Kunnamkulam	3.035	2.10	2.10	19	4	23
	DP, Puzhakalpadam	--	--	--	--	--	--
	DP, Ayyanthole	24.07	20.87	.	--	--	.
	DP, Velakkod	24.066	21.94	5.00	..	--	..
Palakkad	DP, Pudussery	134.15	125.98	125.98	48	12	60
	DA, Kanjikod	532.80	513.44	512.66	264	22	286
	DA, Umminkulam	50.96	40.00	1.30	..	--	..
Malappuram	FIE, Palayangadi	16.19	6.59	6.59	16	..	16
Kozhikkode	DP, West Hill	12.63	10.33	10.33	31	3	34
Kannur	DP, Andoor-I	21.31	17.98	17.98	13*	28	157
	DP, Andoor-II	38.80	28.63				
Kasaragod	DA, Ananthapuram	108.00	103.83	22.23	2	4	6
	DP, Ananthapuram	134.60	97.69	66.32	2	11	13
	DP, Chedanchal	28.54	25.66	25.02	5	1	6
		2460.76	2166.15	1951.22	1752	293	2045

Appendix 8.49

Mini Indusatrial Estates under DICas on 9/2005

District	No. of industrial estates	Total No.of SSI units	No. of working units	No. of employees	No. of sheds allotted in working units	Total No. of sheds
1	2	3	4	5	6	7
Thiruvananthapuram	6	35	50	200	60	60
Kollam	5	42	31	111	50	50
Pathanamthitta	2	20	15	31	20	20
Alappuzha	6	54	58	196	60	60
Kottayam	10	100	90	489	100	100
Idukki	4	35	29	104	40	40
Ernakulam	11	110	109	410	137	137
Thrissur	7	86	37	140	67	67
Palakkad	6	41	51	153	61	61
Malappuram	4	34	33	113	40	40
Kozhikode	8	80	67	281	80	80
Kannur	4	23	26	67	31	31
Kasaragod	5	22	24	84	40	40
Total	**78**	**682**	**620**	**2379**	**785**	**785**

Source. DIC. Tvpm.

Appendix 8.50

Major Industrial Estates under SIDCO

District	Name of Industrial Estate	Total area acquired (Acres)	Allotable area (acres)	Total area allotted (acres)	No.of working Units	No of closed Units	Total No. of Units
1	2	3	4	5	6	7	8
Thiruvananthapuram	Peppanamoode	18.5397	13.7549	13.2789	53	13	66
Kollam	Umayanallur	26.0343	21.8233	19.4533	51	7	58
	Karunagappally	8.7000	8.0981	5.5151	10	2	12
Alappuzha	Cherthala	8.9378	6.5478	6.5478	17	1	18
	Kottakadavu	19.4387	12.5887	10.0159	37	7	44
Kottayam	Changanacherry	13.2478	10.8983	10.8390	69	0	69
	Ettumanoor	30.5664	22.0326	21.6471	69	0	69
Ernakulam	Palluruthy	1.8600	1.4521	1.4521	7	1	8
	Mudickal	4.5851	4.1474	4.0773	16	1	17
Trissur	Ollur	27.5025	24.0725	23.2425	110	16	126
	Kalletumkara	5.0099	2.9299	2.8299	12	5	17
Palakkad	Karakkad	10.9600	7.7088	7.3088	38	1	39
	Olavakkod	21.9300	14.3369	10.5948	37	6	43
Malappuram	Manjeri	4.9200	4.2681	4.2681	21	4	25
Kozhikkode	West hill	12.435'	9.1331	9.1331	56	4	60
Kannur	Palayad	8.4200	8.1540	7.8740	40	7	47
Kasaragod	Kasaragod	16.8423	12.5923	11.5923	49	2	51
	TOTAL	**239.9296**	**184.5386**	**169.6700**	**692**	**77**	**769**

Appendix 8.51

Mini Industrial Estates under SIDCO

Sl. No.	District	Name of Industrial Estate	Total area of IE (Acres)	Total area allotted (acres)	No.of working Units	No. of closed Units	Total no. of Units
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	Ulloor	0.9413	0.9413	5	6	11
2		Vellanad	0.7638	0.7638	5	1	6
3		Anad	1.0000	0.9999	8	1	9
4		Varkala	1.0000	1.0000	7	0	7
5	Kollam	Chithara	1.0000	0.5294	3	1	4
6		Thrikovilvattom	1.0000	0.5137	2	5	7
7		Chadayamangalam	0.8300	0.4559	4	1	5
8	Alappuzha	Kadakarapally	1.2500	1.2499	8	1	9
9		Mararikulam	1.0600	1.0600	5	3	8
10	Pathanamthitta	Pandalam	1.0000	0.9000	4	4	8
11	Kottayam	Nattakam	1.0000	0.3756	10	0	10
12		Pampady	1.0000	0.6453	6	0	6
13		Ayarkunnam	1.0000	1.0000	8	1	9
14	Ernakulam	Edathala	0.7000	0.7000	8	0	8
15		Piravom	1.0000	1.0000	5	4	9
16		Kothamangalam	1.0000	1.0000	2	7	9
17		Rayamangalam	1.0000	1.0000	8	1	9
18		Vazhakulam	1.0000	1.0000	8	3	11
19	Idukki	Kodikulam	1.0000	0.5900	4	0	4
20		Adimali	1.0000	0.3850	5	0	5
21		Olamattom	0.7998	0.7656	7	0	7
22	Thrissur	Mala	1.0000	1.0000	9	0	9
23		Kattoor	1.0000	1.0000	10	0	10
24		Arimbur	1.0000	1.0000	10	1	11
25	Palakkad	Pattambi	1.4000	1.4000	9	0	9
26		Vaniyamkulam	1.0000	1.0000	11	0	11
27		Ottapalam	1.0000	1.0000	10	1	11
28	Malappuram	Edavanna	1.2060	1.0913	6	1	7
29		Kokkur	0.9300	0.8448	7	1	8
30		Oorakam	1.1069	1.0632	8	1	9
31	Kozhikode	Perambra	1.0000	0.6000	9	1	10
32		Kadalundi	1.0000	1.0000	9	1	10
33	Wayanad	Sulthan Bathery	1.0000	1.0000	11	0	11
34	Kasaragod	Thaliparambu	1.0000	1.0000	10	0	10
35		Beliyapattom	1.0000	1.0000	8	0	8
36		Kanhangad	1.0000	1.0000	7	2	9
Total			35.9877	31.8747	256	48	304

Source: SIDCO

Appendix 8.52

Total Area Covered by Mining Leases

Sl. No.	Minerals	Area in Hectares
1	Clay	16 4498
2	Silica Sand	9.8358
3	Bauxite	0
4	Limeshell	94.5
5	Limestone	0
6	Mineral Sand	0
7	Quartz	0
	Total	120.7854

Source : Directorate of Mining & Geology

Appendix 8.53

Production and Sale of Major Minerals other than Mineral Sand in Kerala 2004-05

(In Tonnes)

Sl. No.	Mineral	Production		Sales		Consumption
		Raw	Processed	Raw	Processed	
1	2	3	4	5	6	7
1	China Clay	196720	316575	196720	316575	...
2	Silica Sand	107299	...	85878	...	...
3	Bauxite	37444	...	37444	...	...
4	Limeshell	86928	...	59317	...	27611
5	Limestone	385735	...	...	...	385735
6	Quartz	1100	...	1100	...	...

Source : Directorate of Mining & Geology

Appendix 8.54

Production and Sale of Mineral Sand in Kerala - 2004-05

Sl. No.	Mineral	Production (Tonnes)	Sales (Tonnes)	Consumption (Tonnes)
1	2	3	4	
1	Zircon	9863	9863	Not Available
2	Rutile	8881	...	8881
3	Ilmenite	138224	...	138224
4	Sillimanite	7158	7158	Not Available
5	Brown Ilmenite	..	...	..

Source : Directorate of Mining & Geology

Appendix 9.1
Growth of Foreign Tourist Arrivals in India and Kerala (2000-04)

Year	India (Nos.)	Percentage change over previous year	Kerala (Nos)	Percentage change over previous year	Kerala's share (%) in country's torukm
1	2	3	4	5	6
2000	2624259	--	209893	--	7.99
2001	2537282	-3.31	208830	-0.53	8.23
2002	2384364	-6.03	232564	11.37	9.75
2003	2726214	14.34	294621	26.68	10.81
2004	3367980	23.54	345546	17.28	10.26

Source: Department of Tourism

Appendix 9.2
Flow of Domestic Tourist to Kerala (2000 –2004)

Year	Number of Tourist	Percentage Variation over the previous year
1	2	3
2000	5013221	2.56
2001	5239692	4.52
2002	5568256	6.27
2003	5871228	5.44
2004	5972182	1.72

Source: Department of Tourism

Appendix 9.3
District wise Foreign and Domestic Tourist Arrivals during 2003 & 2004

SL No.	District	No. of foreign Tourist		No. of Domestic Tourist	
		2003	2004	2003	2004
1	2	3	4	5	6
1	Thiruvananthapuram	94835	103558	865048	855787
	Kollam	8620	8242	101890	100729
	Pathanamthitta	287	330	68014	64640
	Alappuzha	26157	38024	172119	185906
	Kottayam	21897	23517	162779	163084
	Ernakulam	99987	109344	1001938	1043479
	Idukki	31831	46031	420960	482283
	Thrissur	2667	2658	1390491	1378118
	Plakkad	661	947	271169	256015
	Malappuram	1402	3129	295102	297203
	Wayanad	621	749	202909	187701
	Kozhikode	3529	4702	461814	498931
	Kannur	1438	2516	319338	323645
	Kasaragod	689	1799	137657	134661
	TOTAL	**294621**	**345546**	**5871228**	**5972182**

Source: Department of Tourism

Appendix 9.4
Earnings from Tourism (2000-04)

(Rs. Crores)

Year	Foreign Exchange Earnings	Earnings From Domestic Tourists	Total Revenue Generated from Tourism (Direct and Indirect)
2000	525.30	2222.36	4000.00
2001	535.00	2561.16	4500.00
2002	705.67	3011.31	4931.00
2003	983.37	3492.68	5938.00
2004	1266.77	3881.92	6829.00

Source: Department of Tourism

Appendix 9.5
Details of Availability of Accommodation Facility in classified Hotels 2003 and 2004

Category of Hotels	2003		2004	
	Number of hotels	Number of Rooms	Number of hotels	Number of Rooms
1	2	3	4	5
5 Star Deluxe	2	246	2	252
5 Star	5	373	7	469
4 Star	9	456	15	862
3 Star	66	2363	61	2059
2 Star	40	1109	78	2241
1 Star	11	268	31	852
Heritage Resort	9	234	10	276
Total	**142**	**5049**	**204**	**7011**

Source: Department of Tourism

Appendix 9.6
State Plan allocation for Tourism (2001-05).

Year	Allocation (Rs. Crores)
2001-02	40.00
2002-03	64.30
2003-04	61.35
2004-05	69.29
2005-06	74.25

Source: Department of Tourism

Appendix 9.7
Central Financial Assistance for Tourism (2001-05)

Year	Allocation (Rs crores)
2001-02	5.45
2002-03	9.11
2003-04	12.39
2004-05	21.99

Source: Department of Tourism

Appendix 9.6

Kerala Tourism Development Corporation Ltd. - Performance for the year 2004--2005

(Amount Rs. in lakhs)

Sl.No.	Name of Units	Bed Available	Bed Occupancy %	Domestic Tourists	Foreign Tourists	Total Income	Operational Expenditure before Interest and Depreciation	Administrative Expenditure	Total Expenditure before Interest Depreciation	Net Income
1	2	3	4	5	7	8	9	10	11	12
1	Mascot Hotel, TVM.	35280	56.68	2889	684	399.39	382.65	13.00	395.65	3.74
2	Hotel Chaithram, TVM.	63360	49.00	20629	878	244.47	239.84	6.00	245.84	-1.37
3	Hotel Samudra, Kovalam	46080	28.60	3816	1324	252.42	195.54	7.02	202.56	49.86
4	Aranya Nivas & Lake Palace,Thekkady	25920	32.93	5178	4160	418.94	166.62	6.16	172.78	246.16
5	Periyar House, Thekkady	31680	43.77	11505	1678	98.75	82.78	1.72	84.5	14.25
6	Bolgatty Palace Hotel, Kochi.	18720	33.26	2284	1360	179.90	148.79	4.14	152.93	26.97
7	Garden House, Malampuzha	11520	20.86	3500	25	42.17	37.84	1.00	38.84	3.33
8	Hotel Nandanam, Guruvayoor	29520	27.91	5600	5	30.69	33.93	0.80	34.73	-4.04
9	Mangalya, Guruvayur	12960	40.71	5685	0	65.51	47.42	5.63	53.05	12.46
10	Water Scapes,Kumarakom	29280	31.67	8690	1071	235.00	198.06	8.33	206.39	28.61
11	Malabar Mansion, Kozhikode.	18720	39.72	2600	250	84.44	75.34	3.54	78.88	5.56
12	Tea County, Munnar	30960	43.49	11734	1896	284.10	169.06	6.23	175.29	108.81
13	Anjanam, Guruvayur	7920	53.43	4500	0	5.58	2.45	2.27	4.72	0.86
14	Agasthya House,Neyyardam	2880	40.00	876	40	24.39	24.79	0.28	25.07	-0.68
15	Motel Arams	15840	56.82	2900	80	344.72	301.94	3.62	305.56	39.16
16	Yauri Nivases	58320	49.23	25115	1762	275.07	259.85	3.00	262.85	12.22
17	Sabala Resturants & Beer Parlours					832.21	720.15	28.82	748.97	83.24
18	Miscellaneous Group					242.83	213.00	14.51	227.51	15.32
19	Head Office					1.59	264.93	29.69	294.62	-293.03
	Grand Total	**438960**		**117503**	**15213**	**4062.17**	**3564.98**	**145.76**	**3710.74**	**351.43**
	Interest Charge									177.13
	Depreciation Charge									291.56
	Net Profit /(-) Loss									-117.26

Appendix 10.1

Growth of Transport & Communications in Kerala since 1999 compared to 1975

Sl. No.	Item	Unit	1975	1999	2000	2001	2002	2003	2004	2005
1	2	3	4	5	6	7	8	9	10	11
1	Road Length (PWD)	Kms.	14870	21938	21731	21508	21347	21487	21487	26269
2	Road Length (PWD) per sq.km	"	0.38	0.56	0.56	0.55	55	56	0.56	0.68
3	Road Length (Panchayats)	"	54812	77356	81790	87094	92084	95516	98973	104257
4	Motor Vechicles	Nos	110720	1708938	1910237	2111885	2315372	2552171	2792094	3122082
5	Motor Vechicles per 100 sq.km.	"	308	4397	4945	5434	5958	6587	7184	8033
6	Buses & Stage Carriages	"	7826	48664	58688	65681	71968	79713	87447	94486
7	Goods Vechicles	"	15875	151082	163443	173856	184178	195383	211798	234191
8	Buses owned by KSRTC	"	2212	3628	4093	4562	4421	4302	4319	4626
9	Railway route length	Kms	996	1198	1119	1148	1148	1148	1148	1148
10	Post Offices	Nos	4024	5061	5070	5071	5073	5077	5083	5082
11	Telephone Exchanges	"	286	850	924	988	1068	1179	1195	1218
12	Total Equipped Capacity	"	70410	1704395	2203954	2584238	3153413	3853413	4070934	4319958
13	Public Call Offices	"	2352	23485	27388	36926	48321	59444	81917	10414*

* Revised

Appendix 10.2

District-wise and Category-wise Length of Roads Maintained by PWD (R&B) as on 31-3-2005

(In Km)

Sl.No	Name of District	State Highways	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	169.360	1839.778	0.000	0.000	2009.138
2	Kollam	90.682	1579.657	0.000	0.000	1670.339
3	Alappuzha	138.121	1171.392	0.000	0.000	1309.513
4	Pathanamthitta	207.268	1388.453	0.000	0.000	1595.721
5	Kottayam	378.006	2212.887	0.000	0.000	2590.893
6	Idukki	880.593	1364.643	0.000	0.000	2245.236
7	Ernakulam	289.113	2143.992	0.000	0.000	2433.105
8	Thrissur	322.391	1476.324	0.000	0.000	1798.715
9	Palakkad	373.079	1564.650	0.000	0.000	1937.729
10	Malappuram	208.867	2098.319	0.000	0.000	2307.186
11	Kozhikode	160.833	1883.474	0.000	0.000	2044.307
12	Wayanad	97.165	705.757	0.000	0.000	802.922
13	Kannur	241.754	2022.329	0.000	0.000	2264.083
14	Kasaragode	227.485	1032.933	0.000	0.000	1260.418
	Total	**3784.717**	**22484.588**	**0.000**	**0.000**	**26269.305**

Source : P.W.D. (R & B)

Appendix 10.3

District-wise, Surface-wise & Category-wise length of roads maintained by Kerala PWD as on 31-03-2005

Sl. No.	District	State Highways				Major District Roads				Total Roads
		CC	BT	WBM	Others	CC	BT	WBM	Others	
1	2	3	4	5	6	7	8	9	10	19
1	Thiruvananthapuram	--	169.360	--	--	--	1796.560	12.978	30.240	2009.138
2	Kollam	--	90.682	-	--	--	1572.760	6.897		1309.513
3	Alappuzha	--	138.121	--	--	--	1096.514	39.785	35.293	1309.513
4	Pathanamthita	--	207.268	--	--	--	1339.290	29.650	19.513	1595.721
5	Kottayam	--	378.006	--		--	2109.780	25.640	77.467	2590.893
6	Idukki	--	760.543	--	120.050		1144.386	22.407	197.850	2245.236
7	Ernakulam	--	289.113	--		0.464	1974.632	60.715	108.645	2433.105
8	Thrissur	3.391	319.000	--	--	--	1461.234	15.000	..	1798.715
9	Palakkad	--	328.479	1.250	44.600	--	1504.960	40.690	19.000	1937.729
10	Malappuram	--	298.867	--	--	--	1945.179	122.650	30.490	2307.186
11	Kozhikkode	.	160.833	--	7.540	--	1868.569	14.445		2044.307
12	Wayanad	--	89.675	2.000		--	661.975	23.600	20.182	802.922
13	Kannur	2.800	238.954	--	--		2017.943	4.386		2264.083
14	Kasaragode	--	198.820	--	28.665	--	967.650	25.150	40.133	1260.418
	Total	6.191	3577.671	3.250	200.855	0.464	21461.232	443.993	578.813	26269.305

Source : PWD (R&B)

Appendix 10.4

Surfa... and Category-wise Length of P.W.D. Roads added during 2004-2005

(in Kms.)

Item	State Highways	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6
Cement Concrete					
Length as on 31.3 2004	6.191	0.714(-)	0	0	6.905
Length added in 04-05	.	0.46	0	0	0.46
Length as on 31.3.2005	6.191	0.46	0	0	6.651
Black topped					
Length as on 31.3.04	3513.446	11471.298	0	0	14984.744
Length added in 04-05	64.225	9990.024	0	0	10054.249
Length as on 31.3.2005	3577.671	21461.322	0	0	25038.993
Water Bound Macadom					
Length as on 31.3.2004	3.250	51.268	0	0	54.518
Length added in 04-05	0.000	392.725	0	0	392.725
Length as on 31.3.2005	3.250	443.993	0	0	443.993
Others					
Length as on 31.3.04	261.83	187.984	0	0	449.814
Length added in 04-05	0	390.829	0	0	390.829
Length as on 31.3.05	200.855	578.813	0	0	779.668
Total					
Length as on 31.3.04	3784.717	11711.264	0	0	15495.267
Length added in 04-05	0.000	10744.038	0	0	10774.038
Length as on 31.3.05	**3784.717**	**11711.264**	0	**0**	**26269.305**

Source : PWD (R&B)

Appendix 10.5

District-wise and Surface-wise Length of Roads Maintained by P.W.D. as on 31.3.2005

(in Kms.)

Sl.No	Name of District	Cement Concrete	Black Topped	Water bound Mecadam	Others	Total
1	2	3	4			7
1	Thiruvananthapuram	-	1965.920	12.978	30.240	2009.138
2	Kollam	-	1663.442	6.897		1670.339
3	Alappuzha	-	1234.435	39.785	35.293	1309.513
4	Pathanamthitta	-	1546.558	29.650	19.513	1595.721
5	Kottayam	-	2487.786	25.640	77.487	2590.893
6	Idukki	-	1904.929	22.407	317.900	2245.236
7	Ernakulam		2263.745	60.715	108.645	2433.105
8	Thrissur	3.391	1760.324	15.000		1798.715
9	Palakkad	-	1833.439	40.690	63.600	1937.729
10	Malappuram	-	2154.046	122.650	30.490	2307.186
11	Kozhikode	0.460	2029.402	14.445		2044.307
12	Wayanad	-	751.600	23.600	27.722	802.922
13	Kannur	2.800	2256.897	4.386		2264.083
14	Kasaragode		1166.470	25.150	68.798	1260.418
	Total	**6.651**	**25038.993**	**443.993**	**779.688**	**26269.305**

Source : P.W.D. (R &B)

Appendix 10.6

No.of Bridges and Culverts in P.W.D. Roads as on 31.3.2005

Sl. No.	Item	SH	MDR	Total
1	2	3	4	7
1	Total Number of bridges	627	1552	2179
2	Number of unsafe bridges	60	88	148
3	Total Number of culverts	11512	39910	51422
4	Number of unsafe culverts	841	678	1519

Source P.W.D (R & B)

Appendix 10.7

District-wise details of vehicles newly registered in the State during the year 2004-2005 (Provisional)

Sl. No	District	Goods Vehicles		Buses		Cars and Station Wagons				Three wheelers		Two Wheelers		Tractors, Trailer Articulated	Tractors				Total
		Four wheelers & above	Three wheelers including Tempos	Stage carriages	Contract Carriages/ Omni Buses	Cars	Station wagons	Taxis	Jeeps	Auto rickshaws	Motorised Cycle rickshaws	Motorised cycles	Scooter/ Motor cycles		Tractors	Tillers	Trailers	Others	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Thiruvananthapuram	997	845	542	961	7453	0	505	2	1558	0	0	31555	0	8	0	2	247	44705
2	Kollam	801	905	63	442	4077	0	491	139	1229	0	0	18913	0	22	0	1	79	27262
3	Pathanamthitta	484	580	32	314	3082	0	310	0	396	0	0	9671	0	16	0	6	60	14953
4	Alappuzha	600	814	56	476	3511	0	649	1	706	0	0	18525	0	19	0	7	83	25447
5	Kottayam	884	678	76	560	4727	0	313	62	601	0	0	11932	0	24	2	17	55	20736
6	Idukki	357	210	47	109	739	0	198	40	673	0	0	2122	0	10	0	0	78	4576
7	Ernakulam	2235	1813	296	1020	9219	0	1696	39	2118	0	0	41270	0	74	14	22	466	60262
8	Thrissur	998	1503	130	678	4706	0	501	13	1576	0	0	26354	0	61	0	18	292	36830
9	Palakkad	771	387	141	609	1288	0	356	138	1593	0	0	11037	0	148	0	6	62	16536
10	Malappuram	1204	616	173	377	3078	0	786	43	3246	0	0	16190	0	46	0	9	129	25501
11	Kozhikode	852	705	102	246	2656	0	341	53	1436	0	0	19354	0	5	0	0	78	25837
12	Wayanad	147	127	13	36	333	0	103	13	222	0	0	2002	0	7	0	0	18	3021
13	Kannur	1219	950	195	311	3206	0	650	27	1406	0	0	10154	0	9	1	5	123	19251
14	Kasargode	238	291	18	40	1357	0	755	6	737	0	0	3734	0	5	40	0	49	8671
	Total	11797	10626	1847	8192	49372	0	6554	571	17696	0	0	222823	0	457	57	88	1928	330008

Source Motor Vehicle Department

Appendix 10.8

Number of Motor Vehicles Having Valid Registration as on 31.3.2005

Sl No	District	Goods Vehicles		Buses		Four Wheelers				Three Wheelers		Two Wheelers			Tractors				Total
		Four wheelers and above	Three wheelers including Tempos	Stage Carriages	Contract Carriages / Omni Buses	Cars	Station wagons	Taxis	Jeeps	Auto-rickshaws	Motorised Cycle rickshaws	Mopeds cycles	Scooters/ Motor cycles	Tractor Trailor Articulated	Tractors	Tillers	Trailers	Others	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Thiruvananthapuram	14607	7268	7397	9512	59342	-	11669	7132	34551	6	0	281376	0	213	85	138	3371	633458
2	Kollam	11954	3252	932	4163	41802	-	5239	4582	27373	73	1110	137610	0	347	233	333	568	239511
3	Pathanamthitta	9793	2688	864	2494	25162	-	8294	3470	13926	0	0	78645	0	144	187	43	835	145207
4	Alappuzha	7809	6651	1028	4082	28068	-	5046	564	13834	5	5	132890	0	240	108	252	1042	201743
5	Kottayam	13435	3874	2117	6269	44560	-	9079	11096	28490	31	0	129703	0	482	104	57	2769	251133
6	Idukki	3631	745	655	864	6731	-	1762	5239	5388	0	0	30406	0	202	114	11	1316	48044
7	Ernakulam	34813	8109	3918	8329	77255	-	12058	2078	37829	0	3	326488	0	819	1298	149	11247	525264
8	Thrissur	17851	7218	3933	10830	37274	-	10649	4155	30069	0	0	206725	0	683	433	809	3019	333598
9	Palakkad	12348	3015	2005	3961	14744	-	6356	3544	17690	0	0	111208	0	3829	935	87	1738	181608
10	Malappuram	19175	7314	3663	5264	25784	-	13045	8307	45998	2	5	109133	0	749	501	79	2349	238573
11	Kozhikode	14529	3995	2992	2515	37246	-	6751	8250	24678	0	0	149237	0	296	172	73	2784	252662
12	Wayanad	2387	819	431	386	3151	-	2497	3488	5874	0	0	18173	0	98	230	24	1679	39047
13	Kannur	11010	3091	2995	2864	17006	-	6509	8032	23352	0	0	84486	0	1336	253	99	1814	161150
14	Kasaragode	3265	1391	803	408	10173	-	1758	3078	14057	0	0	32833	0	41	634	57	706	68784
	Total	173110	61181	33738	61750	428327	0	100012	72222	320748	63	1124	1618790	0	9488	5037	2961	34607	3122062

Source : *Motor Vehicle Department*

Appendix 10.9

District-wise Growth of Motor Vehicles in Kerala and Their Index (Base 1990-91 =100)

Sl. No	District	1990-91		2000-01		2001-02		2002-03		2003-04		2004-05	
		Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvanatha-puram	101980	100	293199	287	320061	314	350455	344	389763	381	433488	425
2	Kollam	57694	100	152526	264	168907	293	189346	328	212249	368	239511	415
3	Pathanamthitta	35565	100	96241	271	106070	298	117704	331	131254	369	146207	411
4	Alappuzha	39545	100	125327	317	138551	353	157011	397	176298	446	201743	510
5	Kottayam	39758	100	183614	462	195400	494	213004	536	230897	581	251133	632
6	Idukki	12812	100	33477	261	36359	284	39721	310	43468	339	48044	375
7	Ernakulam	105622	100	369169	350	405561	384	446959	423	464922	468	525204	497
8	Thrissur	70831	100	220807	311	241500	341	266665	376	296763	419	333598	471
9	Palakkad	37623	100	123526	328	134854	358	151979	404	165072	439	181608	482
10	Malappuram	30671	100	157240	513	174504	569	192956	629	214127	698	239623	781
11	Kozhikode	55939	100	172387	308	190809	341	207117	370	227125	406	252962	452
12	Wayanad	8379	100	29737	355	31553	377	33550	400	36026	430	39047	466
13	Kannur	36540	100	108022	296	118115	323	129680	355	142899	392	161150	441
14	Kasaragode	14793	100	46814	316	50968	345	56022	378	62113	420	68784	465
	Total	**647742**	100	**2111885**	326	**2316372**	357	**2552171**	394	**2792074**	431	**3122082**	482

Source : Motor Vehicle Department.

Appendix 10.10

Category-wise Growth of Motor Vehicles in Kerala since 1999 compared to 1990

Sl. No	Type of Vehicles	1990	2000	2001	2002	2003	2004	2005
1	2	3	4	5	6	7	8	9
I	GOODS VEHICLES							
1	Four Wheelers and above	51530	135058	142168	146719	152802	161343	173110
2	Three Wheelers including Tempos	9576	28385	31688	37457	42561	50455	61081
II	BUSES							
1	Stage Carriages	15056	23537	25161	26899	29249	31889	33736
2	Contract Carriages/ Omni buses	5234	35351	40520	45067	50464	55558	61750
III	CARS AND STATION WAGONS							
1	Cars	116676	257796	282996	305887	336583	378955	428327
2	Station Wagons	849	0	0	0		0	0
3	Taxi Cars	37638	71581	75628	82236	88070	93458	100012
4	Jeeps	24351	67497	69261	70212	70864	71656	72227
IV	THREE WHEELERS							
1	Autorickshaws	58165	227895	248350	265767	285092	303092	320798
2	Motorised Cycle rickshaws	62	58	58	163	63	63	63
V	TWO WHEELERS							
1	Motorised Cycle	70	1124	1124	1124	1124	1124	1124
2	Scooter/ Motor Cycles	248374	1020797	1151735	1289035	1449283	1595937	1818760
VI	Tractor Trailer, Articulated	2661	0	0	0	0	0	0
VII	Tractors	4115	7782	8177	8459	8700	9002	9459
VIII	Tillers	1927	4763	4763	4979	4980	4980	5037
IX	Trailers	580	1506	1576	1771	1823	1913	2001
X	Others	4190	27107	28680	29897	30513	32679	34607
	Total	**581054**	**1910237**	**2111885**	**2315372**	**2552171**	**2792074**	**3122082**
	Per centage increase over the previous year	**11.03**	**11.78**	**10.56**	**9.63**	**10.23**	**10.58**	**11.6**

Source. Motor Vehicle Department

Appendix 10.11

District wise Road Accidents in Kerala in which number of persons affected during 2003-04, 2004-05

Sl.No	Name of District	No.of Accidents		Increases / Decreases %	No of Persons Injured		Increases/ Decreases %	No.of persons Killed		Increases / Decrease %
		2003-04	2004-05		2003-04	2004-05		2003-04	2004-05	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	5095	5379	-5.50	5800	6221	6.8	334	355	5.92
2	Kollam	3292	3314	-0.67	3776	3981	5.50	274	282	2.84
3	Pathanamthitta	1554	1643	-5 73	2105	2059	-2.23	109	120	9.17
4	Alappuzha	2967	3194	-7 65	3461	3719	6.94	228	246	7.32
5	Kottayam	3237	3005	7.17	3579	3568	-0.31	187	192	2.60
6	Idukki	1059	1111	-4.91	1106	1302	15.05	65	79	17.72
7	Ernakulam	7361	7687	-4.43	8408	8794	4 39	402	406	0.99
8	Trissur	4836	4629	4.28	5711	5788	1.33	311	324	4.01
9	Palakkad	2167	2321	7 11	3157	3403	7.23	267	284	5 99
10	Malappuram	2476	2677	-8.12	3830	4112	6.86	272	270	-0.74
11	Kozhikode	3309	3334	-0.76	3918	3824	-2.46	226	231	2.16
12	Wayanad	578	624	-7.96	1021	1015	-0.59	56	50	-12.00
13	Kannur	1594	1530	4.02	2468	2320	-6.38	137	144	4.88
14	Kasaragode	787	772	1.91	1162	1119	-3.84	75	76	1.32
	Total	40312	41220	2 2	49502	51225	3.36	2943	3059	3.79

Source : *Director General of Police, Thiruvananthapuram*

Appendix 10.12

Motor Vehicle Accidents in Kerala by Primary Causes of Accidents during 2004-2005

Sl.No	Name of District	Fault of Driver of motor vehicles	Fault of driver other than motor vehicles	Fault of Cyclist	Fault of Pedestrian	Fault of passengers	Defect of Motor vehicles	Defect of road surface	Bad weather condition	Other causes	Causes not known	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	5322	0	0	0	0	43	1	1	10	2	5379
2	Kollam	3287	0	0	0	0	23	0	0	4	0	3314
3	Pathanamthitta	1626	0	0	0	0	15	0	0	2	0	1643
4	Alappuzha	3190	1	0	0	2	0	0	1	0	0	3194
5	Kottayam	3004	0	0	0	0	1	0	0	0	0	3005
6	Idukki	1094	0	0	0	0	16	0	0	0	1	1111
7	Ernakulam	7489	0	0	0	0	175	0	0	3	20	7687
8	Trissur	4629	0	0	0	0	0	0	0	0	0	4629
9	Palakkad	2320	0	0	0	0	1	0	0	0	0	2321
10	Malappuram	2677	0	0	0	0	0	0	0	0	0	2677
11	Kozhikode	3329	0	0	0	1	4	0	0	0	0	3334
12	Wayanad	623	0	0	0	0	1	0	0	0	0	624
13	Kannur	1530	0	0	0	0	0	0	0	0	0	1530
14	Kasaragode	772	0	0	0	0	0	0	0	0	0	772
	Total	40892	1	0	0	3	279	1	2	19	23	41220
	Percentage to total	99.20	0.00	0.00	0.00	0.01	0.68	0.00	0.00	0.05	0.06	100.00

Source : *Director General of Police, Thiruvananthapuram*

Appendix - 10.13

Type-wise details of Motor Vehicles Involved in Road Accidents in Kerala during 2004-2005

Sl.No	District	KSRTC Buses	Other Buses	Goods Vehicles	Motor Cars	Jeeps	Autoricksha ws	Two wheelers	Miscellaneous vehicles	Class not known	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	419	211	642	878	137	1009	3152	82	70	6600
2	Kollam	130	259	328	607	157	598	1394	138	34	3645
3	Pathanamthitta	64	183	211	286	131	359	640	38	22	1934
4	Alappuzha	124	218	384	678	63	521	1678	62	37	3765
5	Kottayam	102	342	385	559	177	756	1514	32	49	3896
6	Idukki	20	124	112	110	213	297	307	57	17	1257
7	Ernakulam	177	966	825	1569	233	1166	4773	492	265	10486
8	Trissur	90	651	705	833	134	905	2724	33	48	6123
9	Palakkad	41	372	468	352	189	518	1170	52	27	3209
10	Malappuram	38	464	378	320	260	688	919	96	27	3188
11	Kozhikode	47	596	413	380	296	566	1064	66	42	3470
12	Wayanad	33	76	52	71	132	132	254	37	2	789
13	Kannur	18	318	234	168	163	367	368	27	16	1677
14	Kasaragode	31	101	109	115	95	224	240	10	7	932
	Total	1332	4681	5246	6924	2380	8126	20197	1222	663	50971
	Percentage to Total	2.61	9.58	10.29	14	4.67	15.94	39.62	2.40	1.30	100.00

Source : Director General of Police Thiruvananthapuram

Appendix 10.14

Motor Vehicle Accidents by time of day during 2004-2005

Sl.No	District	Day light	Darkness	Time not known	Total
1	2	3	4	5	6
1	Thiruvananthapuram	3235	2144	0	5379
2	Kollam	2275	1039	0	3314
3	Pathanamthitta	1194	449	0	1643
4	Alappuzha	2077	1117	0	3194
5	Kottayam	1991	1014	0	3005
6	Idukki	753	358	0	1111
7	Ernakulam	5198	2489	0	7687
8	Thrissur	3203	1426	0	4629
9	Palakkad	1654	667	0	2321
10	Malappuram	1976	701	0	2677
11	Kozhikode	1843	1491	0	3334
12	Wayanad	435	189	0	624
13	Kannur	1026	504	0	1530
14	Kasaragode	580	192	0	772
	Total	**27440**	**13780**	0	41220
	Percentage to Total	66.57	33.43	0	100.00

Source : *Director General of Police, Thiruvananthapuram*

Appendix 10.15

Age-Wise Details of Vehicles Owned by KSRTC as on 31.03.2005 & 31.08.2005

		31.03.2005	31.08.2005
1	2	3	4
1	10 Years and above	818	889
2	Above 7 years and below 10 years	1267	1241
3	Above 5 years and below 7 years	657	787
4	Below 5 years	1884	1854
	Total	**4626**	**4771**

Source : *KSRTC*

Appendix 10.18

Major indicators showing operational efficiency of KSRTC

Sl. No.	Items	Year		Increase / Decrease
		2003-04	2004-05	
1	2	3	4	5
1	Fleet strength (Nos)	4340	4642	(+) 6.96
2	Gross revenue earnings (Rs. In crores)	668.09	734.01	(+) 9.87
3	Gross revenue expenditure (Rs. In crores)	* 826.22	* 918.12	(+) 11.12
4	Gross operating loss (Rs. In crores)	* 132.22	* 144.72	(+) 9.46
5	No. of schedules operated as on 31st 2004	3768	4066	(+) 7.91
6	Average earnings per vehicle on road per day (Rs.)	5527	5639	(+) 2.03
7	Average earnings per Km. Of buses operated (Paise)	1661	1707	(+) 2.77
8	Average earnings per passenger (Paise)	583	627	(+) 7.55
9	Average route length (Kms)	49.06	49.08	(+) 0.05
10	Average Kms. Run per bus per day	333	331	(-) 0.60
11	Average number of buses held daily (Nos)	4258	4496	(+) 5.59
12	Passengers carried (Lakhs)	11453.97	11846.82	(+) 3.44

*** Provisional figures**

Source - KSRTC

Appendix 10.17

KSRTC Operational Statistics during 2004 - 05

Sl. No.	Unit	No. of buses held as on 31.03.05	No. of schedules 31.03.05	No. of routes as on 31.03.05	Route distance (Kms)	Gross Kms.Operated	Effective Kms.Operated	Passengers Carried	Average Carrying Capacity per Bus
1	2	3	4	5	6	7	8	9	10
1	Parassala	74	88	106	5786	6917304	6914538	10222844	60
2	Nayyattinkara Vellarada	143	129	248	7930	12075728	12070900	40124438	80
3	Poovar	77	51	67	2580	6429940	6427358	19173496	60
4	Vizhinjam	85	69	40	1624	6218391	6216904	18539663	60
5	Kattakkada	85	73	84	2900	7162503	7158038	23189947	60
6	Thiruvananthapuram City	118	116	229	2808	7064303	7051482	37114636	60
7	Pappanamcode	123	116	256	2412	7567030	7564004	37887335	60
8	Thiruvananthapuram Central	192	82	39	12115	17410852	17453956	20875432	60
9	Vuga Bhavan	65	77	128	2907	5344035	5342098	26049253	80
10	Poroorkada	85	85	170	2752	5496778	5494587	32353478	60
11	Nedumangad+Palode								
	Aryanad+Vithura	188	172	310	10465	13521419	13516013	40803184	60
12	Vellanad	55	51	68	1672	3836497	3834933	15762575	80
13	Kanjiramkulam	85	58	58	1672	3026469	3024459	15528893	60
14	Vanjiyoorkodu	42	37	68	7739	3011905	3010401	8642852	60
15	Chathannur	43	36	127	4952	3818395	3814949	11077787	80
16	Anchal	61	73	74	1512	7821018	7817692	23901434	60
17	Kilimanoor, Pachanayaram								
	Chadayamangalam	146	130	235	7589	12336278	12331342	47318742	60
18	Kollam	100	88	122	6580	10001311	9987312	35748830	60
19	Kottarakkara	130	114	134	8487	12149743	12144885	31122723	60
20	Punalur+ Kulathupuzha	80	68	232	6882	8521307	8518700	27532990	80
21	Karunagapally	78	65	143	2855	5718740	5715054	22847758	60
22	Edathuva+ Vallapally	43	37	20	1120	2986144	2983960	4748177	60
23	Pathanamthitta	63	62	78	4350	6612455	6609851	16718094	60
24	Aroor+ Pandalam	68	58	77	4849	5570223	5567696	20731029	60
25	Thiruvalla	48	41	72	3456	3995622	3994084	10042443	60
26	Kayamkulam	86	80	112	5066	6788411	6785706	20640874	80
27	Haripad	36	34	68	3254	3813554	3812108	9958398	60
28	Mavelikara	40	35	26	1323	3831127	3829596	11839278	60
29	Alappuzha	104	94	87	3248	8466864	8461778	24731609	60
30	Cherthala	106	98	32	1693	9266921	9263218	26290784	60
31	Changanur	58	54	33	1550	9410177	9408014	21094622	80
32	Changanassery	54	49	23	1579	4306329	4304801	15229728	80
33	Kottayam	104	92	60	3230	10741981	10737898	28572901	60
34	Ponkunnam+ Erumely	40	36	77	3012	3818320	3817764	8774578	80
35	Pala	68	67	68	3690	8724273	8721384	16869876	80
36	Erattupetta	54	50	21	2988	5244889	5242672	13699183	60

Appendix 16.17 (Contd.)

KSRTC Operational Statistics during 2004 - 05

1	2	3	4	5	6	7	8	9	10
Sl. No	Depot	No. of buses held as on 31.03.05	No. of schedules 31.03.05	No. of routes as on 31.03.05	Route distance (Kms)	Gross Kms Operated	Effective Kms Operated	Passengers Carried	Average Carrying Capacity per Bus
1	2	3	4	5	6	7	8	9	10
37	Vaikom	41	35	15	1114	3625511	3623981	8518950	60
38	Muvattupuzha	63	53	48	2213	5393303	5391147	10117295	60
39	Thodupuzha+Moolamattom	71	58	40	4093	6660076	6580752	14206268	60
40	Kothamangalam+Munnar	53	46	42	3897	5331704	5320572	7400482	60
41	Ernakulam	89	78	46	4834	10043587	10039551	21634310	60
42	Aluva	66	63	37	2960	6250017	6247518	16874037	60
43	Angamaly	47	36	40	1200	3449771	3448992	11212811	60
44	North Paravoor	56	56	91	3422	5908240	5905878	15365829	60
45	Perumbavoor	48	45	22	2181	4248035	4244837	17113204	60
46	Chalakkudy	49	45	36	1245	4738927	4737325	10930886	60
47	Irinjalakkuda	14	11	8	372	1429667	1429065	2164625	60
48	Malam Kodungallu	60	82	83	3072	5287716	5285902	10943854	60
49	Thrissur	91	83	38	4062	11436010	11430438	21482942	60
50	Puthukkad	11	10	22	728	1088246	1087811	4007548	60
51	Guruvayoor	40	34	24	4563	4936022	4936048	6233459	60
52	Ponnani	27	23	29	2448	2886542	2885396	6503744	60
53	Perinthalmanna	29	25	18	2186	3558363	3558930	5077858	60
54	Malappuram+Nilambur	57	50	58	2075	7174027	7171189	11431148	60
55	Polakkad+Vadakkanchery	100	86	45	5100	13137418	13132165	40882771	60
56	Chittur	27	23	15	2095	3324264	3322835	6272230	60
57	Mannarkkadu	14	12	18	4945	1767109	1766403	3526415	60
58	Thrippalam+ Vadakara	32	27	28	1720	2737288	2736187	5297532	60
59	Kozhikode	68	67	45	3860	9617704	8013658	19797113	60
60	Thamarassery	46	41	48	2860	4154863	4152732	9822140	60
61	Kannur	108	88	64	6910	11253555	11249955	20130725	60
62	Payyannur	59	56	30	2561	6214498	6212011	16485752	60
63	Sulthan Bathery	67	59	27	2601	6737510	6734616	12560479	60
64	Kasaragode	101	88	46	3473	9484825	9481183	22298293	60
65	Maneermavady	60	51	41	2644	5856685	5856542	10856381	60
66	Kalpetta	36	30	40	2165	3201159	3189878	8890923	60
67	Kumily (w.e.f 07.02.04)	41	37	45	2779	4440017	4447238	7225500	60
	Total	4625	4083	4236	242358	430039020	429895073	1184082308	

Source : KSRTC

Appendix 10.18
Fare structure of KSRTC during 2005 (wef 01.10.2001 & 16.09.2004)

Sl. No.	Type of service	Basic fare per KM (paise)	Minimum fare (paise)
1	2	3	4
1	City	35 ps wef 01.10.01, 42 ps wef 16.09.04	250
2	Ordinary	35 ps wef 01.10.01, 42 ps wef 16.09.04	250
3	City Fast Passenger	43	250
4	Fast Passenger	43	300
5	Super Fast	46	600
6	Express	54	1000
7	Super Express	54	1000
8	Super Delux Service	63	2000
9	A/C Air Bus	70	2500
10	High Tech (Volvo)	75	3000

Fare revised on 16.09.2004 only for Ordinary and City services only.
Source : KSRTC

Fare revised wef. 25.11.2005

1	City	48	300
2	Ordinary	48	300
3	City Fast Passenger	52	300
4	Fast Passenger	52	400
5	Super Fast	55	600
6	Super Express	60	1000
7	Super Deluxe	70	2000
8	A/C Air Bus	80	3000
9	High Tech (Volvo)	90	3000

Source: KSRTC

Appendix 10.19

KSRTC Operational Ratios during 2004-05

Sl. No	Unit	Average No.of buses held daily	Average Kms. run per day per bus	Percentage vehicular utilisation	Average route length (Kms)	Average earning per passengers (Rs)	Average distance travelled by a passenger (Kms)	Earning per Vehicle on road per day(in Rs)	Earning per km of buses operated (in Ps)
1	2	3	4	5	6	7	8	9	10
1	Parassala	75	332	78	54.67	1107	40.6	5441	1638
2	Neyyattinkara+ Vellarada	139	350	75	32.23	490	18.1	5081	1680
3	Poovar	73	311	78	38.5	552	20.1	5129	1648
4	Vizhinjam	79	288	75	40.6	578	20.1	4924	1710
5	Kattakkada	80	296	83	35.47	501	18.5	4827	1623
6	Thiruvananthapuram City	123	218	72	11.38	339	11.4	3901	1786
7	Pappanamcode	117	220	81	11.70	322	12.1	3527	1595
8	Thiruvananthapuram Central	114	506	83	310.64	1683	50.7	10126	2000
9	Vikasbhavan	87	225	75	22.71	384	17.3	3996	1776
10	Peroorkada	88	210	82	16.16	297	18.19	3886	1753
11	Nedumangad+ Palode								
	Aryanad+ Vithura	171	289	75	32.8	557	20.0	4836	1672
12	Vellanadu	56	246	77	24.23	440	14.6	4456	1809
13	Kanyappuram	64	286	75	41.36	528	19.4	4896	1632
14	Venjaramoodu	45	270	88	78.95	576	21.0	4102	1521
15	Chathannur	38	371	84	38.99	513	18.3	5245	1688
16	Attingal	83	332	78	20.43	597	19.8	6060	1827
17	Kilimanoor+ Chadayamangalam								
	Pathanapuram	146	361	77	33.72	421	15.6	4870	1616
18	Kollam	96	341	84	57.04	522	16.8	6369	1870
19	Kottarakkara	130	312	82	63.11	656	23.4	5244	1881
20	Punalur+ Kulathupuzha	77	280	78	29.68	400	14.2	4866	1890
21	Karunagappally	74	291	86	19.98	532	17.6	5239	1797
22	Edathua+ Mallappally	37	301	77	58.00	1077	37.7	5156	1714
23	Pathanamthitta	65	369	74	65.06	715	24.8	6373	1725
24	Adoor- Pandalam	63	306	80	63.00	447	16.1	5091	1660
25	Thiruvalla	43	303	82	48.58	696	23.3	5452	1797
26	Kayamkulam	67	332	83	45.15	582	19.1	5909	1777
27	Haripad	39	319	79	46.85	649	22.0	5886	1774
28	Mavelikkara	39	347	78	50.88	514	19.7	5750	1655
29	Alappuzha	98	325	81	48.47	671	22.9	5709	1754
30	Cherthala	99	304	84	53.09	540	22.0	5293	1744
31	Changanacherry	57	291	90	46.96	417	15.4	5067	1739
32	Changanassery	57	306	75	73.00	513	17.00	5537	1807
33	Kottayam	103	362	79	97.16	857	27.5	6391	1758
34	Ponkunnam+ Erumely	35	350	76	39.11	708	26.8	5546	1584
35	Pala	64	355	81	69.46	707	25.4	5931	1670
36	Erattupetta	55	325	81	141.64	684	23.2	5749	1708
37	Vaikom	38	340	80	74.26	750	26.9	5859	1664
38	Muvattupuzha	59	313	80	45.14	803	27.4	5879	1877
39	Thodupuzha+ Moolamattom	63	347	81	88.97	802	27.7	6040	1739
40	Kothamangalam+ Munnar	48	353	85	92.78	1231	43.2	6040	1712
41	Ernakulam	83	448	74	64.57	434	27.8	8057	1798

Appendix 10.19 (Contd.)

KSRTC Operational Ratios during 2004-05

Sl. No	Unit	Average No.of buses held daily	Average Kms. run per day per bus	Percentage vehicular utilisation	Average route length (Kms)	Average earning per passengers (Rs)	Average distance travelled by a passanger (Kms)	Earning per Vehicle on road per day(in Rs)	Earning per km of buses operated (in Rs)
1	2	3	4	5	6	7	8	9	10
42	Aluva	68	299	84	60.30	.558	20.1	4893	1870
43	Ankamali	37	303	84	30.00	497	16.4	4892	1618
44	North Paravoor	84	309	82	37.60	670	23.2	4875	1580
45	Perumbavoor	46	298	82	99.13	422	14.9	5083	1705
46	Chalakkudy	49	321	83	34.58	765	26.0	5673	1767
47	Irinjalakkuda	13	369	85	41.33	1115	39.2	6264	1706
48	Mala+ Kodungallur	55	337	79	36.25	841	29.8	5714	1694
49	Thrissur	91	461	75	104.15	915	31.9	7942	172[illegible]
50	Puthukkad	11	307	88	33.00	444	16.3	5037	[illegible]639
51	Guruvayoor	39	435	79	190.12	1035	36.0	7508	1727
52	Ponnani	24	396	81	84.41	697	26.4	6272	1584
53	Perinthamanna	28	451	83	122.11	1196	42.5	7897	1708
54	Malappuram+ Nilambur	56	435	83	30.51	1044	37.6	7245	1665
55	Palakkad+Chittur								
	Vadakkanchery	123	463	81	114.20	608	20.9	8391	1746
56	Mannarkkadu	15	430	77	274.72	1148	41.9	7055	1642
57	Thottippalam+ Vadakara	24	333	81	59.31	694	31.2	5229	1558
58	Kozhikkode	85	398	86	86.77	838	29.1	6961	1721
59	Thamarassery	42	315	85	59.58	674	25.4	5031	1595
60	Kannur	102	380	79	127.96	871	33.5	5921	1559
61	Payyannur	81	370	75	87.13	550	22.6	5405	1462
62	Sulthan Bathery	68	335	81	107.07	870	32.1	5450	1628
63	Kasaragode	93	344	81	75.50	656	25.5	5306	1543
64	Manantharady	80	356	75	64.48	914	32.4	6067	1896
65	Kalpetta	33	319	83	54.12	598	22.2	5151	1616
66	Kumily	41	380	78	81.68	983	37.0	6073	1598

Source : KSRTC

10.20

Category-Wise staff position of KSRTC

Sl. No	Category	As on 01.04.04	As on 01.04.05	As on 31.10.05
1	2	3	4	5
1	Administrative staff	2721	2427	2375
2	Traffic Personnel	15946	17319	16605
3	Maintenance Personnel	3607	3398	3769
	Total	22274	23144	22749

Source . KSRTC

Appendix 10.21

NO. OF SHIPS CALLED AT COCHIN PORT DURING 2003-04 AND 2004-05

Sl.No	Type of Vessel	No. of Ships		% variation Increase (+) Decrease (-)	Net Registered Tonnage		% variation Increase (+) Decrease (-)
		2003-04	2004-05		2003-04	2004-05	
1	Container	381	314	-17.6	2040622	1750841	-14.2
2	Break Bulk	215	185	-14	363160	473816	30.5
3	Dry Bulk	50	48	-4	390937	493425	26.2
4	Liquid Bulk	264	274	3.8	4777028	5009877	4.9
5	Passenger	18	20	11.1	268146	192002	-28.4
6	Others	205	285	39.0	104016	256246	146.4
	Total	1133	1126	-0.6	7843909	8176207	2.9

Source: Cochin Port Trust

Appendix 10.22

Commodity - wise cargo handled at the intermediate and Minor ports of Kerala during 2004-05.

(In tonnes)

Name of Port	Commodity	Imports			Exports			Grand Total
		Coastal	Foreign	Total	Coastal	Foreign	Total	
1	2	3	4	5	6	7	8	9
Kozhikode	Construction Material	5414.5	3850	8264.5	5802	0	5802	12166.5
	Cement	74.5	0	74.5	4237.5	0	4237.5	4312
	POL Products	0	0	0	9541.5	0	9541.5	9541.5
	LPG	0	0	0	551.5	0	551.5	551.5
	Edible Oil	2301	0	2301	330	0	330	2631
	provision and Stationery	57.5	0	57.5	463	0	463	520.5
	Iron & Steel	1932	0	1932	1117.5	0	1117.5	3049.5
	Vegetable and fruits	350	339	689	197	0	197	886
	Food grains	1283	0	1283	411.5	0	411.5	1694.5
	Machinery	8.5	0	8.5	84	0	84	92.5
	Vehicle	48.5	0	48.5	144	0	144	192.5
	Salt	1190	0	1190	52.5	0	52.5	1242.5
	Timber	113.5	0	113.5	2047.5	0	2047.5	2161
	Soda Ash	21730	0	21730	0	0	0	21730
	Copra	44	0	44	0	0	0	44
	Wheat Product	2674	0	2674	73	0	73	2747
	Empty Barrel -Cylinder	1300.5	0	1300.5	95	0	95	1395.5
	Chalk Powder	3224.5	0	3224.5	18	0	18	3242.5
	Dry Fish	46.5	0	46.5	3	0	3	49.5
	Coconut Cake	1387.5	0	1387.5	0	0	0	1387.5
	Ground nut	250	0	250	0	0	0	250
	Bauxite	261.5	0	261.5	0	0	0	261.5
	Manganese Ore	204.5	0	204.5	0	0	0	204.5
	Sodium Bi-Carbonate	432.5	0	432.5	0	0	0	432.5
	Miscellaneous	1335	49	1384	4177.5	0	4177.5	5561.5
	TOTAL	40743.5	6238	46981.5	28346	0	28346	75327.5
Azhiekal								
	Cement	0	0	0	40	0	40	40
	Bamboo	3	0	3	0.5	0	0.5	3.5
	Construction Material	140	0	140	18	0	18	158
	Timber	0	0	0	2	0	2	2
	Diesel	0	0	0	6	0	6	6
	Steel	2	0	2	1	0	1	3
	Vegitable and fruits	0	0	0	3	0	3	3
	Coconut	1	0	1	0	0	0	1
	River Sand	0	0	0	42	0	42	42
	Miscellaneous	45	0	45	20	0	20	65
	TOTAL	191	0	191	132.5	0	132.5	323.5
Kovalam/ Vizhinjam								
	Miscellaneous	0	0	0	0	7829	7829	7829
	TOTAL	40934.5	6238	47172.5	28478.5	7829	37107.5	84280

Source : Directorate of Ports

Appendix 10.23

Number and Tonnage of steamers and sailing Vessels which called at the Intermediate and Minor Ports of Kerala during 2004-05.

Name of Port	Coastal / Foreign	Steamers		Sailing Vessles		Total No. of Vessels	Total Tonnage
		No.	Tonnage	No.	Tonnage		
1	2	3	4	5	6	7	8
Kasaragod	0	0	0	0	0	0	0
Azhikkal	3	0	0	3	1118.85	3	1118.85
Kannur	0	0	0	0	0	0	0
Thalassery	0	0	0	0	0	0	0
Vadakara	0	0	0	0	0	0	0
Kozhikode / Beypore	288	74	35732	214	63177.88	288	98909.88
Ponnani	0	0	0	0	0	0	0
Munambam	0	0	0	0	0	0	0
Alappuzha	0	0	0	0	0	0	0
Neendakara	0	0	0	0	0	0	0
Valiyathura	0	0	0	0	0	0	0
Kovalam / Vizhinjam	82	45	26267	37	3770	82	30037
Grand Total	373	119	61999	254	68066.73	373	130065.73

source: Directorate of Ports.

Appendix 10.24

Number of Harbour Crafts registered at the Intermediate and Minor Ports of Kerala during 2004-05

Name of Port	*Cargo boats including Barges*	*Canoes including boats*	*Mechanised fishing vessels*	*Others*	*Total*
1	2	3	4	5	6
Kasaragod	14	0	6	11	31
Azhikkal	0	0	0	0	0
Kannur	0	0	0	11	11
Thalassery	0	122	0	1	123
Vadakara	0	0	0	0	0
Kozhikode / Beypore	1	0	11	0	12
Ponnani	0	0	0	0	0
Munambam	0	0	303	0	303
Alappuzha	0	0	1503	0	1503
Neendakara	0	0	235	0	235
Valiyathura/Thiruvananthapuram	0	0	0	0	0
Vizhinjam	0	0	0	0	0
Total	15	122	2058	23	2218

Source: Directorate of Ports.

Appendix 10.25

Category - wise break up of Revenue Collected at the Intermediate and Minor Ports of Kerala during 2004-05

(In Rupees)

	Port Dues	Export & Import dues	Tug hireCharges	Pilotage fees	Registration and other fees	Miscellaneous	
1	2	3	4	5	6	7	8
Kasaragod	0	0	0	0	40458	1206640	1247098
Azhikkal	1584	2860	0	0	72233	1322922	1398599
Kannur	7150	0	0	0	106982	3423	117555
Thalassery	0	0	0	0	314024	1109317	1423341
Vadakara	0	0	0	0	0	0	0
Kozhikode/ Beypore	115925	882288	377117	153400	431248	1950541	3910519
Ponnani	0	0	0	0	2980	27870	30850
Munambam	0	0	0	0	119826	0	119826
Alappuzha					550026	90569	640595
Neendakara	0	0	0	0	90830	1066770	1157600
Valiyathura/Thiruvananthapuram	0	0	0	0	0	175335	175335
Kovalam / Vizhinjam	63518	76875	0	0	0	489632	630025
Directorate of Ports	0	0	0	0	0	351710	351710
Total	**188177**	**962023**	**377117**	**153400**	**1728807**	**7794729**	**11204053**

Source - Directorate of Ports

Appendix 10.26

Operational Statistics of Inland Water Transport Agencies in Kerala

Particulars	State Water Transport Department		Kerala Shipping and Inland Navigation Corporation	
1	2	3	4	5
	2003-04	2004-05	2003-04	2004-05
No. of boats/Jhankars	84	87	13	13
Boat in operation	50	50	11	11
No. of trips on Schedule	646	646	43800	32844
No. of passengers carried (in lakhs)	214	163.6	53	36
Gross Route Distance (in KM)	6775	6775	552600	385898
Volume of Cargo carried (000 tonnes)	Nil	Nil	623	848
Total Revenue Receipts (in lakhs)	530.38	448	770.26	985.91
Total Revenue Expenditure (in lakhs)	1304.7	1431	751.99	972.21
No. of Employees (Total)	960	963	288	273
Profit/Loss (in lakhs)	774.32	983	11.75	1.47

Appendix 10.27(A)

Details of flights operated by various agencies from Thiruvananthapuram International Airport

Sl.No.	Airlines	2003-2004				2004-05			
		No. of Flights		No of Passengers		No. of Flights		No of Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India	48	2010	4535	202145	0	1828	0	195084
2	Indian airlines	2364	1398	186883	110222	2582	1152	219476	109475
3	Gulf Air	0	734	0	143041	0	728	0	149580
4	Oman Air	0	734	0	87,865	0	752	0	91 188
5	Kuwait Airways	0	422	0	58,445	0	416	0	61 487
6	Sri Lankan Airways	0	838	0	94 146	0	818	0	112434
7	Qatar Airways	0	732	0	92414	0	988	0	113816
8	Jet Airways	754	0	57073	0	730	0	68155	0
9	Monarch	0	16	0	3058	0	0	0	0
10	Air Holand	0	20	0	659	0	0	0	0
11	Silk Air	0	312	0	26168	0	348	0	30979
12	My Travels	0	26	0	5281	0	42	0	7920
	Total	3166	7242	248491	823245	3312	7074	287631	871911

Source: *Airport Authority of India*

Appendix 10.27 (B)

Details of flights operated by various agencies from Kozhikode Airport

Sl No.	Name of Operator	2003-04				2004-05			
		No. of Flights		Passengers		No of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Indian Airlines	2780	2479	63514	183008	3399	1889	119554	206105
2	Air India	592	2232	33023	326841	543	2265	10341	350629
3	Jet Airways	512	0	49211	0	730	0	60723	0
4	Skycabs (Cargo)	0	0	0	0	0	0	0	0
5	Usbekistan Airways	0	0	0	0	0	0	0	0
6	IAC, AIC Joint Venture	0	0	0	0	0	0	0	0
7	Expo Cargo	0	28	0	0	0	66	0	0
8	Sreelankan Airways	0	0	0	0	0	390	0	40527
	Total	3864	4739	145748	509849	4672	4610	190618	597261

Source. Airport Authority of India. Kozhikode.

Appendix 10.27 (C)

Details of flights operated by various agencies from Nedumbassery International Airport

Sl.No	Airlines	2003-04				2004-05			
		No.of Flights		Passengers		No.of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India	0	3503	0	178411	0	3273	0	335183
2	Indian Airlines	1995		80105	0	2636		224930	0
3	Oman Air	0	522	0	29376		604	0	61268
4	Silk Air	0	420	0	19073	0	432	0	44208
5	Kuwait Airways	0	314	0	26721	0	312	0	51993
6	Emirates Airlines	0	516	0	55311	0	650	0	134400
7	Qatar Airways	0	454	0	27076	0	784	0	85702
8	Saudi Arabian Airways	0	248	0	26878	0	314	0	59149
9	Gulf Air	0	338	0	20224	0	606	0	70319
10	Jet Airways	3665		136522		4319		301648	0
11	Air Sahara	574		21714		728		63476	0

Appendix 10.28

No. of Passports issued from the Passport Offices in Kerala from 2000-01 to 2004-05

Year	No. of applications Received				No. of Passports Issued			
	Thiruvananthapuram	Kochi	Kozhikode	Total	Thiruvananthapuram	Kochi	Kozhikode	Total
1	2	3	4	5	6	7	8	9
2000-01	84609	111974	147831	**344414**	76454	101356	141169	**318979**
2001-02	97952	134863	182604	**415419**	90969	130084	181880	**402933**
2002-03	100525	136971	168922	**406418**	96396	136766	164126	**397288**
2003-04	125517	133754	238543	**497814**	120907	126965	199680	**447552**
2004-05	119177	177598	228566	**525341**	126529	183627	250036	**560192**

Source : Passport Offices Thiruvananthapuram, Kochi and Kozhikode

Appendix 10.29

Growth of Post Offices in Kerala During the Last Six Years

Year	HOs	DSOs	EDSOs	EDBOs	Total
2000	51	1462	528	3028	5069
2001	51	1461	528	3031	5071
2002	51	1462	527	3034	5074
2003	51	1463	527	3036	5077
2004	51	1464	526	3042	5083
2005	51	1464	508	3059	5082

Source:- Chief Post Master General Kerala Circle

Appendix 10.30

Category - wise Offices in Postal and other Postal Services in Kerala.

Category of Office	As on 31st March	
	2004	2005
1	2	3
(a) Postal Services		
1. Head Post Offices	51	51
2 Sub Post Offices	1464	1464
ii) Extra Departmental Sub Post Offices	526	508
3. Branch Offices	3042	3059
Total (a)	**5083**	**5082**
(b) Speed Post Centres National		
National	9	9
State	35	35
Total	**44**	**44**
© Other Postal Services		
1. Head Record Office	3	3
ii) Sorting Mail Offices	29	29
iii) Sub Record Office	26	26
iv) Transist Mail Offices	11	11
v) R.M.S Sections	19	19
vi) Press Sorting Office	2	2
vii) Parcel Sorting Office	3	3
viii) Patrika Channel Office	5	5
ix) Mail Motor Service Division unit	1	1
x) Central Stamp Depot	1	1
xi) Postal Store Depot	3	3
Total (C)	**103**	**103**

Source : CPMG, Kerala Circle, Thiruvananthapuram.

Appendix 10.31
Division-wise and Category - wise Post Offices under kerala Circle
as on 31.3.2005

Sl.No.	Name of Division	Head Offices	Sub Offices			
			SO	EOSO	EDBO	Total
1	2	3	4	5	6	7
1	Trivandrum (N)	2	75	8	113	198
2	Trivandrum (S)	2	70	15	135	222
3	Quilon	3	91	28	122	244
4	Pathanamthitta	3	77	47	185	312
5	Thiruvalla	2	64	30	63	159
6	Alappuzha	2	48	30	44	124
7	Mavelikara	2	52	22	51	127
8	Changanachery	2	47	9	108	166
9	Idukki	2	52	12	224	290
10	Kottayam	3	79	37	135	254
11	Ernakulam	2	72	5	60	139
12	Aluva	3	72	32	148	255
13	Thrissur	3	106	31	156	296
14	Irinjalakuda	2	63	17	111	193
15	Lakshadweep	0	6	3	1	10
16	Palakkad	3	85	21	127	236
17	Ottappalam	1	55	20	143	219
18	Manjeri	2	46	21	191	260
19	Tirur	2	53	21	100	176
20	Kozhikode	3	73	14	218	308
21	Vadakara	2	41	37	146	226
22	Thalassery	1	44	8	155	208
23	Kannur	2	63	25	139	229
24	Kasaragod	2	30	15	184	231
	Total - (Kerala Circle)	51	1464	508	3059	5082

Source : CPMG, Kerala Circle, Thiruvananthapuram.

Appendix 10.32

Urban/Rural Split of Post Offices as on 31-3-2005

	Head Office		Sub Office		EDSO		EDBO		Grand Total		
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Total
TV North	0	2	44	31	7	1	94	19	145	53	396
TV South	0	2	39	31	15	0	130	5	184	38	444
Kollam	2	1	66	25	26	2	117	5	211	33	244
Pathanamthitta	0	3	69	8	44	3	179	6	292	20	312
Thiruvalla	0	2	53	11	29	1	58	5	140	19	159
Total SR	**2**	10	**271**	**106**	**121**	7	**578**	**40**	**972**	**163**	**1135**
Alappuzha	0	2	23	25	24	6	32	12	79	45	124
Mavelikara	0	2	45	7	22	0	48	3	115	12	127
Changanacherry	1	1	43	4	9	0	106	2	159	7	166
Kottayam	0	3	56	23	12	5	222	3	283	34	258
Idukki	1	1	48	4	32	0	132	2	220	7	290
Ernakulam	0	2	19	53	2	3	43	17	64	75	139
Aluwa	0	3	40	32	29	3	142	6	211	44	255
Thrissur	1	2	68	38	21	10	136	20	226	70	297
Irinjalakuda	0	2	39	24	15	2	93	18	147	46	193
Lakshadweep	0	0	6	0	3	0	1	0	10	0	10
Total CR	**3**	**18**	**387**	**210**	**169**	**29**	**955**	**83**	**1514**	**340**	**1859**
Palakkad	2	1	66	19	21	0	120	7	209	27	236
Ottappalam	0	1	44	11	18	2	133	10	195	24	219
Manjeri	0	2	38	8	20	1	178	13	236	24	260
Tirur	0	2	46	7	21	0	100	0	167	9	174
Kozhikode	0	3	20	53	10	4	177	41	207	101	307
Vadakara	1	1	36	5	33	4	143	3	213	13	226
Thalassery	0	1	15	29	2	6	126	29	143	65	208
Kannur	0	2	24	39	10	15	101	38	135	94	228
Kasargod	0	2	20	10	13	2	178	6	211	20	230
Total NR	**3**	**15**	**309**	**181**	**148**	**34**	**1256**	**147**	**1716**	**377**	**2089**
Grand Total	**8**	**43**	**957**	**497**	**438**	**70**	**2789**	**270**	**4202**	**880**	**5082**

Source: CPMG, Kerala Circle

Appendix10.33

District - wise details of area and population served by one post office during 2004-2005

Sl.No.	Name of district	Post Office (Nos.)	Area (Sq.Km.)	Area served by One post office (Sq.Kms)	Population (2001 census)	Population served by one post office
1	2	3	4	5	6	7
1	Thiruvananthapuram	420	2192	5.2	3234356	7700
2	Kollam	365	2481	6.8	2585208	7083
3	Pathanamthitta	312	2637	8.5	1234016	3955
4	Alappuzha	316	1414	4.4	2109180	6833
5	Kottayam	412	2208	5.4	1953646	4014
6	Idukki	291	4358	15.0	1129221	3880
7	Ernakulam	387	3068	8.0	3105798	8025
8	Thirussur	489	3032	6.2	2974232	6082
9	Palakkad	451	4480	10.0	2617482	5804
10	Malappuram	439	3550	8.0	3625471	8258
11	Kozhikode	413	2344	5.7	2879131	6971
12	Wayanad	163	2131	13.0	780619	4789
13	Kannur	373	2966	8.0	2408956	6458
14	Kasaragod	235	1992	8.5	1204078	5124
	Kerala	5066	38863	7.66	31841374	6282
	UT of Lakshadweep	10	32	3.20	60650	6065
	UT of Pondichery	4	8.71	2.18	8779	2209

Source: *CPMG Kerala Circle, Thiruvananthapuram*

Appendix 10.34

District - Wise details of Telephone net work during 2004-05

Sl.No	Name of District	No. of Exchanges	Equipped Capacity	Working connections	Area (sq.Kms)	No. of Telephone (Sq. Kms)	No. of Telephone per 1000 population
1	2	3	4	5	6	7	8
1	Alleppy	69	275164	237338	1414	168	112.7
2	Calicut	92	355984	274087	2344	117	95.2
3	Cannanore	121	341226	272197	2966	92	112.9
4	Ernakulam	125	511910	418885	2407	174	135.2
5	Idukki	80	127330	105074	5019	21	93.1
6	Kasaragd	59	164946	131454	1992	66	109.3
7	Kottayam	97	317053	272923	2203	124	139.8
8	Lakshadweep	11	12976	8927	32	279	146.3
9	Malappuram	83	375947	309753	3550	87	85.3
10	Palakkad	105	240952	201071	4480	45	76.8
11	Pathanamthitta	78	229714	199440	2642	75	161.9
12	Pondicherry (Mahe)	1	6000	5492	10	549	183.1
13	Quilon	86	355974	284540	2491	114	110.1
14	Trichur	83	447980	377607	3032	125	127
15	Trivandrum	97	482410	381691	2192	174	118
16	Wayanad	31	74392	59982	2131	28	76.2
	Total	1218	4319958	3540661	38905	2238	

Appendix 10.35
Total Census Houses and Urban Census Houses in India and Kerala – 2001

(Nos.)

Area	Type	Total Census houses	Total Occupied Census Houses	Total Vacant Census Houses
India	Total	249095869	233284677	15811192
	Urban	71558356	65106336	6452020
Kerala	Total	9356874	8625051	731823
	Urban	2462098	2238836	223262

Source: Census 2001, Government of India, New Delhi

Appendix 10.36
Distribution of Census Houses used as Residence and Residence- Cum-Other use - 2001

(Nos.)

Area	Type	Total Census Houses	Residence			Residence - cum-other use		
			Good	Livable	Dilapidated	Good	Livable	Dilapidated
India	Total	187063733	90295913	79004784	9974908	3633584	3825098	329446
	Urban	52012465	32192595	16196272	1834096	1111329	622126	56047
Kerala	Total	6532021	362910	2330594	530076	18546	19894	3001
	Urban	1631971	1053257	474470	92059	6087	5351	747

Source :Census 2001, Government of India, New Delhi

Appendix 10.37
Distribution of House Holds by the condition of Census houses occupied by them - 2001

(Nos.)

Area	Type	Total Census Houses	Residence			Residence - cum-other use		
			Good	Livable	Dilapidated	Good	Livable	Dilapidated
India	Total	191963935	92813201	81139219	10223387	3633584	3825098	329446
	Urban	53692376	33335574	16690437	1876863	1111329	622126	56047
Kerala	Total	6595206	3683705	2354327	535733	18546	19894	3001
	Urban	1652856	1065690	481307	93474	6087	5351	747

Source :Census 2001, Government of India, New Delhi

Appendix 10.38
Distribution of Census Houses used as Residence & Residence - cum Other use by the Type of Structure (Nos.)

Area	Type	Total Census Houses	Permanent	Semi-Permanent	Temporary		Unclassified
					Serviceable	Non-Serviceable	
India	Total	187063733	96566196	56377181	21622375	12447013	50968
	Urban	52012465	41168843	8075325	1702041	1045025	21231
Kerala	Total	6532021	4452290	1410682	393749	271509	3791
	Urban	1631971	1287095	236040	56541	50963	1332

Source :Census 2001, Government of India, New Delhi

Note : This Table excludes institutional house holds. Permanent, ie. Houses with wall and roof made of permanent materials. Temporary ie. houses with wall &roof made of temporary material. Semi permanent ie, either wall or roof is made of permanent material and other is made of temporary material. Temporary - servicable means wall is made of mud, unburnt brick or wood& Non-serviceable means wall is made of grass, thatch, bamboo, etc. Plastic or Polythene.

Appendix 10.39
Distribution of House Holds by Type of Census Houses Occupied - 2001 (Nos.)

Area	Type	Total Census Houses	Permanent	Semi-Permanent	Temporary		Unclassified
					Serviceable	Non-Serviceable	
India	Total	191963935	99431727	57664327	22096480	12719139	52262
	Urban	53692376	42602249	8262330	1738089	1087983	21725
Kerala	Total	6595206	4493814	1424375	398983	274211	3823
	Urban	1652656	1302681	239279	57723	51624	1349

Source :Census 2001, Government of India, New Delhi

Note : This Table excludes institutional house holds. Permanent, ie. Houses with wall and roof made of permanent materials. Temporary ie, houses with wall&roof made of temporary material. Semi permanent ie, either wall or roof is made of permanent material and other is made of temporary material. Temporary - servicable means wall is made of mud, unburnt brick or wood & Non-servicable means wall is made of grass, thatch, bamboo, etc. Plastic or Polythene.

Appendix 10.40

Distribution of House holds by availability of bathroom and type of latrine within the house and type of sewerage connectivity for waste water outlet (Nos.)

Area	Type	Total Census Houses	House Holds having bathroom facilites within the house	Type of latrine within the house				Type of connectivity for waste water outlet		
				Pit latrine	Water closet	Other latrine	No Latrine	Closed drainage	Open drainage	No drainage
India	Total	191963935	69371156	22076486	34598446	13210867	122078136	23925761	65142354	102895820
	Urban	53692376	37802114	7840189	24761392	6979859	14110938	18523082	23284582	11884712
Kerala	Total	6595206	4096714	815221	4299445	426102	1054438	530486	770183	5294537
	Urban	1652656	1304163	183557	1235462	101728	131909	245485	265079	1142092

Source :Census 2001, Government of India, New Delhi

Appendix 11.1

Literacy rate by Sex for State and Districts 1991 and 2001 -Kerala

Sl. No	States/District	Literacy rate					
		Persons		Male		Female	
		1991	2001	1991	2001	1991	2001
1	2	3	4	5	6	7	8
	Kerala	89.81	90.92	93.62	94.2	86.17	87.86
1	Thiruvananthapuram	89.22	89.36	92.94	92.60	85.76	86.26
2	Kollam	90.47	91.49	94.09	94.63	87.00	88.5
3	Pathanamthitta	94.06	95.09	96.56	96.62	93.29	93.71
4	Alappuzha	93.87	93.66	96.79	96.42	91.12	91.14
5	Kottayam	95.72	95.9	97.46	97.41	94.00	94.45
6	Idukki	85.97	88.58	90.88	92.11	82.97	85.04
7	Ernakulam	92.3	93.42	95.4	95.95	89.22	90.96
8	Thrissur	90.18	92.56	93.77	95.47	86.94	89.94
9	Palakkad	81.27	84.31	87.24	89.73	75.72	79.31
10	Malappuram	87.94	88.61	92.08	91.46	84.09	85.96
11	Kozhikode	91.10	92.45	95.58	96.3	86.79	88.86
12	Wayanad	82.73	85.52	87.69	90.28	77.89	80.8
13	Kannur	91.48	92.8	95.54	96.38	87.85	89.57
14	Kasargod	82.51	85.17	88.97	90.54	76.29	79.80

Note:- Literacy rate is the percentage of literates to population aged 7 years and above

* Provisional

Appendix 11.2

Management -wise Number of Schools in Kerala -1999-00 to 2004-05

Year	Management	LPSchools	LPSections in UPSchools	LP Sections in High Schools	UPSchools	UPSections in HighSchools	High Schools
1	2	3	4	5	6	7	8
1999-2000	Govt	2552	899	436	959	838	979
	Aided	4035	1279	191	1873	1043	1397
	Unaided	161	61	105	134	171	220
	Total	**6748**	**2239**	**732**	**2966**	**2052**	**2596**
2000-01	Govt	2565	898	438	960	844	985
	Aided	4035	1296	183	1873	1051	1412
	Unaided	158	56	101	124	172	218
	Total	**6758**	**2250**	**722**	**2957**	**2067**	**2615**
2001-02	Govt.	2565	899	439	960	846	986
	Aided	4031	1304	185	1874	1051	1415
	Unaided	158	58	99	125	171	217
	Total	**6754**	**2261**	**723**	**2959**	**2068**	**2618**
2002-2003	Govt.	2551	888	440	957	845	984
	Aided	4003	1308	178	1870	1038	1409
	Unaided	158	68	100	124	164	215
	Total	**6712**	**2264**	**718**	**2951**	**2047**	**2608**
2003-04	Govt.	2551	888	440	956	848	991
	Aided	3993	1308	188	1872	1049	1422
	Unaided	172	74	108	136	178	229
	Total	**6716**	**2270**	**736**	**2964**	**2075**	**2642**
2004-05	Govt.	2548	894	437	954	848	995
	Aided	3994	1322	189	1870	1046	1423
	Unaided	285	150	187	218	277	363
	Total	**6827**	**2366**	**813**	**3042**	**2171**	**2781**

Source. Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.3

District-wise/ Management-wise Number of Schools in Kerala -2004-05

Sl. No.	District	High Schools				U.P.Schools				L.P.Schools				H.S+U.P.S+L.P.S			
		G	PA	PUA	T	G	PA	PUA	T	G	PA	PUA	T	G	PA	PUA	T
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Thiruvananthapuram	119	95	41	255	98	101	30	229	299	181	26	506	518	377	97	990
2	Kollam	78	128	14	218	62	139	17	218	268	189	28	485	406	456	59	921
3	Pathanamthitta	48	111	9	168	42	84	14	140	167	236	23	426	257	431	46	734
4	Alappuzha	56	129	9	196	67	77	11	155	193	198	21	412	318	404	41	763
5	Kottayam	59	168	23	248	67	128	11	206	169	288	32	489	295	562	66	923
6	Idukki	56	73	12	141	40	63	7	110	85	136	9	230	181	272	28	481
7	Ernakulam	87	175	46	308	91	103	25	219	182	272	33	487	360	550	104	1014
8	Thrissur	80	150	31	261	55	162	15	232	115	382	23	520	250	694	69	1013
9	Palakkad	61	79	30	170	63	159	11	233	194	346	14	556	318	586	55	959
10	Malappuram	82	84	77	243	113	223	38	374	349	478	26	853	544	785	141	1470
11	Kozhikodu	69	98	24	191	74	240	12	326	181	530	15	726	324	868	51	1243
12	Wayanadu	40	23	5	68	34	39	2	75	91	53	6	150	165	115	13	293
13	Kannur	83	79	23	185	76	280	20	376	114	608	10	732	273	967	53	1293
14	Kasaragod	77	33	19	129	72	72	5	149	141	115	19	275	290	220	43	553
	Total	995	1423	363	2781	854	1870	218	3042	2548	3994	285	6827	4497	7287	866	12650

Source. Directorate of Public Instruction. Thiruvananthapuram.

G-Govt. PA-Private Aided PUA-Private Unaided T.-Total

Note.- Palakkad-2 LPS 1UP; Malappuram-12 LPS 8UP, Kozhikode-2 LP Wayanad-1 LP, Kasaragod-1 LP working under Area Intensive Programme included in the Private Unaided category

Appendix 11.4

District wise Number of Schools (other than state syllabus) in Kerala (2004-2005)

Sl.N	District	CBSE	ICSE	Kendriya Vidyalaya	Jawahar Navodaya
1	2	3	4	5	6
1	Thiruvananthapuram	43	11	4	1
2	Kollam	28	10	0	1
3	Pathanamthitta	22	13	1	1
4	Alappuzha	33	10	1	1
5	Kottayam	38	5	1	1
6	Idukk.	13	4	0	1
7	Ernakulam	80	11	6	1
8	Thrissur	42	5	1	1
9	Palakkad	42	2	3	1
10	Malappuram	49	2	1	1
11	Kozhikode	32	1	2	1
12	Wayanadu	11	1	1	0
13	Kannur	35	1	3	1
14	Kasaragod	15	2	2	1
	Total	483	78	26	13

Source: Directorate of Public Instruction . Thiruvananthapuram.

Appendix 11.5

District - wise Details of Govt.Schools having Building Facilities - Kerala (2004-2005)

Sl. No.	District	No.of Schools having Pucca Buildings				No of Schools having Thatched				No.of Schools working in Rented			
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	291	84	64	439	8	14	55	77	0	0	0	0
2	Kollam	268	62	68	398	0	0	8	8	2	0	0	2
3	Pathanamthitta	167	42	48	257	0	0	0	0	3	0	0	3
4	Alappuzha	191	67	51	309	2	0	7	9	0	0	0	0
5	Kottayam	169	87	59	295	0	0	0	0	0	0	0	0
6	Idukki	85	40	56	181	0	0	0	0	0	0	0	0
7	Ernakulam	182	81	87	360	0	0	0	0	2	0	0	2
8	Thrissur	112	55	79	246	3	0	1	4	18	0	1	19
9	Palakkad	194	63	61	318	0	0	0	0	44	1	0	45
10	Malappurem	349	112	81	542	0	1	1	2	90	26	1	117
11	Kozhikode	179	73	68	320	2	1	1	4	58	14	1	73
12	Wayanad	91	34	38	161	0	0	4	4	0	0	0	0
13	Kannur	114	76	83	273	0	0	0	0	34	19	3	56
14	Kasaragod	141	72	77	290	0	0	0	0	13	7	5	25
	Total	2533	936	918	4387	15	16	77	108	264	67	11	342

Source: Directorate of Public Instruction. Thiruvananthapuram.

Appendix. 11.6

District - wise Details of Govt. Schools having Drinking water/Latrines/Urinal Facilities in Karala (2004-05)

Sl.No.	District	No. of Schools having							
		Drinking Water				Urinals / Latrines			
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	283	95	119	497	285	91	119	495
2	Kollam	226	55	74	355	219	59	76	354
3	Pathanamthitta	165	42	48	255	167	42	48	257
4	Alappuzha	191	66	58	315	193	67	58	318
5	Kottayam	163	66	59	288	167	67	59	293
6	Idukki	72	38	55	165	85	40	56	181
7	Ernakulam	182	91	87	360	182	91	87	360
8	Thrissur	107	53	80	240	108	55	72	235
9	Palakkad	176	60	61	297	143	58	61	262
10	Malappuram	304	110	75	489	275	103	76	454
11	Kozhikode	168	68	69	305	175	71	69	315
12	Wayanad	79	33	40	152	79	34	40	153
13	Kannur	106	76	83	265	114	76	83	273
14	Kasaragod	128	71	77	276	141	72	77	290
	TOTAL:	2350	924	985	4259	2333	926	981	4240

Source: Directorate of Public Instruction, Thiruvananthapuram

Appendix.11.7

Enrolment of Students in Schools- District-wise and Stage-wise (2004- 05)

Sl.No	Districts	L.P S(I-IV)			U P S(V-VII)			H.S(VIII-X)			TOTAL		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	85397	87138	172533	68793	67470	136263	71989	71061	143050	226179	225667	451846
2	Kollam	60603	60923	121526	55703	52493	108196	58639	55675	114314	174945	169091	344036
3	Pathanamthitta	27375	27533	54908	23418	22276	45694	27771	25207	52978	78564	75016	153580
4	Alappuzha	48378	48140	96518	42098	39521	81619	47112	44044	91156	137588	131705	269293
5	Kottayam	49872	48954	98826	39528	37086	76614	41727	40895	82622	131125	126937	258062
6	Idukki	27913	26944	54857	22900	20242	43142	22030	20515	42545	72843	67701	140544
7	Ernakulam	74919	73458	148377	61124	58367	119491	63999	62865	126864	200042	194690	394732
8	Thrissur	90726	88867	179593	71095	66957	138052	69733	68633	138366	231554	224457	456011
9	Palakkad	86601	85106	171707	67540	63746	131286	67873	66800	134673	222014	215652	437666
10	Malappuram	152345	145552	297897	120884	111252	232136	117396	113152	230548	390625	369956	760581
11	Kozhikode	89285	87919	177204	74558	69276	143834	75163	73142	148305	239006	230337	469343
12	Wayanad	26383	25327	51710	18898	17737	36635	18986	18595	37581	64267	61659	125926
13	Kannur	73260	69914	143174	60096	55594	115690	61446	59176	120622	194802	184684	379486
14	Kasaragod	39433	38810	78243	31725	29624	61349	31696	29621	61317	102854	98055	200909
	Total	932490	914583	1847073	758358	711643	1470001	775560	749381	1524941	2466408	2375607	4842015

Source: Directorate of Public Instruction, Thiruvananthapuram

Appendix. 11.8

Management-wise/Standard-wise enrolment of Students in Schools -Kerala-2004-05 (Students in Nos.)

Management	Standards													
	LP					UP				HS				Total I toX
	I	II	III	IV	Total	V	VI	VII	Total	VIII	IX	X	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Govt.														
Boys	69974	78596	80986	81719	311275	70692	73504	80194	224390	90626	93253	79964	263843	799508
Girls	69260	76356	78319	79122	303057	67468	68432	74095	209995	81745	87721	83095	252561	765613
Sub-Total	**139234**	**154952**	**159305**	**160841**	**614332**	**138160**	**141936**	**154289**	**434385**	**172371**	**180974**	**163059**	**516404**	**1565121**
Aided														
Boys	126004	138103	139405	137106	540618	153924	159365	174250	487539	167651	165280	135631	468562	1496719
Girls	126324	136130	136975	133549	532978	148210	151752	161343	461305	153682	158286	145303	457271	1451554
Sub Total	**252328**	**274233**	**276380**	**270655**	**1073596**	**302134**	**311117**	**335593**	**948844**	**321333**	**323566**	**280934**	**925833**	**2948273**
UnAided														
Boys	20703	21192	19942	18760	80597	15951	15318	15160	46429	15072	14630	13453	43155	170181
Girls	19716	20482	19429	18921	78548	13883	13399	13061	40343	13437	13179	12933	39549	158440
Sub-Total	**40419**	**41674**	**39371**	**37681**	**159145**	**29834**	**28717**	**28221**	**86772**	**28509**	**27809**	**26386**	**82704**	**328621**
Total-Boys	216681	237891	240333	237585	932490	240567	248187	269604	758358	273349	273463	229048	775560	2466408
-Girls	215300	232968	234723	231592	914583	229561	233583	248499	711643	248864	259186	241331	749381	2375607
Grand Total	**431981**	**470859**	**475056**	**469177**	**1847073**	**470128**	**481770**	**518103**	**1470001**	**522213**	**532349**	**470379**	**1524941**	**4842015**

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix-11.9
Standard -wise Strength of SC/ST Students - 2004-05

(Students in Nos)

Standard	Government Schools			Private Aided Schools			Private Unaided Schools		
	Total	SC	ST	Total	SC	ST	Total	SC	ST
1	2	3	4	5	6	7	8	9	10
I	139234	19588	4192	252328	26377	3426	40419	1348	109
II	154952	22377	4571	274233	30192	3756	41674	1388	114
III	159305	22925	4468	276380	29846	3580	39371	1349	99
IV	160841	22223	3860	270655	28257	2965	37681	1210	114
V	138160	17846	3377	302134	30774	3059	29534	796	91
VI	141960	17651	3311	311117	31538	2952	28717	743	145
VII	154289	18883	3284	335593	33511	2791	28221	706	121
VIII	172371	21690	3353	321333	31796	2294	28509	656	111
IX	180974	22538	2994	323566	31743	1925	27809	622	123
X	163059	19338	2179	280934	25521	1400	26386	588	114
Total	**1565145**	**205059**	**35587**	**2948273**	**299355**	**28148**	**328621**	**9406**	**1141**

Source Directorate of Public Instruction Thiruvananthapuram.

Appendix-11.10
District wise/Stage-wise Drop out ratio in Schools 2003-04

Sl.No	Districts	L.P.Stage			U.P. State			High Schools		
		Enrolment	Drop out	% Drop out	Enrolment	Drop out	% Drop out	Enrolment	Drop out	% Drop out
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	165960	1755	1.06	138185	888	0.60	146957	1143	0.78
2	Kollam	127850	543	0.42	111950	593	0.53	117379	1424	1.21
3	Pathanamthitta	56842	282	0.50	49204	159	0.32	57805	227	0.39
4	Alappuzha	95968	335	0.35	83490	439	0.53	93387	1383	1.48
5	Kottayam	97811	381	0.39	78900	255	0.32	84824	1240	1.46
6	Idukki	55423	894	1.61	44446	484	1.09	43797	1343	3.07
7	Ernakulam	143423	1593	1.11	121097	1102	0.91	128255	2742	2.14
8	Thrissur	176360	835	0.47	140202	1184	0.84	141155	2682	1.90
9	Palakkad	172283	2035	1.18	135670	1709	1.26	140782	3280	2.33
10	Malappuram	291982	2058	0.70	238726	1247	0.53	234265	3651	1.56
11	Kozhikodu	173983	1743	1.00	146384	1799	1.23	152076	2530	1.66
12	Wayanadu	52330	1217	2.33	38172	674	1.77	38314	1263	3.30
13	Kannur	143524	908	0.63	119418	766	0.64	123171	3643	2.96
14	Kasaragod	74026	1223	1.65	58718	735	1.25	61591	2288	3.71
	Total	**1827765**	**15805**	**0.86**	**1502542**	**11834**	**0.79**	**1583698**	**28639**	**1.84**

Source: Directorate of Public Instruction

Appendix 11.11

District wise and stage wise Uneconomic Schools in Kerala– 2004 (in Nos.)

Sl.No.	District	Government				Aided				Total			Grand Total
		LPS	UPS	HS	Total	LPS	UPS	HS	Total	LPS	UPS	HS	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	89	16	10	115	16	2	4	22	105	18	14	137
2	Kollam	77	3	0	80	18	14	--	32	95	17	--	112
3	Pathanamthitta	104	25	12	141	187	23	2	212	291	48	14	353
4	Alleppuzha	99	25	2	126	67	13	4	84	166	38	6	210
5	Kottayam	99	41	11	151	91	31	3	125	190	72	14	276
6	Idukki	55	22	16	93	51	11	3	65	106	33	19	158
7	Ernakulam	106	41	8	155	68	30	2	100	174	71	10	255
8	Trissur	40	14	1	55	69	11	0	80	109	25	1	135
9	Palakkad	59	6	0	65	34	2	0	36	93	8	0	101
10	Malappuram	21	1	0	22	13	0	0	13	34	1	0	35
11	Kozhikkode	69	11	4	84	152	10	0	162	221	21	4	246
12	Wayanad	30	2	0	32	2	0	0	2	32	2	0	34
13	Kannur	74	20	0	94	331	43	0	374	405	63	0	468
14	Kasaragod	65	5	1	71	25	6	0	31	90	11	1	102
	Total	987	232	65	1284	1124	196	18	1338	2111	428	83	2622

Source Directorate of Public instruction, Thiruvananthapuram

Appendix. 11.12

Protected Teachers in Kerala- 2004-2005

Sl. No	Name of District	Deployed in Govt School				Retained in parent school				Deployed in other aided school				Undeployed				Total Number of Protected Teachers			
		H S A	PD	Spl	Total	H S A	PD	Spl	Total	H S A	PD	Spl	Total	H S A	PD	Spl.	Total	H S A	PD	Spl.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Thiruvananthapuram	15	37	7	59	0	1	7	8	0	7	13	20	1	21	4	26	16	66	31	113
2	Kollam	128	127	55	310	14	44	31	89	11	12	9	32	8	13	7	28	161	196	102	459
3	Pathanamthitta	36	41	19	96	8	21	29	58	1	4	2	7	8	9	8	25	53	75	58	186
4	Alappuzha	6	11	4	21	0	0	0	0	2	0	0	2	0	0	0	0	8	11	4	23
5	Kottayam	31	28	22	81	1	5	14	20	2	1	5	8	0	4	9	13	34	38	50	122
6	Idukki	8	11	9	28	3	7	11	21	4	4	8	16	0	0	0	0	15	22	28	65
7	Ernakulam	30	75	6	111	17	33	98	148	4	33	53	90	0	0	0	0	51	141	157	349
8	Thrissur	0	0	0	0	[illegible]	2	3	6	0	0	0	0	0	5	7	12	1	7	10	18
9	Palakkad	9	104	29	142	4	59	11	74	3	2	0	5	0	1	4	5	16	166	44	226
10	Malappuram	1	77	27	105	2	55	2	59	0	1	3	4	2	14	3	19	5	147	35	187
11	Kozhikkode	26	216	41	283	7	142	19	168	1	8	0	9	15	97	10	123	50	463	70	583
12	Wayanad	4	16	14	34	1	0	4	5	1	6	0	7	0	1	1	2	6	23	19	48
13	Kannur	68	198	48	314	12	124	28	164	2	3	0	5	9	172	27	208	91	497	103	691
14	Kasaragod	10	31	5	46	[illegible]	18	[illegible]	20	4	1	0	5	2	2	3	7	17	52	9	78
	TOTAL	372	972	286	1630	71	511	258	840	35	82	93	210	46	339	83	468	524	1904	720	3148

Source Directorate of Public Instruction.

Appendix. 11.13

Stage-wise and Management-wise number of Teachers in Schools in Kerala - 2004-05.

Stage	Government			Aided			Unaided			Total Teachers		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Lower Primary School Teachers	5731	15381	21112	9038	27737	36775	357	3246	3603	15126	46364	61490
Upper Primary School Teachers	6457	10038	16495	10234	23642	33876	626	2495	3121	17317	38175	53492
High School Teachers	7750	11897	19647	12148	23603	35751	1441	2937	4378	21339	38437	59776
TTI	87	84	171	86	229	315	0	0	0	173	313	486
Total	20025	37400	57425	31506	75211	106717	2424	8678	11102	53955	121289	175244

Source Directorate of Public Instruction, Thiruvananthapuram.

Appendix-11.14

District wise/Management-wise Number of Higher Secondary Schools in Kerala-2005

Sl No.	District/Taluk	Number of Higher Secondary Schools				Number of Batches			
		Govt.	Aided	Unaided	Total	Science	Humanities	Commerce	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	73	46	42	161	352	107	148	607
2	Kollam	56	48	23	127	247	75	98	420
3	Pathanamthitta	25	36	29	90	185	66	77	328
4	Alappuzha	40	49	16	105	218	71	80	369
5	Kottayam	37	60	27	124	275	95	83	453
6	Idukki	24	26	14	64	114	37	44	195
7	Ernakulam	82	63	54	179	385	98	164	627
8	Thrissur	61	44	43	148	277	77	127	481
9	Palakkad	52	23	30	105	185	86	79	330
10	Malappuram	83	39	77	199	349	117	166	632
11	Kozhikode	56	39	30	125	215	63	101	379
12	Wayanad	20	11	7	38	62	28	24	114
13	Kannur	62	28	25	115	208	58	84	350
14	Kasaragod	51	11	14	76	112	47	49	208
	Total	702	523	431	1656	3164	1005	1324	5493

Source: Directorate of Higher Secondary Education, Thiruvananthapuram.

Appendix.11.15

Course wise intake of students in VHSE- 2005

Sl.No.	Name of Course	Sanctioned	Actual Intake
1	2	3	4
1	Civil Construction and Maintenance	992	936
2	Wheelers	354	336
3	Maintenance and Repairs of Automobiles	387	347
4	Maintenance and Repairs of Radio and Television	2103	1946
5	Maintenance and Repairs of Domestic Appliances	1533	1409
6	Mechanical Servicing (Agro Machinery)	81	80
7	Refrigeration and Air conditioning	519	495
8	Printing Technology	603	555
9	Rubber Technology	81	77
10	Textile B28Dyeing and Printing	35	35
11	Textile Weaving	27	--
12	Computer Science	1176	1137
13	Computer Application	1071	1014
14	Plant Protection	1758	1659
15	Fruits and Vegetables	600	571
16	Nursery Management and Ornamental Gardening	1260	1218
17	Sericulture	81	52
18	Livestock Management (Dairy Husbandry)	607	576
19	Livestock Management (Poultry Husbandary)	357	344
20	Dairying (Milk Products)	108	108
21	Aquaculture	219	215
22	Fishing Craft and Gear Technology	109	107
23	Maintenance and Operation of Marine Engines	165	164
24	Fish Processing Technology	409	400
25	Medical Laboratory Technician	3722	3572
26	Maintenance and Operation of Bio Medical Equipment	797	772
27	ECG and Audiometric Technician	244	237
28	Domestic Nursing	408	407
29	Dental Technology	84	80
30	Physiotherapy	30	27
31	Physical Education	54	50
32	Clothing and Embroidery	462	406
33	Cosmetology and Beauty Parlour Management	137	126
34	Creche and Pre-School Management	108	104
35	Travel and Tourism	654	632
36	Office Secretaryship	1800	1686
37	Accountancy and Auditing	2205	2056
38	General Insurance	379	369
39	Marketing and Salesmanship	681	656
40	Reception, Book-keeping and communication	138	134
41	Catering & Restaurant Management	84	80
42	Banking Assistance	252	227
	Total	**26874**	**25362**

Source . Directorate of Vocational Higher Secondary Education.

Appendix.11.16

Details of B.A Degree Enrolment in Colleges during the year 2004-05

(Students in Nos)

Sl.No	Subject	First Year		Second Year		Third Year	
		Total	of which girls	Total	of which girls	Total	of which girls
1	2	3	4	5	6	7	8
1	Economics	7108	4513	6940	4458	6249	4397
2	History	3815	2531	3305	2431	2963	2500
3	Sociology	1088	962	923	815	514	455
4	Politics	1172	921	1012	714	822	681
5	Philosophy	862	560	712	408	545	471
6	Geography	158	68	98	51	82	38
7	Psyshology	415	208	371	175	253	112
8	English	4406	2401	4201	2371	3923	2393
9	Malayalam	3519	2309	3418	2263	3118	2286
10	Hindi	1100	815	1003	738	907	698
11	Islamic History	525	235	398	118	215	105
12	Arabic	415	418	302	325	293	196
13	SansKript	452	115	353	95	201	85
14	Kannada	36	25	35	20	28	17
15	Tamil	98	21	52	18	45	15
16	Music	62	26	59	21	51	20
	Total	25231	16128	23182	15021	20209	14469

Source: Directorate of Collegiate Education

Appendix.11.17

Details of B.Sc.Degree Enrolment in Colleges during 2004- 2005

(Students in Nos.)

Sl.No	Subject	First Year		Second Year		Final Year	
		Total	of which girls	Total	of which girls	Total	of which girls
1	2	3	4	5	6	7	8
1	Mathematics	5818	3704	5453	3426	5217	3269
2	Physics	4415	3085	4126	2840	4020	2851
3	Chemistry	4325	3005	4035	2810	3975	2442
4	Zoology	4008	2828	3515	2644	3221	2315
5	Botany	3675	2945	3370	2812	3160	2321
6	Statistics	305	210	312	243	158	131
7	Geology	201	155	175	102	146	75
8	Homescience	95	85	70	42	72	59
9	Bio Chemistry	151	61	128	45	120	35
10	Polymer Chemistry	172	68	152	40	116	34
11	Bio Technology	146	39	114	28	80	24
12	Computer Science	143	93	101	78	90	57
13	Industrial Fish and Fisheries	45	34	31	20	21	17
14	Electronics	100	67	89	52	78	52
15	Analytical Chemistry	21	26	16	13	12	10
	Total	23630	16413	21787	15202	20488	13497

Source: Directorate of Collegiate Education

Appendix. 11.18
Details of B.Com Degree Enrolment in Colleges 2004-05

(Students in Nos.)

Year	Boys	Girls	Total
First Year	3831	4768	8599
Second Yea	3802	4472	8274
Third Year	3510	3834	7344
Total	11143	13074	24217

Source Directorate of Collegiate Education

Appendix.11.19
Details of Enrolment of M.A. Students in Colleges during 2004- 2005 (In Nos.)

Sl.No	Subject	First Year			Second Year		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
1	Economics	181	802	983	160	788	948
2	History	108	443	551	92	428	520
3	Sociology	15	10	25	9	6	15
4	Politics	63	202	265	55	198	253
5	Philosophy	28	48	76	17	38	55
6	Geography	16	27	43	10	20	30
7	Psychology	18	32	50	11	26	37
8	English	197	496	693	151	485	636
9	Malayalam	102	391	493	91	374	465
10	Hindi	68	195	263	53	175	228
11	Geology	21	16	37	10	11	21
12	Arabic	123	71	194	112	43	155
13	Sanskrit	38	63	101	27	58	85
14	Kannada	5	15	20	3	10	13
15	Islamic History	41	52	93	30	45	75
16	Tamil	5	8	13	2	5	7
	Total	1029	2871	3900	833	2710	3543

Source. Directorate of Collegiate Education, Thiruvananthapuram

Appendix.11.20
Details of Enrolment of M.Sc. Students in Colleges during 2004 - 05(in Nos.)

Sl. No	Subject	First Year			Second Year		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
1	Mathematics	160	765	925	125	728	853
2	Statistics	122	412	534	110	394	504
3	Physics	131	495	626	120	473	593
4	Chemistry	138	532	670	118	502	620
5	Zoology	122	491	613	108	472	580
6	Botany	123	498	621	109	487	596
7	Home Science	10	89	99	5	61	66
8	Geology	17	58	75	12	42	54
9	Analytical Chemistry	15	46	61	10	32	42
10	Bio-Chemistry	12	31	43	9	8	17
	Total	850	3417	4267	726	3199	3925

Appendix. 11.21

Details of Enrolment of M.Com Students in Colleges during 2004-05(in Nos)

Sl.No	Category	Enrolment		
		Boys	Girls	Total
1	2	3	4	5
1	First Year	454	968	1422
2	Second Year	398	771	1169
	Total	852	1739	2591

Source: Directorate of Collegiate Education, Thiruvananthapuram

Appendix. 11.22

University-wise Number of Teachers in Arts & Science Colleges in Kerala(2002-03 to 2004-05)

Sl. No	Name of University	Number of Teachers								
		2002-03			2003-04			2004-05		
		Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11
1	Kerala	1535	1634	3169	1526	1625	3151	1532	1535	3167
2	Calicut	1738	1985	3723	1720	1973	3693	1697	1701	3898
3	Mahatma Gandhi	1370	1458	2828	1351	1440	2791	1461	1372	2833
4	Kannur	322	415	737	310	402	712	402	378	780
	TOTAL:	4965	5493	10458	4907	5440	10347	5492	4986	10488

Source: Directorate of Collegiate Education, Thiruvananthapuram

Appendix. 11.23

Year-wise Break up of Private Registration (2001 to 2005)

Year	Kerala University						Calicut University						Mahatma Gandhi University					
	BA	MA	B.Com	M Com	M Sc	Total	BA	MA	B.Com	M Com	M Sc	Tota	BA	MA	B Com	M.Com	M.Sc	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2001	9888	3949	12458	1952	565	**28812**	16822	6137	13779	2021	510	**39269**	3659	2835	11056	1859	203	**19612**
2002	8978	3640	10510	2625	1000	**26753**	16624	5930	18052	2734	483	**45823**	4381	2930	13033	2556	272	**23172**
2003	6466	N.A	9866	N.A	N.A	**16332**	19738	4643	21534	3205	570	**49690**	2754	3018	9199	2322	306	**17599**
2004	6172	N.A	7175	N.A	N.A	**13347**	18455	N.A	22472	N.A	N.A	**40927**	2530	3220	7732	2794	352	**16628**
2005	7000	N.A	7500	N.A	N.A	**14500**	18096	N.A	23448	N.A	N.A	**41544**	2616	3172	7145	2967	378	**16278**

Source-Universities in Kerala

Appendix 11.24

District-wise and Management wise details of Engineering Colleges in Kerala-2005

Sl. No	Name of District	No. of Colleges				Sanctioned Intake			
		Govt.	Aided	Unaided	Total	Govt	Aided	Unaided	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	2	0	13	15	773	0	3600	4373
2	Kollam	0	[illegible]	8	9	0	480	1785	2265
3	Pathanamthitta	0	0	5	5	0	0	1350	1350
4	Alappuzha	0	0	3	3	0	0	600	600
5	Kottayam	1	0	6	7	300	0	1635	1935
6	Idukki	1	0	3	4	240	0	900	1140
7	Ernakulam	0	1	12	13	0	480	3340	3820
8	Thrissur	1	0	9	10	490	0	2453	2943
9	Palakkad	1	1	1	3	180	480	240	900
10	Malappuram	0	0	4	4	0	0	840	840
11	Kozhikodu	1	0	3	4	180	0	1020	1200
12	Wayanadu	1	0		1	120	0	0	120
13	Kannur	1	0	3	4	300	0	900	1200
14	Kasaragod	0	0	2	2	0	0	510	510
	Total	**9**	**3**	**72**	**84**	**2583**	**1440**	**19173**	**23196**

Source: Directorate of Technical Education, Thiruvananthauram

Appendix. 11.25

Branch-wise Distribution of Seats in Engineering Colleges-2005-06

Sl No	Name of Course/Branch	Total Sanctioned Seats
1	2	3
1	Applied Electronics	1080
2	B.Tech (Agriculture Engineering)	30
3	Architecture	90
4	Bio-medical Engineering	100
5	Bio-Technology	300
6	Civil Engineering	1352
7	Chemical Engineering	150
8	Automobile Engineering	240
9	Computer Science & Engineering	4730
10	Diary Science & Technology	23
11	Electronics and Communication	5555
12	Electrical and Electronics	3450
13	Electronics & Instrumentation	300
14	Instrumentation and Control Engineering	180
15	Industrial Engineering	30
16	Information Technology	2355
17	Mechanical (Automobile)	60
18	Mechanical (Engineering)	2961
19	Mechanical (Production Engineering)	90
20	Polymer Engineering	60
21	Production Plant Engineering	30
22	Printing Technology	30
	Total	**23196**

Source:Directorate of Technical Education, Thiruvananthapuram

Course-wise Annual Intake of Students in Government and Aided Engineering Colleges at Post Graduate Level - 2004-05 to 2005-06

Sl.No.	Name of Course	Annual Intake in Nos					
		2004-05			2005-06		
		Govt.	Aided	Total	Govt.	Aided	Total
1	2	3	4	5	6	7	8
1	Civil Engineering	67	8	75	67	8	75
2	Mechanical Engineering	46	7	53	46	7	53
3	Electrical Engineering	38	0	38	36	0	36
4	Electronics& Communication Engg	24	0	24	42	0	42
5	Architecture	7	0	7	7	0	7
6	Chemical Engineering	8	0	8	8	0	8
	Total	188	15	203	206	15	221

Source Directorate of Technical Education, Thiruvananthapuram

Appendix 11.27

Trade-wise Annual Intake of students in Polytechnics - 2005-06

Sl.No	Name of Trade	Sanctioned Intake	Actual Intake
1	Civil Engineering	980	980
2	Mechanical Engineering	1310	1310
3	Electrical Engineering	970	970
4	Electronics	1770	1770
5	Chemical Engineering	80	80
6	Automobile	240	240
7	Textile Technology	160	160
8	Computer Engineering	1640	1640
9	Instrument Technology	110	110
10	Polymer Technology	140	140
11	Computer hardware Mentenance	470	470
12	Tool & Die making	90	90
13	Electronic Production	120	120
14	Architecture	70	70
15	Electronics & Communication	380	380
16	Electrical & Instrumentation	320	320
17	Wood A2 Paper Technology	40	40
18	Painting Technology	70	70
19	Commercial Practice	300	300
20	Electronics & Avionics	50	50
21	CA & BM	200	200
22	Bio Medical Engineering	40	40
23	Information Technology	40	40
	Total	9680	9680

Source Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.26

Number of Students and Teachers in Polytechnics 2004& 2005

Type of Institutions	Students (in Nos)						Teachers (in Nos)					
	2004			2005			2004			2005		
	Boys	Girls	Total	Boys	Girls	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Government	15321	8772	24093	15400	8700	24100	1050	335	1385	1330	80	1410
2. Private (Aided)	2634	1546	4180	2670	1500	4170	246	73	319	246	73	319
Total	**17955**	**10318**	**28273**	**18070**	**10200**	**28270**	**1296**	**408**	**1704**	**1576**	**153**	**1729**

Source: Directorate of Technical Education, Thiruvananthapuram

Appendix. 11.29

Department wise Details of Courses in Cochin University of Science & Technology- 2005

Sl. No.	Name of the Courses	Duration of courses	Sanctioned Intake	Actual Intake
1	2	3	4	5
	FACULTY OF ENGINEERING			
1	B. Tech Civil Engineering	8 Sem.	130	130
2	B Tech Computer Science and Engg	8 Sem.	150	150
3	B Tech Electrical & Electronics Engg	8 Sem.	120	120
4	B Tech Electronics & Comm.Engineering	8 Sem.	150	150
5	B Tech Mechanical Engineering	8 Sem.	150	150
6	5 year Integrated MSc Software Engg (No admissions in the current Year)	10 Sem	40	40
7	B.Tech Information Technology	8 Sem.	90+60	90+60
8	B Tech Safety & Fire Engg	8 Sem.	30	30
9		5 Sem.	15	15
10	M E by research (admissions only for Civil, Mechanical and Electronics Engg.)	5 Sem. (Part time)	Variable	Variable
		4 Sem (Full time)	Variable	Variable
11	Ph D		Variable	Variable
	FACULTY OF ENVIRONMENTAL STUDIES			
12	MSc Environmental Tech Stream I Env Engg Stream II Env Bio tech	 4 Sem 4Sem	 6 6	 6 6
13	Ph D		Variable	Variable
	FACULTY OF HUMANITIES			
14	Certificate programmes in French/ German/Japanese/Russian	1 Year	25	25 each
15	Diploma in Communicative English	1 Years	25	25
16	Diploma Programmes in French/German/Japanese/Russian	1 Years	10	10 each
17	Diploma in Functional Arabic	1 Years	20	20
18	Integrated Diploma in French/German/Japanese/Russian	1 Years	20	20 each
19	M.A Translation in German/Russian	4 Sem.	5	5each
20	M A Hindi Language and Literature	4 Sem	28	28
21	M Phil Hindi	2 Sem	10	10
22	PG Diploma in Translation, Administrative Drafting and Reporting in Hindi	1 Year	28	28
23	Ph D		Variable	Variable
	FACULTY OF LAW			
24	LLB	6 Sem	60	60
25	LLM	4 Sem.	36	36
26	PhD		Variable	Variable
	FACULTY OF MARINE SCIENCES			
27	MSc (Industrial Fisheries)	4 Sem	16	16
28	MSc Meteorology	4 Sem	12	12
29	M Tech (Atmos Sciences)	4 Sem	10	10
30	MSc Hydrochemistry	4 Sem	12	12
31	M Phil Chemical Oceanography	2 Sem	6	6
32	MSc Marine Biology	4 Sem	19	19
33	M.Phil Life Sciences	2 Sem	6	6

Sl. No.	Name of the Courses	Duration of courses	Sanctioned Intake	Actual Intake
1	2	3	4	5
34	MSc Marine Geology	4 Sem	10	10
35	MSc Marine Geophysics	2 Years	10	10
36	PG Diploma in Coastal Zone Management (No admission in the current year)	4 Sem	16	16
37	MSc Oceanogaphy	4 Sem	12	17
38	M.Tech Ocean Technology	4 Sem	8	8
39	Ph D		Variable	Variable
	FACULTY OF SCIENCE			
40	MSc Applied Chemistry	4 Sem	12	12
41	M Phil Chemistry	2 Sem	9	9
42	M.Tech Industrial Catalysis	4 Sem	10	10
43	M.Sc Biotechnology	4 Sem	10	10
44	MSc Mathematics	4 Sem	20	20
45	M.Sc (Operations Research & Computer Appins) (offered only odd years)	4 Sem	15	15
46	MSc Physics	4 Sem	25	25
47	M Phil Physics	2 Sem	9	8
48	MSc Statistics (offered only in even years)	4 Sem	15	15
49	M.Tech Engg. Statistics	4 Sem	8	8
50	Ph D		Variable	Variable
	FACULTY OF SOCIAL SCIENCES			
51	M.Phil Applied Economics	2 Sem	10	10
52	MBF (Master of Business Economics)	4 Sem	15	15
53	MBA (Full time)	4 Sem	50	50
54	MBA (Part time)	6 Sem	30	30
55	MIB (Master of International Business)	4 Sem	30	30
56	M Phil (Commerce)	2 Sem	6	6
57	Ph D		Variable	Variable
	FACULTY OF TECHNOLOGY			
58	5 year Integrated MSc in Photonics	10 Sem	20	20
59	MCA	6 Sem	50	50
60	M Tech Electronics (with specialization in Digital Electronics Microwave and Radar Electronics)	4 Sem	20	20
61	MSc Electronics Science (with specialization in Artificial Intelligence, Robotic Microwave Electronics and Computer Technology)	4 Sem	25	25
62	B Tech Instrumentation	8 Sem	28	28
63	B Tech Polymer Science & Rubber Technology	8 Sem	20	20
64	M Tech Polymer Technology	4 Sem	10	10
65	B Tech Naval Architecture & ship Building	8 Sem	24	24
66	M Tech Computer Aided Structural analysis and Design	4 Sem	15	15
67	M Tech Opto Electronics & Laser Technology	4 Sem	10	10
68	M Phil Photonics	2 Sem.	6	6
69	MCA	6 Sem.	30	30
70	M Tech Computer & Information Science	4 Sem	14	14
71	M Tech Software Engineering	4 Sem	13	13
72	MCA	6 Sem.	60	60
73	Ph D		Variable	Variable

Source:- Cochin University of Science & Technology

Appendix-11.30

District-wise Details of Trainees admitted during 8/2004 in ITI/ITC/SCDD (Nos)

Sl.No	District	No. of Trainees admitted		SC		S/T		Women		SCDD/ SfDD	PH	Total
		ITI	ITC	ITI	ITC	ITI	ITC	ITI	ITC	ITC		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	2197	1960	275	113	11	1	422	395	101	10	4258
2	Kollam	1018	2547	97	180	4	8	305	600	92	4	3655
4	Alappuzha	805	1784	138	106	8	6	150	234		3	2589
3	Pathanamthitta	105	1066	10	109	1		8	109	37		1208
5	Idukki	134	203	20	13	1	2	9	18		2	337
6	Kottayam	781	823	89	46	4	1	54	147	42	13	1646
7	Ernakulam	668	2179	81	107	11	5	121	178	14		2861
8	Trissur	764	1097	113	38	1	9	159	65	143	34	2004
9	Palakkad	819	582	87	13	5		114	14	69	3	1270
10	Malappuram	228	512	34	9	5	2	5	5	67		807
11	Kozhikode	715	113	98	20	6	5	239	132	66	4	1894
12	Wayanad	54	131	2		4		4	27			165
13	Kannur	711	579	70	11	7		135	78	37		1327
14	Kasaragod	166	173	12		1		62	44	32	1	371
	Total	**8983**	**13749**	**1126**	**785**	**69**	**39**	**1787**	**2046**	**700**	**74**	**24412**

Source - Industrial Training

Appendix 11.31

Trade wise in take and out turn in Govt. ITI's during 2004-05 as on 30.9.2005 (1 Year Course) (in Nos.)

Sl.No	Name of trade	Students admitted in 2004						students passed					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Plumber	445		28	--	8	–	264	--	25	--	3	–
2	Mech Diesel	203	3	15	3	4	--	143	--	8	--	1	--
3	Secretarial Practice	--	51	--	4	--	2	--	24	--	3		--
4	COPA	144	448	9	60	3	6	125	401	10	48		1
5	Steno (English)	82	233	11	37	9	2	56	151	2	29		--
6	Steno (Hindi)	1	54	--	3	--	1	--	45	–	3		--
7	Dress Making	2	110	–	9	–	8	2	95	--	8		–
8	Welder	815	1	58	--	17	--	527	1	43	–		–
9	Foundrymen	140	--	12	–	4	--	60	--	4	–		--
10	DTPO	4	70	2	4	1	3	3	66	3	5		1
11	Upholstery	23	8	3	--	1	-	--	–	--	--		--
12	SMW	297	17	20	5	7	1	183	9	10	5		--
13	Carpenter	430	1	21	3	5	2	194	1	10	-		-
14	P.P.O	65	12	4	1	1	-	34	3	2		-	-
15	Mech. Tractor	76	--	4	--	2	–	27		3	-		-
	Total	2727	1008	185	129	60	26	1618	796	120	101	4	2

Souce Industrial Training.

Appendix-11.32

Trade wise in take and out turn in Government ITI's during 2003-05 as on 30.09.2005 (two year course) (In Nos)

Sl.No	Name of Trade	Students admitted in 2003						Students passed in 2005					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	MRTV	335	99	71	13	4	--	191	61	15	8	1	0
2	D/Civil	201	183	18	32	4	2	44	61	3	5	0	0
3	D/Mech	72	30	8	7	1	--	59	10	3	1	0	0
4	MRAC	284	22	54	18	6	3	203	1	17	0	1	0
5	Surveyor	37	76	6	5	2	-	89	128	34	39	2	2
6	Fitter	689	9	14	2	2	--	553	0	50	0	7	0
7	Wireman	424	3	42	8	6	2	225	0	21	0	1	0
8	Electronic Mech.	348	206	64	38	3	2	310	137	28	16	2	2
9	Electrician	483	36	51	4	5	2	312	3	33	2	2	0
10	MMV	524	12	52	14	4	2	45	0	3	0	1	0
11	Turner	397	1	49	0	2	--	237	0	19	0	1	0
12	Mechinist	280	36	32	8	2	1	258	1	20	1	3	0
13	Painter General	81	8	7	4	4	2	50	0	4	0	1	0
14	Instrument Mech	87	7	4	1	--	--	70	1	8	0	1	0
15	Watch and Clock Maker	--	43	--	12	--	1	--	33	0	10	0	0
16	Electro Plater	33	2	2	2	--	--	22	1	0	1	0	0
17	Agriculture Mechinery	15	4	2	--	1		4	0	0	0	0	0
18	Medical Electronics	37	0	5	0	0	0	30	0	2	0	0	0
	Total	**4327**	**777**	**481**	**188**	**46**	**17**	**2702**	**437**	**260**	**83**	**23**	**4**

Source: Industrial Training Department

Appendix-11.33

ITI wise details of seat strength and enrolment in Government ITIs

Sl. No	Name of Institution	Total Seat Strength			Total Enrolment			Of which Girls			SC			ST		
		2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	ITI D'Puram	690	690	690	690	677	668	54	61	93	90	70	90	5	5	1
2	Aryanad	57	57	57	56	54	56		2	5	21	27	29	10	2	1
3	Chakkai	857	857	800	837	763	831	48	30	70	110	51	100	7	4	8
4	Kazhakkuttam	233	233	233	142	228	225	142	228	225	28	28	24	4	1	1
5	Attingal	512	523	469	512	460	417	48	41	14	50	59	25	3	2	
6	Kollam	698	617	673	630	556	649	42	33	68	48	42	60	4	5	5
7	(W) Kollam	257	257	257	253	242	212	253	242	212	43	30	30	2	3	2
8	Chathannoor	57	57	57	64	57	55	10	22	17	5	0	5	2	3	3
9	Basic Training Centre (BTC Kollam)	95	95	110	94	88	100	5	8	5	8	12	9	2	2	2
10	Chengannur	741	665	741	697	613	708	27	24	53	63	70	100	4	6	8
11	(W) Chengannur	96	90	106	95	88	97	95	88	97	18	24	20	3	3	2
12	Chenneerkara	114	114	114	108	103	105	12	15	8	12	14	10	2	2	1
13	ITI	188	228	228	184	219	106	17	10	15	16	31	31	4	6	2
14	Ettumanoor	580	552	596	564	548	585	28	19	39	52	60	58	4	8	2
15	Kattappana	138	138	138	128	134	134	6	3	9	16	14	20	2	2	1
16	Kalamassery	520	480	590	494	475	587	34	7	41	55	44	71	12	9	11
17	(W) Kalamassery	110	110	110	101	96	81	101	98	81	12	15	10		2	
18	Chalakudy	580	580	580	532	550	572	44	35	49	62	56	78	6	4	4
19	(W)Chalakkudy	96	95	96	86	86	84	86	86	84	10	12	15	1		1
20	Mala	148	120	120	131	115	108	25	23	26	15	16	16	2		
21	Malampuzha	380	510	560	360	487	554	32	37	48	80	56	79	5	6	5
22	(W) Malampuzha	96	96	72	85	86	65	86	86	65	7	9	8	4		
23	Kuzhalmannam	98	98	98	88	95	0	7	5	8	10	10	0	2		0
24	Arecode	222	210	242	212	187	228	24	29	28	33	15	39	4	3	
25	Kalpetta	110	88	68	98	68	54	1	8	4	8	6	2	10	3	4
26	Kozhikode	480	480	510	465	473	496	48	51	54	34	49	68	5	1	4
27	(W)Kozhikode	192	192	192	163	165	181	163	165	181	20	15	23	4	2	3
28	Quilandy	38	38	38	38	38	38	4	2	4	3	2	6	2	1	2
29	Kannur	710	560	658	690	558	626	42	34	69	60	44	64	5	3	7
30	(W) Kannur	88	88	88	85	86	85	85	86	85	7	8	6	2		
31	Kasargode	76	96	76	57	89	65	16	25	19	5	18	5	2	7	
32	Kayyur	180	110	114	178	40	101	58	..	43	11		7			1
33	Nilambur	38	38	0	38	38		12	10	8	2	4		2	2	0
	Total	9475	9149	9481	8956	8562	8963	1664	1620	1827	1035	917	1106	126	97	81

Appedix-11.34

Institution Wise Details of Apprentices Under Industrial Training Department

Sl.No	Name of Insitutue	Seat Strength		Apprentices Trained			
		2004	2005	2004		2005	
1.		3	4	5	6		
				Boys	Girls	Boys	Girls
1	Thiruvananthapuram R.I C	1020	1078	977	43	998	80
2	Kollam ,,	708	731	539	46	605	63
3	Allapuzha ,,	565	599	527	37	558	38
4	Kottayam ,,	552	592	487	32	521	42
5	Kalamassery ,,	1248	1410	1142	61	1285	85
6	Thrisser ,,	781	776	707	52	712	62
7	Palakkao ,,	763	650	523	62	493	52
8	Kozhikode ,,	511	494	435	21	438	30
9	Kannur ,,	297	332	268	29	285	47
10	Channeerkara I.T.I	264	216	173	9	180	36
11	Kattappana ,,	249	199	62	9	65	29
12	Areacode ,,	291	315	155	NIL	147	7
13	Kasaragode ,,	46	63	35	11	53	10
14	Kalpatta ,,	64	68	49	7	39	6
	Total	7358	7523	6079	421	6359	587

Source:- Industrial Training Department

RIC- Related Instruction Centres

Appendix 12.1

District wise details of infrastructure under Co-operative ssector - 2005

Sl.No.	Name of District	No of hospitals	No of beds	No. of dispensaries	No of doctors		No of other Paramedical Staff including Nurses		No of patients treated during 2002		Remarks
					Hospital	Dispensaries	Hospital	Dispensaries	IP	OP	
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	1	28	Nil	2	Nil	8	Nil	880	14600	
2	Kollam	2	172	Nil	11	Nil	31	Nil	1704	15147	
3	Pathanamthitta	1	25	Nil	1	Nil	6	Nil	310	10744	
4	Alappuzha	1	18	Nil	2	Nil	14	Nil	410	5002	2 hospitals and 3 dispensaries are not functioning
5	Kottayam	2	35	Nil	8	Nil	20	Nil	1324	30670	
6	Idukki	1	150	Nil	10	Nil	38	Nil	3607	47931	
7	Ernakulam	6	426	Nil	67	Nil	113	Nil	15565	147973	3 hospitals are not functioning
8	Thrissur	5	489	1	67	2	133	9	37785	110981	
9	Palakkad	2	112	Nil	17	Nil	31	Nil	7529	49545	
10	Malappuram	3	731	1	45	1	243	3	18377	171105	
11	Kozhikode	10	682	Nil	86	Nil	160	Nil	44858	485932	3 hospitals are not functioning
12	Wayanad	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
13	Kannur	14	2268	1	304	1	737	7	110569	961799	
14	Kasargode	9	114	Nil	15	Nil	40	Nil	14557	83207	One hospital is not functioning
	TOTAL	57	5272	3	635	4	1574	19	257475	2134836	

Source: Registrar of Co-operative Societies

Appendix 12.2

District wise details of infrastructure in the Directorate of Insurance Medical Services - 2005

Sl.No	Name of District	No of hospitals	No. of beds	No of dispensaries	No of doctors		No of other Paramedical Staff including Nurses		No of patients treated during 2004		
					Hospital	Dispensaries	Hospital	Dispensaries	Hospital (OP)	Dispensaries (OP)	Hospital (IP)
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	1	128	11	29	25	39	35	30956	147778	3655
2	Kollam	2	238	30	41	102	107	167	37005	775104	6716
3	Pathanamthitta	--	--	3	--	8	-	13	..	32059	--
4	Alappuzha	1	60	14	17	24	22	43	3874	180799	1410
5	Kottayam	1	65	7	18	14	25	24	3504	85893	1784
6	Idukki	--	-	1	-	1	--	2	–	3385	--
7	Ernakulam	2	220	20	45	47	78	70	48424	280934	3826
8	Thrissur	2	212	15	36	30	60	50	17454	137679	2122
9	Palakkad	1	50	7	16	10	19	16	9304	34360	830
10	Kozhikode	1	100	12	23	34	39	56	29920	102390	1636
11	Malappuram	--	--	4	-	4	--	8	--	19629	--
12	Kannur	1	50	11	17	16	20	31	7533	84337	714
13	Kasaragode	--	--	1	--	1	--	2	--	6360	--
	TOTAL:	12	1123	138	244	318	409	517	187974	1894747	22693

Source: *Directorate of Insurance Medical Services*

Appendix 12.3

District wise medical institutions and beds - Government sector (2004)

Sl.No.	District	Allopathy		Ayurveda		Homoeopathy		Total		Beds per lakh of population
		Institutions	Beds	Institutions	Beds	Institutions	Beds	Institutions	Beds	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	116	7261	78	919	57	310	251	8490	262
2	Kollam	89	2189	62	190	40	75	191	2454	95
3	Pathanamthitta	64	1369	47	150	26	25	137	1544	125
4	Alappuzha	88	4322	65	180	44	75	197	4577	217
5	Kottayam	83	3771	52	150	48	175	183	4096	208
6	Idukki	64	1028	38	160	35	50	137	1238	110
7	Ernakulam	115	4560	76	419	55	185	246	5154	166
8	Thrissur	123	4514	97	426	40	25	260	4965	167
9	Palakkad	112	2488	81	160	40	25	233	2673	102
10	Malappuram	123	2520	77	370	44	50	244	2940	81
11	Kozhikode	95	5047	61	210	49	175	205	5432	189
12	Wayanad	41	913	24	170	20	25	85	1108	141
13	Kannur	105	2792	68	316	39	25	212	3133	130
14	Kasaragode	60	855	41	100	24	75	125	1030	86
	TOTAL	1278	43619	867	3920	561	1295	2706	48834	153

NB 1. Including medical college hospitals

2 Population based on 2001 Census

Appendix -12.4

Medical Institutions and Beds in Kerala - Category-wise - 2004-05

Sl.No.	District	Hospitals		PHCs including MCH Centres		Community Health Centres		Dispensaries		T.B. Clinics/Centres		Grant in aid institutions		Sub centres	Leprosy Control Clinical Units
		No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Thiruvananthapuram	17	3752	77	490	10	528	9	34	1		3	245	455	1
2	Kollam	9	1434	65	342	9	413	.	..	2		3	325	449	4
3	Pathanamthitta	7	648	51	504	4	217	1	..	1		4	863	260	.
4	Alappuzha	10	2457	55	451	8	307	1	..	2	76	4	750	368	1
5	Kottayam	11	1437	61	580	8	426	..	.	2	48	6	1021	359	..
6	Idukki	3	328	52	524	6	178	2	..	1		0	0	231	
7	Ernakulam	22	3010	77	935	10	485	5	80	1	40	3	1010	351	..
8	Thrissur	16	2558	87	640	9	323	5	6	1	..	1	170	492	4
9	Palakkad	8	1147	82	804	12	537	8	.	1	.	3	187	471	1
10	Malappuram	7	1302	95	770	10	396	6		2	52	2	70	508	3
11	Kozhikode	8	2115	69	311	11	364	3	.	1	.	0	0	389	2
12	Wayanad	2	331	25	318	5	264	7	..	1	.	0	0	204	.
13	Kannur	9	1693	79	785	7	244	9	70	1	.	0	0	352	..
14	Kasargode	3	433	46	262	5	160	3	.	1	.	0	0	205	2
	TOTAL:	132	22645	931	7716	115	4840	59	190	18	216	28	4641	5094	18

Source: *Directorate of Health Services*

Excluding Medical colleges and attached institutions

Appendix 12.5

District -wise details of IP,OP, major/minor operations conducted in hospitals/ dispensaries under DHS (2003-04 and 2004-05)

Sl.No.	District	2003-04				2004-05			
		IP	OP	Operations conducted		IP	OP	Operations conducted	
				Major	Minor			Major	Minor
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	149828	5846376	8462	25672	190043	5846376	17529	29397
2	Kollam	152122	3216463	21110	19015	152122	3216463	21110	19015
3	Pathanamthitta	43621	1562941	7408	5914	43621	1562941	7408	5914
4	Alappuzha	76420	4047756	5582	13503	76886	4047756	5582	13503
5	Kottayam	102443	2736604	3129	11709	102443	2736604	3129	11709
6	Idukki	32715	1420376	1472	2556	33785	1420376	1472	2556
7	Ernakulam	95638	3440727	5492	18881	95638	3440727	5492	18881
8	Thrissur	121116	3411434	4803	31824	121116	3402897	4803	31824
9	Palakkad	154322	2699044	3740	10663	154322	2699044	3740	10663
10	Malappuram	79011	3542421	3368	24871	78981	3543121	3368	24871
11	Kozhikode	81788	3563961	3184	38966	135250	3563961	3184	38966
12	Wayanad	78569	1217176	2610	1246	78569	1217176	2610	1246
13	Kannur	84030	2149472	6666	10931	84030	2149472	6666	10931
14	Kasaragode	37175	1150403	1062	1159	38275	1150403	1062	1159
	TOTAL:	1288798	40005154	78088	216910	1385081	39997317	87155	220635

Source. Directorate of Health Services

Appendix 12.6

Target and achievement of Immunisation programme

Sl.No	Item	Unit	2003-04		%	2004-05		
			Target	Achievement		Target	Achievement	%
1	2	3	4	5	6	7	8	9
	M.C.H. Programme							
a)	Immunisation Programme							
(i)	D.P.T	Dose	582480	556582	95.6	562410	558421	99.3
(ii)	Polio	Dose	582480	552064	94.8	562410	556564	99.0
(iii)	B.C.G	Dose	582480	576128	98.9	562410	586706	104.3
(iv)	Measles	Dose	582480	503260	86.4	562410	539401	95.9
(v)	T.T for Pregnant women	Dose	642678	574572	89.4	622860	569963	91.5
(vi)	T.T. for 5 Years	Dose	534759	431500	80.7	520279	442144	85.0
(vii)	T.T. for 10 Years	Dose	534759	517899	96.8	548952	449880	82.0
(viii)	T.T for 16 Years	Dose	578969	525534	90.8	543726	421147	77.5
b)	Prophylaxis against nutritional anaemia							
(i)	Women	Dose	642678	549477	90.3	622860	539295	85.5
(ii)	children'	Dose	.				..	
c)	vitamin A deficiency in children	Dose	1491988	1473565	91.5	1687230	1498655	98.8

Source: *Directorate of Health Services*

Appendix 12 .7

Attack and death due to major principal diseases during 2003 & 2004

(No.)

Sl.No.	Name of Diseases	Attack		Death	
		2003	2004	2003	2004
1	2	3	4	5	6
1	Acute Diarrhoeal Diseases	606034	541358	16	17
2	Diptheria	0	1	0	0
3	Acute Poliomyelitis	0	0	0	0
4	Tetanus-Others	24	13	0	0
5	Neonatal Tetanus	0	0	0	0
6	Whooping Cough	198	102	0	0
7	Measles	4942	3189	0	1
8	Chickenpox	12902	14864	9	7
9	Acute Respiratory Infection	8128094	8428388	216	196
10	Pneumonia	29475	22387	59	42
11	Enteric Fever	12996	9447	0	4
12	Dengue Fever	3861	839	35	8
13	Viral Hepatitis-A	7433	6990	0	1
14	Viral Hepatitis-B	628	769	9	8
15	Weils Disease(Leptospirosis)	2162	1455	95	76
16	Japanese Encephalitis	14	11	0	0
17	Meningococal Meningitis	204	75	0	4
18	Rabies(Hydrobhobia)	31	27	31	27
19	Syphilis	146	72	0	0
20	Gonococcal Infection	582	485	0	0
21	Pulmonary Tuberculosis	21866	20766	201	186
22	Anthrax	2	0	0	0
23	All Other Diseases (including communicable and non communicable diseases	25202870	23634781	8450	7837
	Total	*34034464*	*32686019*	*9121*	*8414*

Source *Directorate of Health Services*

Appendix 12.8
District wise details of Dengue fever - 2004

(Nos.)

Sl.No.	District	Patients treated	Patients cured	Death reported
1	2	3	4	5
1	Thiruvananthapuram	305	305	0
2	Kollam	25	25	0
3.	Pathanamthitta	47	46	1
4	Alappuzha	86	85	1
5	Kottayam	75	73	2
6	Idukki	29	29	0
7	Ernakulam	51	49	2
8	Thrissur	36	35	1
9	Palakkad	10	10	0
10	Malappuram	42	42	0
11	Kozhikode	2	2	0
12	Wayanad	44	44	0
13	Kannur	18	18	0
14	Kasaragode	69	68	1
	Total	**839**	**831**	**8**

Source: Directorate of Health Services

Appendix-12.9
Distirct wise details of Leptospyrosis - 2004

(Nos.)

Sl.No.	District	Patients treated	Patients cured	Death reported
1	2	3	4	5
1	Thiruvananthapuram	124	124	0
2	Kollam	59	48	11
3	Pathanamthitta	146	143	3
4	Alappuzha	154	131	23
5	Kottayam	296	284	12
6	Idukki	132	131	1
7	Ernakulam	143	132	11
8	Thrissur	97	91	6
9	Palakkad	31	31	0
10	Malappuram	39	37	2
11	Kozhikode	21	21	0
12	Wayanad	114	113	1
13	Kannur	82	76	6
14	Kasaragode	17	17	0
	Total	**1455**	**1379**	**76**

Source: Directorate of Health Services

Appendix-12.10

DETAILS OF BLOOD UNITS COLLECTED IN BLOOD BANKS - KERALA

Sl.No	Name of Category	Blood units collected (No.)		
		2003	2004	2005 till September
1	2	3	4	5
A	GOVERNMENT SECTOR			
1	Medical College Hospitals	78156	81734	66427
2	General Hospitals	7811	7870	5197
3	District Hospitals	14231	13922	9311
4	Women and Children Hospitals	1049	899	847
5	Taluk Head Quarters Hospitals	12832	13218	11622
6	Other Hospitals	154	146	110
	SUB TOTAL -	114233	117789	93514
B	AUTONOMOUS INSTITUTIONS			
1	Regional Cancer Centre	7001	9145	7255
2	Sree Chitra Thirunal Institute of Science and Technology	6375	6346	4764
	SUB TOTAL -	13376	15491	12019
C	PRIVATE SECTOR	139989	135152	99470
	TOTAL : (A+B+C)	267598	268432	205003

Source : Blood Banks in Kerala

Appendix 12.11

Medical and Para-medical courses conducted in Govt. Medical Colleges with annual intake of Students

Name of Courses	No.of seats in Medical Colleges				
	Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6
Degree Courses					
1. M.B.B.S.	200	200	100	100	100
2. B.D.S	40	40	40	–	--
3. B.Sc. Nursing	60	60	60	--	--
4. B.Pharm	60	20	–	–	--
5.B.Sc. MLT	24	--	–	–	–
Sub - Total	**384**	**320**	**200**	**100**	**100**
Post Graduate Courses					
1 M.Sc. Nursing	8	4	4	–	–
2. M.D.S.	18	10	--	--	–
3. M.D.Anaesthesia	7	5	3	1	–
4. M.D.Biochemistry	1	2	–	--	–
5. M.D.Forensic medicine	1	2	–	--	–
6. M.D.Dermatology and Venerology	3	3	2	1	--
7 M.D.General Medicine	10	9	6	1	4
8. M.D.Microbiology	2	1	--	–	--
9. M.D.Obstetrics and Gynaecology	8	8	4	1	--
10. M.D.Pathology	6	2	3	1	–
11. M.D.Pharmacology	4	1	--	–	--
12. M.D.Physiology	2	3	2	–	–
13 M.D.Paediatric	6	5	3	2	--
14 M.D.Psychiatry	1	2	4	–	–
15 M.D.Radio Diagnosis	2	2	–	–	
16 M.D.Radiotherapy	2	--	–	--	–
17. M.D. Community Medicine	3	--	2	--	–
18. M.D.T.B. And Respiratory Diseases	3	3	2	--	--
19. M.S. Anatomy	2	2	2	--	--
20. M.S.ENT	2	2	2	--	--
21. M.S.General Surgery	20	12	8	2	--
22. M.S Orthopaedics	4	4	3	--	--
23. M.S.Ophthalmology	6	4	2	--	--
24 M.D.Physical Medicine	2	1	–	--	--
25. M.Pharm	16	--	–	--	--
Sub - Total	**123**	**87**	**52**	**9**	**4**

Appendix 12.11(Contd.)
Medical and Para-medical courses conducted in Govt. Medical Colleges with annual Intake of Students

Name of Courses	No.of seats in Medical Colleges				
	Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6
Super Speciality course					
1. Mch.Paediatric Surgery	2	2	--	--	--
2. Mch Plastic Surgery	2	2	1	--	--
surgery	2	2	1	--	--
4. Mch. Thorasic Surgery	2	2	1	--	--
5. Mch. Neuro Surgery	2	1	2	--	--
6. D.M Gastro Enterology	2	1	--	--	--
7. D.M Neurology	1	1	--	--	--
8. D.M.Cardiology	2	1	2	--	--
9. Mch.Gastro Enterology	2	--	--	--	--
10. D.M.Nephrology	1	1	1	--	--
Sub - Total	**18**	**13**	**8**	**0**	**0**
Diploma Courses					
1 Diploma in Anaesthesia	8	6	6	2	--
2 Diploma in child Health	6	12	6	2	--
3. Diploma in Clinical Pathology	3	6	--	--	--
4 Diploma in Dermatology and Venerology	--	2	--	--	--
5. Diploma in Larynology and Otology	8	6	2	--	--
6. D.M.R.D	2	2	--	--	--
7. D.M.R.T.	2	2	--	--	--
8. Diploma in Obstetrics and Gynaecology	12	12	9	2	--
9. Diploma in Ophthalmology	3	6	4	--	--
10 Diploma in Orthopaedic Surgery	8	6	6	--	--
11. Diploma in Physical Medicine andRehabilitation	4	4	--	--	--
12. Diploma in Psychiatric Medicine	6	--	--	--	--
13.Diploma in Public Health	12	--	--	--	--
14. D.T.C.D	3	3	--	--	--
Sub - Total	**77**	**67**	**33**	**6**	**0**

Appendix 12.11(Contd.)

Medical and Para-medical courses conducted in Govt. Medical Colleges with annual intake of Students

Name of Courses	No.of seats in Medical Colleges				
	Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6
Diploma / Certificate Courses.					
4. MLT Certificate(2 years)	40+20*	50	15	15	15+20*
5. Diploma in Radiological Technology (2 Years)	10+30*	30	15	10	15+30*
6. Ophthalmic Assistant Certificate(2 Years)	10+20*	20	15	5	5+20*
7. D Pharm(2 years)	20+30*	50	30	35	--
8. Dental Mechanic Certificate course(2 years)	5+10*	10	--	--	--
9. Dental Hygienist Certificate Course	10	--	--	--	--
10. Certificate Couse in Nursing SC/St (3 Years)	30*	30*	20**	--	--
Sub - Total	**245**	**190**	**95**	**70**	**105**
TOTAL:	**847**	**677**	**388**	**185**	**209**

*SC/ST only **For ST only

Source: *Directorate of Medical Education*

Appendix 12.12

District-wise details of Medical and Paramedical Personnel Under DHS - 2004-05

Sl.No.	District	Medical Officers	Dentists	Senior Nurses	Junior Nurses	Lady Health Inspectors	Pharmacists	JPHN (ANMS)	Junior Health Inspectors	Health Inspectors	Population for one doctor
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	436	6	305	1117	71	194	527	296	75	7419
2	Kollam	240	6	80	353	79	102	427	292	84	10767
3	Pathanamthitta	194	4	28	242	44	70	266	184	43	6348
4	Alappuzha	269	7	158	631	71	133	381	224	53	7827
5	Kottayam	253	5	161	590	61	108	328	220	51	7719
6	Idukki	141	4	24	167	59	63	315	223	56	8004
7	Ernakulam	367	9	171	706	76	148	427	265	64	8442
8	Thrissur	332	8	162	642	99	162	499	328	79	8962
9	Palakkad	285	6	73	404	80	127	515	294	71	9183
10	Malappuram	309	6	67	421	97	136	589	333	83	11746
11	Kozhikode	279	6	203	905	67	156	419	272	66	10317
12	Wayanad	124	3	28	163	34	46	205	126	30	6344
13	Kannur	307	4	102	484	83	132	423	290	74	7858
14	Kasargode	152	3	31	169	41	61	249	168	38	7917
	TOTAL:	3688	77	1593	7094	962	1638	5570	3515	867	8633

Source: *Directorate of Health Services*

N.B. Population Based on 2001 census

Appendix 12.13

Details of Personnel (Clinical/Non-clinical) in Medical Colleges -2000-2005

Sl.No.	Category	No. of Clinical/Non Clinical personnel					
		2000	2001	2002	2003	2004	2005
1	2	3	4	5	6	7	8
	Medical Education						
1	Director and Professor						
2	Professor	202	207	207	189	189	189
3	Associate Professor	242	236	236	236	236	236
4	Assistant Professor	449	490	490	431	431	431
5	Tutor/Lecture	711	1877	1877		613	613
	Sub Total	**1604**	**2810**	**2810**	**856**	**1469**	**1469**
	Nursing Education						
6	Director	3	3	3	3	3	3
7	Professor	7	7	7	8	8	8
8	Associate Professor	18	17	17	16	16	16
9	Assistant Professor	27	25	25	23	23	23
10	Tutor	40	29	29	32	32	32
	Sub Total	**95**	**81**	**81**	**82**	**82**	**82**
	M.L.T. Course						
11	Director	..			..		
12	Assistant Professor	3			..		
13	Tutor	5	3	5	9		
14	Tutor Technician	14	..	.	..	9	9
	Sub Total	**22**	**3**	**5**	**9**	**9**	**9**
	Dental						
15	Principal	2	3	3	3	3	3
16	Professor	16	16	16	17	17	17
17	Associate Professor	12	4	4	8	8	8
18	Assistant Professor	25	24	24	20	20	20
19	Tutor/Lecture	44	43	43	45	45	45
	Sub Total	**99**	**90**	**90**	**93**	**93**	**93**
	Pharmacy						
20	Director	1	5	5	5	5	5
21	Professor	3	4	4	4	4	4
22	Associate Professor	7	5	5	4	4	4
23	Assistant Professor	13	12	12	12	12	12
24	Lecture	30	27	27	28	28	28
	Sub Total	**54**	**53**	**53**	**53**	**53**	**53**
	TOTAL:	**1874**	**3037**	**3039**	**1093**	**1706**	**1708**

Source Directorate of Medical Education

Appendix 12.14
Registered Medical Practitioners (Numbers cum)

Sl.No.	System	Class of Registration	2003	2004
1	Modern Medicine	A	32824	33969
2	Homoeopathy	A	7138	7388
3	Ayurvda	A	7933	8284
4	Siddha	A	144	145
5	Unani	A	6	7

Source : Kerala Nurses and Midwives Council

Appendix 12.15
Registered para medical practotioners

Sl.No	Category	2004	2005
1	Nurse	39567	40713
2	Midwife	40428	41571
3	Nurses and Midwives	42716	46992
4	Auxillary	14561	14945

Source : Kerala Nurses and Midwives Council

Appendix 12.16
Annual intake in different Nursing courses - 2004-05

(Nos.)

Sl.No.	Name of Institutions	Institutions	Annual intake
1	2	3	4
I	**Integrated General Nurse-cum-Midwives (3 year course)**		
a)	Government Nursing schools	15	354
b)	Private Nursing schools	182	5200
c)	Medical College, Kozhikode	1	30
d)	Medical College, Thiruvananthapuram	1	30
e)	Medical College, Kottayam	1	20
II	**Junior Public Health Nurses (18 months)**		
a)	Government Nursing schools	4	180
b)	Private Nursing schools	11	291
III	**BSc. Nursing (4 Year course)**		
a)	Medical College, Kottayam	1	60
b)	Medical College, Thiruvananthapuram	1	60
c)	Medical College, Kozhikode	1	60
d)	Nursing Colleges in Self financing Sector	42	2100
	MSc. Nursing (2 Year course)		
a)	Medical College, Thiruvananthapuram	1	8
b)	Medical College, Kozhikode	1	4
c)	Medical College, Kottayam	1	4

Source: Directorate of Health Services

Appendix 12.17

District-wise distribution of Institutions,Beds and Patients treated under Ayurvedic system of Medicine in Kerala (2004and 2005)

(Nos.)

Sl No	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated in 2004		Doctors-2004
		2004	2005	2004	2005	2004	2005	2004	2005	Inpatients	Outpatients	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	14	14	285	285	63	64	77	78	2444	680068	111
2	Kollam	9	9	190	190	52	53	61	62	2964	423070	75
3	Pathanamthitta	5	5	150	150	40	40	45	45	932	172709	53
4	Alappuzha	10	10	180	180	55	56	65	66	1420	460491	63
5	Kottayam	8	8	150	150	43	44	51	52	1516	292024	76
6	Idukki	3	3	160	160	33	34	36	37	2517	102423	47
7	Ernakulam	13	13	280	280	81	81	74	74	3656	574972	92
8	Thrissur	15	15	273	273	80	80	95	95	2325	501785	120
9	Palakkad	6	6	160	160	74	75	80	81	1567	177317	95
10	Malappuram	11	11	220	220	65	66	76	77	1207	265230	87
11	Kozhikode	7	7	210	210	53	53	60	60	1791	291053	74
12	Wayanad	3	3	170	170	21	23	24	26	1680	130379	35
13	Kannur	6	6	216	216	61	62	67	68	14957	200964	79
14	Kasargode	5	5	100	100	36	36	41	41	938	161729	47
	TOTAL:	**115**	**115**	**2744**	**2744**	**737**	**747**	**852**	**862**	**39914**	**4434214**	**1054**

Source: *Directorate of Ayurveda*

Appendix 12.18

Annual intake of students and courses in Ayurveda Colleges

Sl No	Name of College	Annual intake of students	
		BAMS	P G Degree
1	2	3	4
	Government		
1	Ayurveda Medical College, Thiruvananthapuram	70	57
2	Ayurveda Medical College, Tripunnithura	50	--
3	Ayurveda Medical College, Kannur	40	10
	Government aided		
4	Vaidyaratnam Ayurveda college, Ollur	40	--
5	Vaidyaratnam P.S.Varier Ayurveda college, Kottakkal	50	10
	Total	**250**	**77**
	Self-financing		
6	Pankajakasthuri Ayurveda Medical college, Kattakkada, Thiruvananthapuram	50	--
7	Parassinikadavu Ayurveda Medical College, Pappinisseri	50	--
8	Vishnu Ayurveda College, Shornur	40	--
9	Santhigiri Ayurveda Medical College, Palakkad	50	--
10	Nangelil Ayurveda Medical College, Kothamangalam	40	--
11	Santhigiri Siddha Medical College, Pothencode, Thiruvananthapuram	50	--
12	Amritha Ayurveda Medical College, Kollam	50	
13	Sreenarayana Institute of Ayurveda studies and Research, Puthoor, Kollam	50	
	Total	**380**	--
	Grand Total	**630**	**77**

Source: Directorate of Ayurveda Medical Education

Appendix 12.19
District-wise Distribution of Institutions , Beds and patients treated under Government Homoeopathy Department (2004 & 2005)

(Nos.)

Sl.No	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated in 2004		Doctors-2004
		2004	2005	2004	2005	2004	2005	2004	2005	Inpatients	Outpatients	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	4	4	185	185	51	51	55	55	3618	372132	63
2	Kollam	3	3	75	75	37	37	40	40	1540	1186520	44
3	Pathanamthitta	1	1	25	25	25	25	26	26	*NR	96115	27
4	Alappuzha	3	3	75	75	41	41	44	44	1212	973044	48
5	Kottayam	3	3	175	175	44	44	47	47	824	1204213	54
6	Idukki	2	2	50	50	33	33	35	35	1032	780469	38
7	Ernakulam	3	3	85	85	51	51	54	54	635	1508817	59
8	Thrissur	1	1	25	25	39	39	40	40	712	1145049	42
9	Palakkad	1	1	25	25	39	39	40	40	378	837178	42
10	Malappuram	2	2	50	50	42	42	44	44	11852	765348	47
11	Kozhikode	3	3	75	75	45	45	48	48	6588	14621939	52
12	Wayanad	1	1	25	25	19	19	20	20	262	380721	22
13	Kannur	1	1	25	25	38	38	39	39	221	759283	41
14	Kasaragode	3	3	75	75	21	21	24	24	1133	686210	28
	TOTAL	31	31	970	970	525	525	556	556	29807	25317034	607

Source. Directorate of Homoeopathy

* IP is not working for want of infrastructure facilities

Appendix 12.20

Annual intake of students and courses in Homoeo Colleges

Sl No	Name of College	Annual intake of students		Nurse cum Pharmacist course
		BHMS	P G Degree	
1	2	3	4	5
	Government			
1	Homoeopathic Medical college, Thiruvananthapuram	50	30	60
2	Homoeopathic Medical college, Kozhikode	50	30	60
	Government aided			
3	Dr. Padiyar memorial Homoeopathic Medical college, Ernakulam	50	--	--
4	Athuvasramam N.S.S. Homoeopathic Medical college, Kottayam	50		--
5	Sree Vidhyadhiraja Homoeopathic Medical college, Nemom	50	--	--
	Total	250	60	120

Source Govt. Homeo College TVM

Appendix 12.21

Achievement of Family Welfare Programme (2004-05) District -wise

Sl.No.	District	Vasectomy	PPS	Munilap	Laproscopic	Total (4+5+6)	Cu -T	Nirodh supplied	Oral pills	Induced Abortion
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	103	14797	473	5159	20429	5315	1374219	23512	2752
2	Kollam	27	9187	407	352	9646	5253	1032675	24258	2926
3	Pathanamthitta	22	4171	449	096	5010	3122	629959	16086	707
4	Alappuzha	85	6006	693	806	8165	3522	723875	12582	971
5	Kottayam	426	5777	274	1516	7567	6168	999256	26185	1320
6	Idukki	106	8439	630	906	9975	4344	560342	18403	1002
7	Ernakulam	173	14680	306	2521	17507	6301	271359	44125	2458
8	Thrissur	79	8112	668	3034	11814	6781	906611	37223	2095
9	Palakkad	72	8577	599	2594	11770	7800	738945	29176	1773
10	Malappuram	84	12567	413	575	13565	7850	1311635	47535	2801
11	Kozhikode	284	10380	1744	488	12612	5468	782756	16681	4381
12	Wayanad	29	4136	439	248	4821	3468	700285	19188	1167
13	Kannur	75	9248	482	499	10229	6110	685404	22191	1490
14	Kasargode	15	4250	178	1354	5782	3308	364849	16882	724
	TOTAL:	1583	120987	7755	20746	149488	74810	10382170	354023	26588

Source. Directorate of Health Services

Appendix 12.22

District wise Couple protection rate and female reproductive age group - 2004

Sl.No.	District	Couple protection rate	Female reproductive age group (15-44) (in thousands)
1	2	3	4
1	Thiruvananthapuram	97.6	489.65
2	Kollam	79.61	361.4
3	Pathanamthitta	90.32	168.47
4	Alappuzha	88.76	272.48
5	Kottayam	78.1	258.5
6	Idukki	60.3	157.01
7	Ernakulam	70.13	361
8	Thrissur	71.15	428.4
9	Palakkad	64.12	357.67
10	Malappuram	49.6	575.67
11	Kozhikode	83.09	461.4
12	Wayanad	87.54	120.58
13	Kannur	81.63	376.45
14	Kasaragode	59.1	158.27
	State	72.1	4595.35

Source: Directorate of Health Services

Appendix 13.1

Achievements under Major Housing Schemes (Nos)

Sl.No.	Name of Schemes	2002-03	2003-04	2004-05	2005-06 (up to 30-9-05)
1	2	4	5	6	7
1	Kerala State SC/ST Development Corporation	31	44	24	20
2	SC Dev. Dept.	18764	2090	5471	7475
3	Fishenes Dept.	0	1500	1500	1500
5	KS Co-op.Agril &RDB	13448	14794	16389	5222
6	Sainik Welfare	69	77	9	6
7	LIC Housing Finance	3000	1023	4396	1785
8	GIC Housing Finance	741	1345	383	67
9	Commissionerate of Rural Developemnt	32107	26375	43291	12990
10	Canfin Homes	413	156	149	80
11	HOUSE FED	7380	7562	6996	3428
12	KSHB	8686	12933	2414	51
13	Nationalised Scheduled Bank	40620	54454	74327	25095
14	KPHC	0	101	0	0
15	Kudumbasree	1330	504	0	0
16	HDFC	4880	5474	0	0
17	ST Development	1759	1132	0	0
	Total	**133228**	**129564**	**155349**	**57719**

Source: Housing Commisioner

Appendix 13.2

Kerala State Housing Board: Mythri Housing Scheme					
Sl.NO.	Name of District	Houses selected under Mythri scheme	Houses constructed & handed over to the beneficiaries	Houses partially completed	Capital subsidy distributed for completed houses (Rs.lakhs)
1	2	3	4	5	6
1	Thiruvananthapuram	11670	11356	314	1022.04
2	Kollam	14178	14176	2	1275.84
3	Alappuzha	29994	24666	5328	2219.94
4	Pathanamthitta	16044	15111	933	1359.99
5	Kottayam	29945	29743	202	2676.87
6	Idukki	26131	26120	11	2350.8
7	Ernakulam	36533	32604	3929	2934.36
8	Thrissur	16769	16329	440	1469.61
9	Palakkad	16934	16638	296	1497.42
10	Malappuram	17918	15500	2418	1395
11	Kozhikode	19867	18639	1228	1677.51
12	Wayanad	9218	8906	312	801.54
13	Kannur	22521	21785	736	1960.65
14	Kasargod	14543	13267	1276	1194.03
	State Total	**262265**	**264840**	**17425**	**23835.6**

Source Kerala State Housing Board

Appendix 13.3

Houses Assisted and Amount disbursed by Kerala Stae Co-operative Housing Federation Limited

(Rs. in lakhs)

Sl.No.	Category	(Amount distributed (Rs. lakhs)			Houses Assisted (Nos)		
		2002-03	2003-04	2004-05 upto 30.9.05	2002-03	2003-04	2004-05 upto 30.9.05
1	2	3	4	5	6	7	8
1	EWS	957.86	1118.62	1707.71	2518	2574	2489
2	LIG	2078.47	2305.27	3086.27	2536	2610	3579
3	MIG	1345.49	1482.45	2657.5	706	731	1270
4	Others (Repair)	1333.31	1486.9	2990.46	1593	1697	3086
	Total	5715.13	6393.24	9841.94	7353	7612	10424

Source : Kerala State Co-operative Housing Federation

Appendix 13.4
Interest Rates of Different Financial Institutions on Housing loan as on 30/9/2005 (percentage)

Sl.No	Name of Institution	Floating rate	Fixed rate		
1	2	3	4		
1	State Bank of India				
	upto 5 years	7.50%	7.25%		
	5 to15 years	7.50%	7.50%		
	15 to 20 years	7.50%	7.75%		
2	State Bank of Travancore				
	upto 5 years	7%	8.00%		
	5 to 10 years	8.00%	9.00%		
	above 10 years	8.25%	9.25%		
3	Bank of Baroda				
	upto 5 years	8.25%	9.00%		
	up to10 years	--	9.25%		
	above 15 years	8.50%	9.50%		
4	Syndicate Bank				
	Up to 6 years	7.25%	8.00%		
	6 to 12 years	7.75%	8.50%		
	12 to 18 years	8.00%	8.75%		
	18 to 25 years	8.25%	9.00%		
5	Corporation Bank				
	upto 5 years	7.50%	8.00%		
	5 to 15 years	8.00%	8.25%		
	15 to 25 years	8.50%	8.50%		
6	HUDCO				
	A. EWS housing by all borrowers				
	(i) Housing projects for widows, SC/STs, Legally handicapped single women above 35 years of age and natural calamities affected areas	7.25%	7.75%		
	(ii) Dilhers and action plan projects	7.75%	8.25%		
	B. LIG housing projects by all borrowers	8.25%	8.75%		
	C. Direct borrowing by Govt. Parastatal Organisation and Govt./Public borrowers	8.50%	9.00%		
7	HDFC				
	Upto 5 lakhs		7.75%		
	5 to 25 lakhs		7.75%		
	Above 25 lakhs		7.25%		
8	LIC	7.25%	9%		
9	Sundaram Home Finance	9.00%	10% to 10.5%		
10	GIC Housing Finance				
	i) Up to 5 lakhs - 5 years	7.75%	9.75%		
	-10 years	8.00%	10.00%		
	-15 years	8.50%			
	20 years	8.75%			
	ii) Above 5 lakh - 5 years	7.75%			
	10 years	7.75%			
	-15 years	8.00%			
	-20 years	8.25%			
11	HOUSEFED			Primary	Individual
	EWS up to Rs. 50,000 (15 yrs)			8.25%	9.00%
	L.I.G 50001 to 1.25 lakhs			8.50%	9.50%
	(15Yrs)				
	MIG 1.25 lakhs to 5.00 lakhs)			8.75%	9.75%
	(15 Yrs)				

Appendix 13.4 (contd..)
Interest Rates of Different Financial Institutions on Housing loan as on 30/9/2005 (percentage)

Sl.No.	Name of Institution	Floating rate	Fixed rate
1	2	3	4
12	**Dewan Housing Finance**		
	up to 20 years	8.00%	8.00%
13	**Canfin Homes**		
	Any term Rs. 10 lakhs	7.75%	
	Above Rs. 10 lakhs	7.50%	
	Repayment term- 5 years	--	8.00%
	6 years to 10 years	--	8.25%
	11 to 20 years	--	8.50%
14	**Dhanalakshmi Bank**		
	upto 5 years	8.00%	9.00%
	5 to10 years	8.25%	9.00%
	above 10 years	8.50%	11.00%
15	**Bank of India**		
	upto 5 years	7.25%	8.00%
	5 to10 years	7.75%	8.75%
	above 10 years to 25 years	8.25%	8.75%
16	**Canara Bank**		
	Up to 15 years	8.00%	9.00%
	Above 15 years	8.25%	9.25%
17	**BOB Housing Finance**		
	upto 5 years	8.00%	9.00%
	5 to15 years	8.25%	9.50%
	above 15 years	8.50%	10.00%
18	**Kerala State Co-Op Bank Ltd**		
	Nalinna Housing Finance	--	9 to 15%
	Thanal Housing Scheme	--	10.25%
	Rural Housing thro DCCBs & Branchs of KSCB	--	5.25 to 7.25%
19	**Kerala State Co-op Agricultural and Rural Development Bank Ltd**		
	(1) NABARD		
	Construction/Purchase of New houses/flats		
	Up to Rs. 50,000/-		9.00%
	Rs. 50001 to 1 lakh		9.50%
	1 lakh to 2 lakhs		10.00%
	Above 2 lakhs		11.00%
	Repairs of houses		
	Up to Rs. 50,000/-		9.50%
	Rs. 50001 to 2 lakh		10.00%
	Above 2 lakhs to 3 lakhs		11.00%
	(2). NHB		
	New construction/purchase		
	Up to 2 lakhs (5 years)		9.50%
	up to 2 lakhs (above 5 to 10 years)		10.00%
	2 lakhs to 5 lakhs(5 years)		10.50%
	2 lakhs to 5 lakhs(Above 5 to 10 years)		11.00%
	Upgradation /Major repairs		
	UP to 2 lakhs (5 years)		10.00%
	UP to 2 lakhs (Above 5 to 10 years)		10.50%
20	**HSBC (Up to 3 years)**	8.00%	8.50%
21	**Kerala State Housing Board**		
	LIG	10.00%	
	MIG	11.00%	
	HIG	12.50%	

Source - Housing Commissioner

Appendix 14.1

Poverty Projection for 2006-07

Sl.No	State/UTs	Rural		Urban		Combined	
		%age of poor	No. of Poor (lakh)	%age of poor	No. of Poor (lakh)	%age of poor	No. of Poor (lakh)
1	Andhra Pradesh	4.58	26.97	18.99	41.75	8.49	68.72
2	Arunachal Pradesh	37.89	3.54	4.48	0.14	29.33	3.68
3	Assam	37.89	95.36	4.48	1.78	33.33	97.14
4	Bihar	44.81	482.16	32.69	54.74	43.18	536.90
5	Goa	NA	NA	NA	NA	NA	NA
6	Gujarat	2.00	6.88	2.00	4.38	2.00	11.26
7	Haryana	2.00	3.30	2.00	1.51	2.00	4.81
8	Himachal Pradesh	2.00	1.18	2.00	0.14	2.00	1.32
9	Jammu Kashmir	NA	NA	NA	NA	NA	NA
10	Karnataka	7.77	28.66	8.00	16.34	7.85	45.00
11	Kerala	1.63	4.03	9.34	8.01	3.81	12.04
12	Madhya Pradesh	28.73	192.07	31.77	74.46	29.52	266.53
13	Maharastra	16.96	101.61	15.20	72.68	16.18	174.29
14	Manipur	37.89	8.10	4.48	0.27	30.52	8.37
15	Meghalaya	37.89	7.99	4.48	0.24	31.14	8.23
16	Mizoram	37.89	1.88	4.48	0.23	20.76	2.11
17	Nagaland	37.89	8.01	4.48	0.21	31.86	8.22
18	Orissa	41.72	139.12	37.46	23.57	41.04	161.69
19	Punjab	2.00	3.40	2.00	1.95	2.00	5.35
20	Rajastan	11.09	54.41	15.42	23.44	2.11	77.85
21	Sikkim	37.89	2.08	4.48	0.03	33.78	2.11
22	Tamil Nadu	3.68	12.46	9.64	31.61	6.61	44.07
23	Tripura	37.89	10.70	4.48	0.28	31.88	10.98
24	Uttar Pradesh	24.25	373.16	26.17	111.25	24.67	484.41
25	West Bengal	21.98	137.53	8.98	22.21	18.30	159.74
26	A&N Island	3.68	0.10	9.64	0.14	5.82	0.24
27	Chandigarh	2.00	0.02	2.00	0.19	2.00	0.21
28	Dadra & Nagar Haveli	NA	NA	NA	NA	NA	NA
29	Daman& Diu	NA	NA	NA	NA	NA	NA
30	Delhi	NA	NA	NA	NA	NA	NA
31	Lekshadeweep	1.63	0.01	9.34	0.02	4.59	0.03
32	Pondicherry	3.68	0.13	9.64	0.70	7.72	0.83
	All India	21.09	1704.86	14.99	492.27	19.33	2197.13

Source : India's Five Year Plan (Complete Document) First Five Year Plan 1951 - 56 to Tenth Five Year Plan 2002-07 - Mid Term Appraisal June 28, 2005. Planning Commission, Government of India.

Appendix 14.2

Community Based Organisation Status in Rural Areas

As on 30-11-2005

Sl. No	District	No. of GPs	No. of NHG formed	No. of ADS formed	No. of Families Covered	No. of families Started Thrift	Amount of Thrift (Rs.)	Amount of Loan (Rs.)
1	Trivandrum	78	15380	1091	323639	319825	575859460	972874725
2	Kollam	69	11635	1031	220468	220468	376579373	726906175
3	Pathanamthitta	54	5851	526	115963	115963	226144728	372421511
4	Alappuzha	73	11380	931	233702	233702	410129355	906241530
	Regional Total	**274**	**44046**	**3579**	**893772**	**889958**	**1588712921**	**2978243941**
5	Kottayam	74	8988	954	193908	192885	280467616	450647447
6	Idukki	51	8440	608	152831	152535	369706371	900617541
7	Ernakulam	88	10669	1090	187341	184906	375088650	777928249
8	Thrissur	92	14524	1224	261447	261447	533418403	1986411834
9	Palakkad	90	17672	1231	305037	308602	458350098	899495709
	Regional Total	**395**	**60293**	**5105**	**1100564**	**1100375**	**2017031138**	**5015100780**
10	Malappuram	100	10877	1460	254181	254181	372942577	481300273
11	Kozhikkode	77	12762	1090	272388	283234	530085438	1386013543
12	Wayanad	25	5555	354	92192	92192	231874700	880806271
13	Kannur	81	9415	1046	197998	197998	400357570	1066322615
14	Kasargode	39	5041	528	112330	111350	229095849	791289944
	Regional Total	**322**	**43650**	**4478**	**929089**	**918955**	**1764356134**	**4605732646**
	Total	**981**	**147989**	**13262**	**2923425**	**2909288**	**5370100193**	**12589077387**
15	**Tribal (5 Districts)**		2036		**32802**	**32762**	**54114722**	**107612661**
	Grand Total		**150025**	**13262**	**2956227**	**2942050**	**5424214915**	**12706690028**

Source : Kudumbashree, Government of Kerala

Appendix 14.3

Linkage Banking

Sl No	Name of District	No. of NHGs Graded	No. of NHGs Linked	Amount of Loan Disbursed (Rs in Lakhs)
01	Trivandrum	10651	6351	2245.76
02	Kollam	8976	5626	3304.77
03	Pathanamthitta	3010	1957	1415.77
04	Alappuzha	11040	8414	3856.81
05	Kottayam	3996	3364	1130.09
06	Idukki	4818	3260	2097.69
07	Ernakulam	7656	6830	1605.68
08	Thrissur	4919	4847	2396.71
09	Palakkad	9953	6179	2216.47
10	Malappuram	4107	3766	1429.93
11	Kozhikkode	9030	4287	1717.62
12	Wayanad	6200	6050	3163.24
13	Kannur	6360	3410	1226.47
14	Kasaragod	3313	2021	736.92
	Total	**93979**	**66362**	**28543.88**

Source : Kudumbashree, Government of Kerala

Appendix 14.4

District Wise Details of Lease Land Farming

	Name of District	No. of GPs	No. of NHGs	No. of families	Area in Acres
01	Trivandrum	68	1684	21704	1834.29
02	Kollam	69	1839	9268	1002.81
03	Pathanamthitta	50	1562	12435	4106.90
04	Alappuzha	68	5129	64886	7381.09
05	Kottayam	64	5205	12211	1528.85
06	Idukki	48	6956	33388	8989.00
07	Ernakulam	80	3239	34029	7116.01
08	Thrissur	78	1024	15020	1968.82
09	Palakkad	91	2415	19674	4195.00
10	Malappuram	66	1059	6872	5177.20
11	Kozhikkode	69	1416	10051	1667.48
12	Wayanad	26	1073	15652	3586.00
13	Kannur	79	3018	26189	2901.60
14	Kasaragud	39	1919	15664	1782.32
	Total	**895**	**33519**	**327063**	**53237.36**

Source: Kudumbashree, Government of Kerala

Appendix 14.5

Financial Achivement under SGSY,IAY,JGSY/EAS, SGRY

(Rs. Lakhs)

Sr No	Year	SGSY		IAY		JGSY		EAS		SGRY		Total	
		Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2002-03	2133 30	2062 58	4984 26	4617 34	5440 51	3731 46	5741.01	4060 16	0 00	0 00	18269 08	14351.54
2	2003-04	2127 44	2054 15	6245 27	5767.77	6725 13	4496 65	7535 14	5628 46	0 00	0 00	22632 98	17947 04
3	2004 05	2514.48	2445.14	8212.78	7839 16	0 00	0 00	0 00	0 00	16897 32	13565 39	27624.58	23849 69
4	2005-06 (Up to October 2005)	1218 21	1081 44	4373 06	3527 56	0 00	0 00	0.00	0 00	10370 67	5797 12	15961 94	10436.12
	Total	7963.43	7643 29	23815 37	21651 83	12165 64	8228 11	13276 15	9678.65	27267 99	19362 51	84488.58	66584 39

Source Commissionarate of Rural Development

Appendix 14.6

District-wise distribution of Surplus Land from 1-4-2004 to 31-10-2005

Districts	Number of Beneficiaries				Land Distributed (Area in Acres)			
	SCs	STs	Others	Total	SC	STs	Others	Total
1	2	3	4	5	6	7	8	9
Thiruvananthapuram								
Kollam								
Pathanamthitta								
Alappuzha	8		71	79	5		32	37
Kottayam			5	5				
Idukki								
Ernakulam	11		7	18				
Thrissur								
Palakkad	29	6	58	93	2		3	5
Malappuram	31	61	90	182	6	46	19	71
Kozhikkode	6		3	9				0
Wayanad	22	29	63	114	2	2	91	95
Kannur	509	235	1027	1771	104	133	276	513
Kasaragod	7	26	42	75	1	5	11	17
Total	**623**	**357**	**1366**	**2346**	**120**	**186**	**432**	**738**

Source: Survey and Land Records Department

Appendix 14.7

District wise Urban Thrift & Credit Operation - as on 30-11-2005

(Rs. Lakhs)

Sl. No	Name of District	No. of NHG	No. of ADS	No. of CDS	Amount of Thrift	Amount of Loan	No. of families started Thrift
1	Thiruvananthapuram	2174	125	5	337.32	253.47	75209
2	Kollam	820	61	3	306.65	315.64	20747
3	Pathanamthitta	405	28	3	61.68	68.76	8090
4	Alappuzha	871	81	5	385.9	313	24823
5	Kottayam	364	38	4	89.22	77.27	9791
6	Idukki	60	5	1	25.9	18.05	2100
7	Ernakulam	1756	146	10	1138.91	1502.56	50686
8	Thrissur	627	64	7	175.04	169.06	22224
9	Palakkad	1134	97	4	205.55	421.18	26325
10	Malappuram	613	80	5	130.82	72.58	17536
11	Kozhikkode	984	68	3	395.89	387.07	28173
12	Wayanad	75	11	[illegible]	25.97	24.56	1669
13	Kannur	487	61	6	100.46	73.88	12181
14	Kasaragod	317	29	2	47.71	23.19	6879
	Total	10687	894	59	3357.02	3720.25	306.433

Source . Kudumbashree, Thiruvananthapuram

Appendix 14.8
List of Group Micro Enterprises in Urban Area

Sl. No.	Name of Project	No. of Units
1	Direct Marketing	104
2	IT Unit	67
3	Soap making unit	55
4	Canteen	60
5	Catering Service	54
6	Dairy unit	48
7	Ethnic Delicacies	53
8	IT @ School	45
9	Garments/Readymade	45
10	Hotel	43
11	Tender Coconut selling unit	32
12	Provision Store	34
13	Paper Cover & Paper Bag	45
14	Scrashree (Coconut processing/Oil extraction unit)	30
15	Mat Weaving/Cover making unit	27
16	Super Market	30
17	Curry Powder unit	27
18	Umbrella Manufacturing	22
19	Mobile market (Pick up van)	20
20	Laundry unit	26
21	Solid waste processing unit	20
22	Remedial Education Centre	19
23	Bakery/Sweet stall unit	21
24	Tailoring unit	30
25	Book Binding unit	20
26	Food Products	25
27	Agricultural Nursery	19
28	Sanitation unit	20
29	Clean Kerala Business	35
30	Grinding unit	16
31	KSRTC Canteen	16
32	Fish vending unit	15
33	Palm mat unit	11
34	Consumer Store/Traders	12
35	Pickles making	15
36	Bag manufacturing	11
37	Coir Yarn/Products	19

Appendix 14.8 (Contd.)

List of Group Micro Enterprises in Urban Area

Sl. No.	Name of Project	No. of Units
38	Vanila Nursery	8
39	Cloth Bag unit	5
40	Bamboo unit	7
41	Chappel making	8
42	Coconut Products	14
43	Metal crushing unit	6
44	Neighbours - Support Services to Friends	4
45	Note Book Manufacturing	8
46	Beauty parlour	6
47	Bricks/Hollow bricks	7
48	Flowers & Garlands	6
49	Handicrafts	5
50	Toy manufacturing	7
51	Computer Hardware unit	5
52	Hospital Restaurant	3
53	Telephone Repair	5
54	Herbal Nursery	6
55	Nursery unit	4
56	Prasopthika	4
57	Rice/Rice powder business	5
58	Chicken Stall	4
59	Cooking mate/Gas light/Decorator (Hiring service)	3
60	Electronic unit	3
61	Fish/Sea shell processing	14
62	Instant Mix manufacturing unit (Palada)	3
63	Paddy Cultivation	3
64	Pappad making unit	4
65	Limited Services	3
66	Water Meter Repair unit	3
67	Multi Purpose Job Club	5
68	Agarbathi/Candle unit	3
69	Atta packing	2
70	Chips unit	2
71	Construction work of women	2
72	Courier Service	2
73	Day Care centre	3
74	Documentation/File works unit	2
75	Electronic Choke Assembling unit	2
76	Furniture manufacturing	2
77	Ice Cream Parlour	2

Appendix 14.8 (Contd.)

List of Group Micro Enterprises in Urban Area

Sl. No.	Name of Project	No. of Units
78	Marketing unit	2
79	Ornaments Manufacturing unit	2
80	Painting unit	2
81	Pandhal unit	2
82	Poultry farm	2
83	Printing unit	2
84	Shawl/Pardha Making	2
85	Tarpolin production/Crackovin	2
86	Women Hostel	2
87	Fire wood	2
88	Photo Album	2
89	Sound system	2
90	Bio Technology	1
91	Cashew nut processing	1
92	Cement products	1
93	Handloom weaving	1
94	Home Nursing unit	1
95	Net works	1
96	Plastic chair & mat	1
97	Pottery unit	1
98	Soda making	1
99	Solar Cooker	1
100	Vegetable Vending	1
101	Vehicle Service	1
102	Wire Coir Carpet making unit	1
103	Embroidary	1
104	Mosquito net making	1
105	Sandhwanam (Health volunteer group)	3
106	Hollow bricks unit	1
	Total	1418

Source: Kudumbashree, Thiruvananthapuram

Appendix 14.9

District-wise Number of beneficiaries in Welfare Institutions - 2005

Sl No	Name of Welfare Institution	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasargod	Total	Sanctioned strength
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Mahila Mandir	25	11	15	22	20		25	14	17	24	21		17	5	216	300
2	Home for Mentally Deficient children											24				24	50
3	Home for Physically Handicapped	24						15				19				58	75
4	Home for the cured mental patients (Asha Bhavan)	53						56	22			53				184	200
5	Care Home for Disabled Children			16										6		30	70
5	Old Age Home	105	27		29	28		39	12		20	26		18		334	1000
7	After Care Home for adolescents		15									65		45		85	250
8	Observation Home	58	34	24		22		29	58	11	13	54	9	15	43	409	450
9	Juvenile Homes	1111	595			911			948			40				6810	9000
10	Government Balasadan																100
11	Rescue Home			5							18					23	200
12	Children's home			34												34	50
13	Home for Physically Handicapped (Aged)			16		24				17			29			86	100
14	Day Care Centre & Old Age Home	18														18	125
15	Pratheeksha bhavan										29					29	50
16	Short Stay Homes											17				17	50
	Institutions run by NGO's																
17	Orphanages	2432	1900	1310	1412	3018	1236	4684	2016	1804	3812	4318	1008	2434	943	34005	52202
18	Sending Home	86		32	59		78	62								417	323
19	Beggar homes	25	122			66			36					32		392	419
20	Home for Aged Women			3			22			19				20		73	
21	Oldage homes	362	546	182	61	782	312	1020	763	438		720	312	816	512	6823	14635

Source: Social Welfare Department

Appendix 14.10

Disability in Kerala - 2001

Type of Disability	Rural			Urban			Total		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10
Seeing	251284	124846	126438	83338	42506	40832	334622	167352	167270
Speech	51003	28299	22704	16063	8880	7183	67066	37179	29887
Hearing	51066	28145	32921	18647	8311	10336	79713	36456	43257
Movement	178587	107646	70941	58120	34713	24407	237707	142359	95348
Mental	105842	55555	50287	35844	19449	16395	141686	75004	66682

Source: Census of India - 2001

Appendix 14.11

Disability in India - 2001

Type of Disability	Rural			Urban			Total		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10
Seeing	7873383	4222717	3650666	2761498	1509621	1251877	1.1E+07	5732338	4902543
Speech	1243854	713966	529888	397014	228129	168885	1640868	942095	698773
Hearing	1022815	549002	473814	239906	124795	114111	1261722	673797	587925
Movement	4654552	2975127	1679425	1450925	927625	523300	6105477	3902752	2202725
Mental	1593777	949373	644404	670044	405280	264764	2263821	1354653	909168

Source: Census of India - 2001

Appendix 14.12

Details of Self-Employment Programme through Kerala State Handicapped Persons Welfare Corporation-(2000 -2005)

Year	No.of Applicant	No.of Applications Forwarded to Bank	No of Applications Sanctioned	Amount Released by Corporation	No of Aids & Appliances distributed	Amount (Rs.in lakhs)
1	2	3	4	5	6	7
2000-01	2326	2326	533	12[illegible]06	4002	66.42
2001-02	1348	1348	242	48[illegible]000	1077	[illegible]6.1
2002-03	1303	1303	281	562500	1644	33.07
2003-04	1256	1256	344	756535	1166	27.29
2004-05	1417	1417	314	773475	1358	34.26

Source KSHPWC Trivm

Appendix 14.13

Major Pension Schemes in Kerala through Revenue Deprtment - District-wise Beneficiaries 2005

Sl.No	Name of Scheme	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasargod	State Total
1	Widow/Destitute Pension Scheme	30541	31163	[illegible]4215	7448	11451	2963	19302	22370	21290	30474	27691	5652	16318	[illegible]0825	251704
2	Special Pension for persons with Disabilities	20537	16654	13334	5634	6755	3002	13216	16179	13169	17852	18342	1450	10620	5765	164009
3	Leprosy Cancer patients	2216	2503	571	236	186	107	441	395	210	220	385	99	120	40	7786
4	Freedom Fighters	1567	808	1330	56	65	134	304	259	297	630	952	39	1446	165	8117
5	National Old Age Pension	14590	13304	7469	3555	8095	3306	13051	12290	17551	13600	7559	[illegible]673	9269	5104	131346
6	Unmarried women above	2018	990	1925	671	1293	48	2130	5545	2602	1708	4534	82	3655	524	27625

Source:Land Revenue Department

Appendix 14.14

Details of Social Security Pension Schemes in Kerala - 2005

Sl No	Welfare institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	5	6	7	8	9	10	
	Agricultural Workers Welfare Scheme	1 Pension - Above 60 years Annual family income Rs 11 000	1980	Rs 40/m	Rs 45/m(1985)	Rs 60/m(1987)	Rs 70/m(1991)	Rs 80/m(1998)	Rs 100/m (1997)	Rs 120/m (2000)
		2 Retirement benefit minimum one year membership	1990	Rs500 to Rs5000						
2	Kerala Widow Pension Scheme	Death of husband/separated/unmarried Income Rs 3000/m	1973	Rs.55/m	Rs 65/m(1991)	Rs 80/m(1996)	Rs 100/m(1998)	Rs 110/m(1997)		
3	Special Pension for the Disabled and Mentally Retarded Persons	40% Disability Medical Certificate Family income below 500/m	1982	Rs.75/m	Rs. 100/m(2000)	Rs 150/m(2003)				
4	Pension to Sportsmen	Income Rs 1100 per annum Inter District/State level participation	1979	Below 60 yrs Rs 100/m	Below 60 yrs Rs 200/m(1993)	Below 60 yrs Rs 400/m(1999)				
				60 to 70 yrs Rs 150/m	60 to 70 yrs Rs 300/m	60 to 70 yrs Rs 600/m				
				70 yrs and above Rs 200/m	70 yrs and above Rs400/m	70 yrs and above Rs800/m				
5	IInd World War Veterans	Participated in the 2nd World War Non recipient of any other assistance Annual income Rs 6000	1997	Rs 200/m	Rs 300/m(2000)	Rs 400/m(2003)				
6	Freedom Fighters Pension Scheme	Participated in the National Movement	1971	Rs 300/m	Rs 1000/m(1996)	Rs 1500/m(1997)	Rs 2000/m,1998	Rs 3000/m(2000)		
7	Financial Assistance to Leprosy and Cancer Patients	Certificate from HoA/PHC Income Rs 200/m	1976	Rs 50/m	Rs 115/m(1991)	Rs 200/m(1997)				
8	Pension to Journalists' Dependents	1 Living Journalist who are unemployed due to ill health and average	1976	Rs 300/m	Rs 500/m(1997)					
		2 Pension to journalist who retired after 10 year service	1991	Rs 1000/m	Rs 1600/m(2001)					
		3 Pension to daily workers Minimum 10 year service for full pension. 50% pension for 5 year service	2000	Rs 1000/m						

Appendix 14.14 (Contd.)

Details of Social Security Pension Schemes in Kerala - 2005

Sl No	Welfare Institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	5	6	7	8	9	10	
9	Welfare Fund for Cine Artists	Cine Artists in distress. Annual family income Rs 12000	1981	Rs 300/m	Rs 400/m(1987)	Rs 500/m(1998)				
10	Kerala Cashew Workers Welfare Schemes	1 Cashew Workers above the age of 60. Incapacity to do work	1989	Rs 75/m	Rs 100/m(1992)	Rs 125/m(1998)				
		2 Death benefit to nominee	1991	Rs 250/m	Rs 500/m(1995)	Rs 1000(1998)				
11	Kerala Coir Workers Welfare Scheme	1 Pension - Workers above the age of 60 years	1989	Rs 75/m	Rs100/m(1997)					
		2 Family Pension - Death of the member worker	1989	Rs 75/m						
12	Kerala Construction Workers Welfare Scheme	1 Pension - Workers having one year service 60 years of age	1991	Rs 75/m	Rs 100/m(1995)	Rs 150/m(1998)	Rs 200/m(2000)			
		2 Disability pension - Medical Certificate	1990	Rs 150/m						
		3 Family Pension - Death of the Pensioner	1998	Rs 100/m						
13	Kerala Khadi Workers Welfare Scheme	10 years service 60 years of age	1990	Rs 60/m	Rs 150/m(1997)	Rs 100 to Rs 300(1999)				
14	Kerala Handloom Workers Welfare Scheme	1 Pension - Above the age of 60 years at least 3 years service	1989	Rs 75/m	Rs100/m(1997)					
		2 Self employed pension	1989	Rs 100/m						
		3 Death Benefit	1990	Rs 1000/m	Rs 5000/m 1998)					
15	Kerala Abkari Workers Welfare Scheme	1 Pension - 60 years Completed 3 years continuous service	1993	Rs 115/m	Rs 200/m(1995)					
		2 Death benefit		Rs 10000						
		3 Permanent Disability Benefit		Rs 5000						

Appendix 14.14 (Contd.)

Details of Social Security Pension Schemes in Kerala - 2005

S No.	Welfare Institution	Qualifying condition	Year	Year of Revision and Rate of assistance					
1	2	3	4	5	6	7	8	9	10
16	Kerala Toddy Workers Welfare Scheme	1 Pension - Not less than 10 years membership	1997	Rs 100/m					
		2 Assistance to Disabled workers	1988	Rs 100/m	Rs 125/m(1992)	Rs 150/m(1994)			
17	Kerala Head Load Workers Welfare Scheme	1 Death benefit	1997	Normal death Rs 10000 Accidental death Rs.20000	Rs 15000 and Rs 30000 respectively				
		2 Invalid Pension	1993	Rs 150/m	Rs 200 in Rs 2400(2000)				
18	Kerala Motor Workers Welfare Scheme	1 Death benefit - 3 months continuous service	1988	Rs 5000	Rs 25000(2000)				
		2 Retirement benefit		Rs 12000 for 5years service and Rs 60000 for 15 years service					
19	Kerala Fishermen Welfare Scheme	1 Pension Completed 60 years Annual Income Rs 5000	1997	Rs 75/m	Rs 85/m(1992)	Rs 100/m(1998)	Rs 120/m(2003)		
		2 Accidental death/missing - 18 to 70 years	1988	Rs 15000	Rs 21000(1990)	Rs 25000(1992)	Rs.50000(1998)	Rs 100000(1999)	
		3 Permanent disability	1988	Rs 7500	Rs 10500(1990)	Rs 25000(1992)	Rs 50000(1998)	Rs 100000(1999)	
20	Kerala Tailoring Workers Welfare Scheme	1 Pension - Completed 60 years Minimum 3 years service	2000	Rs 100 to Rs 430/m					
		2 Disability Pension	1997	Rs 130/m					
21	Kerala Artisans & Skilled Workers Welfare Scheme	1 60 years and above and is a member	1988	Rs 50000 for 40 years of service Rs 600 for 2 yrs service					
		2 Death Benefit		Rs 10000					
		3 Permanent disability		Rs 1000					

Appendix 14.14 (Contd.)

Details of Social Security Pension Schemes in Kerala - 2005

Sl No	Welfare Institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	5	6	7	8	9	10	
22	Financial Assistance to Widows for the marriage of their daughter	Family annual income Rs 10000 Individual Income Rs 6000	1978	Rs 1000	Rs 1250(1991)	Rs 2000(1995)	Rs 2500(1998)	Rs 5000(2002)		
23	Tree Climbers Welfare Scheme	Workers in the event of fatal accidents and permanent total disability following the accidents	1980	Rs. 10000						
24	Kerala National Employment Services	1. Unemployment Assistance Passed SSLC registered at employment exchange for more than 3 years Age limit 18-35 years Family annual income Rs 12000 should not be a student	1982	Rs 50/m	Rs 60/m(1987)	Rs 70/m(1991)	Rs 80/m(1996)	Rs 90/m(1997)	Rs 100/m(1998)	Rs 120/m(2000)
		2. Self Employment Scheme for the registered unemployed Persons between 21-40 years Annual Family income Rs 24000	1989	Rs 30000 to Rs 50000/ Loan 20% loan amount subsidy						
25	National Old Age Pension Scheme	Above 65 years Annual Family Income below Rs 11000	1995	Rs 100/m	Rs 110/m(1996)					
26	Ration Dealers Welfare Fund Scheme	1. Pension completed 65 years Minimum 10 years of service	2000	Rs 150/m						
		2. Death Benefit one year minimum membership	2000	Rs 10000 to the nominee						
27	Beedi and Cigar Workers Welfare Scheme	1. Pension - Completion of 60 years/Minimum 5 years service	1997	Rs 100/m						
		2. Retirement benefit	1997	Rs 10000						
28	Pension to unmarried women	Above 50 years Annual family income below Rs 6000 Not covered under any other social security schemes	2001	Rs 110/m						

Source: Different Welfare Fund Boards/Departments

Appendix 14.15

Major Welfare Measures in the Welfare Fund Boards in Kerala - 2005

Sl. No	Name of Welfare Fund Boards	Maternity benefits	Marriage Assistance	Medical Assistance	Death Relief	Pension (per month)	Family Pension (per month)	Invalid Pension	Permanent disability	Educational Assistance	House Building Advance
1	2	3	4	5	6	7	8	9	10	11	12
1	Kerala Agricultural Workers Welfare Fund Board	1000	2000	1000	1000	200	0	0	0	NA	0
2	Kerala Building and Other Construction Workers Welfare Board	2000	3000 (Daughters) 2000(Sons)	300 to 5000	15000 to 100000	200	100	150	50000	NA	50000
3	Kerala Handicraft Workers Welfare Fund Board	0	2000	0	5000	100	0	0	5000	250 to 2000	0
4	Kerala Fishermens Welfare Fund Board	0	0	2000	100000	0	0	0	100000	0	0
5	Kerala Toddy Workers Welfare Fund Board	0	0	7000 (cancer)	5000	150	0	0	150	0	0
6	Kerala Ration Dealers Welfare Fund	0	0	5000 to 15000	0	150	0	0	0	2500	0
7	Kerala Abkari Workers Welfare Fund Board	0	0	0	10000	200 to 300	0	0	10000	0	0
8	Kerala Tailoring Workers Welfare Scheme	0	1000	0	10000	100 to 430	0	0	0	500 to 3000	0
9	Kerala Headload Workers Welfare Board	0	0	0	0	250 to 2400	125	250	0	0	0
10	Kerala Coir Workers Welfare Fund Board	0	1000	350	5000	100	75	0	2500	500 to 1500	10000
11	Kerala Cashew Workers Relief Welfare Fund Board	0	0	0	1000 pensioner-500	125 to 200	0	0	0	0	0

Source: Different Welfare Fund Boards

Appendix 14.16

District-wise ICDS beneficiaries in Kerala

Sl. No	Name of District	0-3 years	3-6 years	Pregnant and lactating women
1	2	3	4	5
1	Thiruvananthapuram	31269	27897	15271
2	Kollam	27812	36338	11700
3	Pathanamthitta	9239	17278	4342
4	Alappuzha	21628	31454	10435
5	Kottayam	21299	30560	9423
6	Idukki	19983	24192	9171
7	Ernakulam	28421	42547	11878
8	Thrissur	27355	29886	12613
9	Palakkad	43810	36097	14421
10	Malappuram	55556	58089	20622
11	Kozhikkode	28623	46309	13928
12	Wayanad	9802	10940	4921
13	Kannur	15903	29832	7203
14	Kasaragod	18119	21303	5224
	Total	**358849**	**442732**	**151152**

Source: Social Welfare Department

Appendix 14.17
ICDS PROJECTS (GENERAL) - 2005

Sl.No.	Name of Project	Year of sanctioning	Type of project	No. of AWCs	
				Sanctioned	Operational
1	2	3	4	5	6
	Thiruvananthapuram				
1	Thiruvananthapuram (Ulli)	1977-78	Urban	103	103
2	Athiyannoor	1982-83	Rural	147	147
3	Chirayinkeezh	1981 82	Rural	146	146
4	Kazhakuttam	1994-95	Rural	230	230
5	Varkala	1993-94	Rural	140	140
		Total		**766**	**766**
	Kollam				
6	Chavara	1978-79	Rural	152	152
7	Oachira	1980-81	Rural	110	109
8	Anchalummoodu	1982-83	Rural	114	114
		Total		**376**	**375**
	ALAPPUZHA				
	Pattanacadu	1980-81	Rural	195	195
	Thykattusserry	1979-80	Rural	107	107
	Kanjikuzhi	1982 83	Rural	159	159
	Alappuzha(U)	1982 83	Rural	147	147
	Campakulam	1982 83	Rural	118	118
	Amabalappuzha	1981 82	Rural	117	117
	Harippad	1982-83	Rural	118	118
	Muthukulam	1982-83	Rural	182	182
		Total		**1143**	**1143**
	Kottayam				
	Vaikom	1979-80	Rural	108	108
		Total		**108**	**108**
	Eranakulam				
	Vypin				
	North Paravur	1983-84	Rural	125	125
	Mattanchery	1980-81	Rural	118	118
	Kochi(U)	1979-80	Urban	110	110
		1994-95	Urban	179	179
		Total		**532**	**532**

	Palakkad				
	Attappad	1979-80	Tribal	126	125
		Total		**126**	**125**
	Malappuram				
	Punnam	1980-81	Rural	113	113
	Tanur	1983-84	Rural	135	135
	Tiru	1982-83	Rural	149	149
	Thirurangadi	1985-86	Rural	204	204
		Total		**601**	**601**
	Kozhikode				
	Meladi	1982 83	Rural	80	80
	Kozhikode (UI)	1977-78	Urban	101	101
	Kozhikode(UII)	1983-84	Urban	111	111
		Total		**292**	**292**
	Wayanad				
	Mananthavadi	1978-79	Rural	206	206
		Total		**206**	**206**
	Kannur				
	Kannur (R)	1993-94	Rural	144	143
	Payyannur	1993-94	Rural	336	336
	Thaliparamaba	1981 82	Rural	224	224
	Halassery	1993-94	Rural	243	243
		Total		**947**	**946**
	Kasaragod				
	Kanhangad	1980-81	Rural	227	227
	Kasargod	1985-86	Rural	269	269
	Manjeswaram	1993-94	Rural	260	260
		Total		**756**	**756**
	GRAND TOTAL			**5853**	**5851**

WORLD BANK ASSITED PHASE III PROJECTS

Sl No	Name of projects	Year of sanctioning		No of AWCs Sanctioned strength	Functioning as on 30.09.05
	THIURUVANANTHAPURAM				
1	Nedumangad	1999-2000	Rural	150	150
2	Vellanad	2000-01	Rural	212	212
3	Parassala	2000-01	Rural	172	172
	TOTAL			**534**	**534**
	KOLLAM				
4	Kaunagappally	1999-2000	Rural	145	145
5	Mukhathala	2000-01	Rural	254	254
6	Kollam Punalur	2000-01	Urban	186	186
	TOTAL			**585**	**585**
	PATHANAMTHITTA				
7	Mallappally	1999-2000	Rura	116	116
8	Koipuram	2000-01	Rural	122	122
	TOTAL			**238**	**238**
	ALAPPUZHA				
9	Ariyad	1999-2000	Rural	112	112
10	Vellyanad	1999-2000	Rural	60	60
	TOTAL			**202**	**202**
	KOTTAYAM				
11	Kadutturuthy	1999-2000	Rural	157	157
12	Pallom	1999-2000	Rural	235	235
13	Vazhoor	1999-2000	Rural	111	111
14	Uzhavoor	2000-01	Rural	144	144
15	Ettumanoor	2000-01	Rural	192	192
16	Erattupetta	2000-01	Rural	100	100
	TOTAL			**939**	**939**
	ERANAKULAM				
17	Koovappady	1999-00	Rural	133	133
18	Parakkadav	1999-2000	Rural	127	127
19	Vazhakulam	1999-2000	Rural	179	179
20	Pampakuda	1999-00	Rural	92	92
21	Palluruthy	2000-01	Rural	60	60
22	Alangad	2000-01	Rural	115	115
23	Angamali	2000-01	Rural	192	192
24	Kothamangalam	2000-01	Rural	179	179
25	Edappally	2000-01	Rural	87	87
26	Muvattupuzha	2000-01	Rural	137	137
	TOTAL			**1301**	**1301**

	THRISSUR				
27	Puzhakkal	1999-00	Rural	165	165
28	Ollukkara	1999-2000	Rural	225	225
29	Cherpu	2000-01	Rural	165	165
30	Kodungallu	2000-01	Rural	124	124
31	Kodakara	2000-01	Rural	196	196
32	Muthilakom	2000-01	Rural	140	140
	TOTAL			**1015**	**1015**
	PALAKKAD				
33	Malampuzha(U)	1999-00	Rural	167	167
	TOTAL			**167**	**167**
	MALAPPURAM				
34	Malapouram (U)	2000-01	Urban	150	150
	TOTAL			**150**	**150**
	KOZHIKODE				
35	Chelannur	1999-00	Rural	183	183
36	Kunnummal	1999-00	Rural	175	175
37	Panthalayani	1999-00	Rural	165	165
38	Kozhikode (C	1999-00	Rural	257	257
39	Kozhikode (U II)	2000-01	Rural	152	152
40	Thodannur	2000-01	Rural	119	119
41	Tuneri	2000-01	Rural	126	126
42	Vadakara	2000-01	Rural	114	113
	TOTAL			**1291**	**1290**
	KASARAGOD				
43	Neeleswaram	1999-00	Rural	242	242
				242	**242**
	TOTAL			**6664**	**6662**

GENERAL ICDS PROJECTS

Sl No	Name of Projects	Year of Sanctioning		No of AWCs	
				Sanctioned strength	Functioning as on 30 9 05
	THIRUVANANTHAPURAM				
1	Thiruvananthapuram (U II)	1994-95	Urban	105	105
2	Thiruvananthapuram (R)	1982-83	Rural	114	114
3	Kilimanoor	1993-94	Rural	165	165
4	Nemom	1982-83	Rural	117	117
5	Perumkadavila	1982-83	Rural	147	147
6	Vamanapuram	1986-87	Rural	219	219
	TOTAL			**868**	**868**
	KOLLAM				
7	Sasthamcotta	1982-83	Rural	92	92
8	Ithikkara	1983-84	Rural	141	141
9	Veliikavala	1982-83	Rural	179	179
10	Chittumala	1985-86	Rural	123	123
11	Pathanapuram	1988-89	Rural	172	172
12	Anchal	1993-94	Rural	199	199
13	Kottanakara	1993-94	Rural	144	144
14	Chadayamangalam			203	203
	TOTAL			**1253**	**1253**
	PATHANAMTHITTA				
15	Pullikeezhu	1985-86	Rural	121	121
16	Elanthoor	1994-95	Rural	105	105
17	Ranni	1994-95	Rural	208	208
18	Pandalam	1993-94	Rural	103	103
19	Konni	1988-89	Rural	179	179
20	Kulanada	1989-90	Rural	85	85
21	Parakode	1982-83	Rural	153	153
	TOTAL			**954**	**954**
	ALAPPUZHA				
22	Mavelikkara	1993-94	Rural	117	117
23	Bharanikavu	1993-94	Rural	183	183
24	Chengannur	1994-95	Rural	171	171
	TOTAL			**471**	**471**

	KOTTATAM				
25	Lalam	1982-83	Rura	114	114
26	Pampady	1982-83	Rural	129	129
27	Madappally	1985-86	Rural	235	235
28	Kanjirapally	1989-90	Rural	223	223
	TOTAL			**701**	**701**
	IDUKKI				
29	Adimali	1990-91	Rural	143	142
30	Azhutha	1986-87	Rural	192	192
31	Devikulam	1983-84	Rural	116	112
32	Elamdesom	1979-80	Rural	111	111
33	Idukki	1982-83	Rural	124	125
34	Kattappana	1988-89	Rural	209	209
35	Nedumkandam	1991-92	Rural	170	170
36	Thoodupuzha	1993-94	Rural	105	105
	TOTAL			**1170**	**1166**
	ERANAKULAM				
37	Vadavucodu	1982-83	Rural	128	128
38	Mulamthuruthy	1989-90	Rural	140	140
39	Vattila	1993-94	Rural	50	50
	TOTAL			318	318
	THRISSUR				
40	Anthikad	1980-81	Rural	101	101
41	Chavakkadu	1978-79	Rural	199	197
42	Chalakudy	1983-84	Rural	154	154
43	Chowannur	1994-95	Rural	176	170
44	Irinjalakuda	1989-90	Rural	135	134
45	Mala	1982-83	Rural	118	118
46	Mullassery	1988-89	Rural	96	96
47	Pazhayannoor	1986-87	Rural	166	166
48	Thallikulam	1985-86	Rural	109	109
49	Velfanga loor	1993-94	Rural	98	98
50	Wadakanchery	1993-94	Rura	174	174
	TOTAL			**1526**	1517
	PALAKKAD				
51	Kuzhalmannam	1980-81	Rural	85	85
52	Kollangodu	1981 82	Rural	103	103
53	Alathoor	1983 84	Rural	145	145
54	Sreekrishnapuram	1983 84	Rural	137	137
55	Chittoor	1986-87	Rural	160	160
56	Ottappalam	1986-87	Rural	174	174
57	Mannarkadu	1988-89	Rura	275	272
58	Thirthala	1989-90	Rura	187	187
59	Plalkkad	1990 91	Rural	231	231
60	Pattambi	1991 92	Rural	226	226
61	Nenmara	1993-94	Rural	72	72
	TOTAL			**1795**	**1792**

	MALAPPURAM				
62	Andathodu	1993-94	Rural	134	134
63	Areacode (Manjeri)	1983-84	Rural	182	182
64	Kodotty	1981-82	Rural	165	165
65	Kuttipuram	1991-92	Rural	196	199
66	Malappuram ®	1995-94	Rural	174	174
67	Mankada	1993-94	Rural	228	228
68	Nilambur	1993-94	Rural	211	211
69	Perinthalmanna	1983-84	Rural	168	168
70	Vengara	1975-76	Rural	172	171
71	Wandoor	1990-91	Rural	290	290
	TOTAL			**1920**	**1922**
	KOZHOKODE				
72	Balusseery	1989-90	Rural	227	227
73	Koduvally	1983-84	Rural	133	132
74	Perambra	1983-84	Rural	150	150
75	Kunnamangalam	1983-84	Rural	152	152
	TOTAL			**662**	**661**
	WAYANAD				
76	Sulthan battery	1982-83	Rural	166	166
77	Kalpatta	1982-83	Rural	205	205
	TOTAL			**371**	**371**
	KANNUR				
78	Kannur (U)	1982-83	Rural	34	34
79	Kuthuparamba	1983 84	Rural	161	161
80	Peravoor	1985-87	Rural	136	136
81	Irikkur	1993-94	Rura.	215	215
82	Edakkad	1982-83	Rural	157	157
83	Iritty	1993-94	Rural	163	163
	TOTAL			**867**	**866**
	GRANT TOTAL			**12876**	**12860**

ABSTRACT as on September, 2005

Sl.No	Name of Projects	No. of Anganwadis Operational as on 30 9 05		No. of AWCs	
		Rural	Urban	Sanctioned strength	Functioning as on 30 9 05
1	General ICDS Projects 83			12876	12860
2	Strengthing Projects 37			5853	5851
3	World Bank Projects 43			6664	6662
	TOTAL 163			25393	25373

Appendix.14.18
District-wise Details of SC/ST population Census 2001

Sl.No.	India/State/District	Total Population			Scheduled Caste			Scheduled Tribe		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	Kasargod	588083	615995	1204078	44904	45314	90218	15132	15206	30338
2	Kannur	1152817	1256139	2408956	48275	50716	98991	9793	10176	19969
3	Wayanad	391273	389346	780619	16738	16626	33364	67394	68668	136062
4	Kozhikkode	1399358	1479773	2879131	98386	102597	200983	2924	3016	5940
5	Malappuram	1754576	1870895	3625471	140535	144907	285442	5996	6271	12267
6	Palakkad	1266985	1350497	2617482	210624	221954	432578	19990	19675	39665
7	Thrissur	1422052	1552180	2974232	171443	182783	354226	2293	2533	4826
8	Ernakulam	1538397	1567401	3105798	129706	133812	263518	5079	4967	10046
9	Idukki	566682	562539	1129221	79389	79973	159362	25510	25463	50973
10	Kottayam	964926	988720	1953646	73885	76397	150282	8972	9368	18340
11	Alappuzha	1014529	1094631	2109160	96900	102331	199231	1565	1565	3131
12	Pathanamthitta	589398	644618	1234016	78731	83271	162002	3184	3355	6549
13	Kollam	1249621	1335587	2585208	156880	166007	322887	2447	2743	5190
14	Thiruvananthapuram	1569917	1664439	3234356	178718	192139	370857	9890	11003	20893
	Kerala	**15468614**	**16372760**	**31841374**	**1525114**	**1598827**	**3123941**	**180169**	**184020**	**364189**
	Share of Kerala (Per cent)	**2.91**	**3.31**	3.1	1.77	**1.98**	**1.88**	**0.43**	**0.45**	**0.44**

Source: Census 2001

Appendix 14.19

District wise Details of Registered Unemployed Persons in the Live Register During October 2005.

Sl.No	District	2005-06 (9/2005)			
		SC	ST	Others	Total
1	2	3	4	5	6
1	Thiruvananthapuram	78842	4019	464537	547398
2	Kollam	53879	401	350035	404315
3	Pathanamthitta	26395	676	122458	149529
4	Alappuzha	46591	671	309695	356957
5	Kottayam	31062	3532	206044	240638
6	Idukki	15247	5637	107077	127961
7	Ernakulam	50694	1349	319419	371462
8	Thrissur	61590	428	271236	333254
9	Palakkad	49036	1312	227167	277515
10	Malappuram	54167	691	203391	258249
11	Kozhikkode	46501	971	315338	362810
12	Wayanad	5179	8525	65067	78771
13	Kannur	17276	1576	207733	226585
14	Kasaragod	8587	1580	79726	89873
	Total	545026	31368	3248923	3825317

Source Directorate of Employment

Appendix 14.20

SCP/TSP through Local Self Govt. Institutions - Kerala
Physical Achievements 2004-2005(Provisional)

Sl.No	Item	Unit	SCP	TSP
1	2	3	5	6
1	Area brought under cultivation	Ha	803.84	251.52
2	Beneficiaries of vegetable cultivation	No	5966	123
3	Benifeciaries who received Planting materials distributed through integrated agricultural development programmes	No	7542	1530
4	Pumpset distributed through integrated agricultural development programmes	No	306	24
5	Sprayers distributed through integrated agricultural development programmes	No	94	0
6	Poultry-egg rearing units	No	959	0
7	Fresh water fish culture(Area)	Ha	37	0
8	Construction of cattlesheds	No	691	23
9	Watershed development projects	No	171	176
10	Land brought under cultivation through watershed development projects	Ha	169	102
11	New industrial units	No	212	4
12	Rehabilitation of traditional industrial units	No	51	16
13	Persons who received industrial entrepreneurship training	No	1068	194
14	Skill development(Persons trained)	No	6583	25
15	Micro enterprises started	No	230	35
16	Self employment units started	No	391	28
17	Self employed persons	No	4581	116
18	Employment training programme for destitutes	No	211	0
19	Self employment units started by poor people	No	62	0
20	Self employment units for destitutes	No	336	0
21	Destitutes trained (Persons)	No	187	0
22	Computer training (Persons trained)	No	15213	0
23	Area of land distributed to landless	Ha	3622	132
24	Distribution of house plots	No	4257	245
25	Houses constructed	No	15040	1922
26	Distribution of land to land less(beneficiaries)	No	2011	294
27	Renovation of houses	No	9135	1119

Sl.No	Item	Unit	SCP	TSP
1	2	3	5	6
28	Shelter upgradation	No	1125	144
29	Renovation of SC/ST houses	No	7251	787
30	Integrated development SC habitates	No	521	39
31	Electric wiring of houses	No	7954	1323
32	Construction of sanitation units	No	11167	1009
33	New wells	No	2074	103
34	New public water tap connection installed	No	1835	43
35	New water tap connection to households	No	256	0
36	Renovation of ponds	No	40	0
37	Pump sets	No	184	4
38	Ordinary roads (Number)	No	1369	70
39	Ordinary roads (Length)	Km	7398.14	407.39
40	Roads above 8M width(Number)	No	11	0
41	Roads above 8M width(Length)	Km	15.89	0.00
42	Roads between 6 and 8 M width(Number)	No	303	15
43	Roads between 6 and 8 M width(Length)	Km	373.75	7.14
44	Roads below 6M width(Number)	No	567	38
45	Roads below 6M width(Length)	Km	536.10	19.02
46	New culverts	No	46	0
47	New bridges	No	11	7
48	Anganwadi Buildings	No	25	4
49	Rehabilitation of puramboke dwellers (projects)	No	28	0
50	Beneficiaries of rehabilitation of puramboke dwellers	No	1209	0
51	Slum development projects	No	71	0

Estimated from Annual expenditure statement of Local Governments

Source: Information Kerala Mission

Appendix 14.21
Major Schemes implemented by Scheduled Caste Development Department
Physical Target and Achievements during 2004-05 and 2005-06

Sl. No	Name of Scheme	Unit (Nos)	2004-05		2005-06 (Up to October 2005)	
			Target	Achievement	Target	Achievement
1	Pre-matriculation studies (SC)	Students	4,00,000	4,22,440	-	-
2	Special incentive to talented students	Students	5,000	5157	5,000	1358
3	Post matric hostel	Students	1250	1102	1250	548
4	Model Residential Schools	School students	7 900	7 952	7 900	7 988
5	Bharath Dharsan	Students	60	60	15	-
6	Financial assistance to failed SC students for continuing education	Students	9000	6343	9000	-
7	Upgradation of performance of SC students in sports and games	School students	1 180	1 146	1 180	1 -
8	Information Cum Guidance Centers	Center	14	14	14	14
9	Self employment scheme for SCs	Beneficiaries	650	618	650	128
10	Apprenticeship to ITI/ITC/Diploma holders	Trainees	600	420	600	316
11	Pre-examination training centers	Centre students	3 3000	2700	3000	4
12	Production cum training centers	Centre students	41	850	1035	41
13	Grant to civil services examination training society	Students	30	30	30	-
14	High tech training in electronic computer and IT	Students	-	-	100	-

Sl No	Name of Scheme	Unit	2004-05		2005-06 (Up to October 2005)	
			Target	Achievement	Target	Achievement
15	National Trade and Arts festival for SCs	Festival	1	1	1	
16	Training and Honorarium to SC promoters	Promoters	1175	1175	1175	1175
17	Paramedical Education	Students	10,000	2199		271
18	Pre-matriculation studies OBC	Students	1,30,000	1,28,545	1,30,000	67,735
19	Post matriculation studies OBC	Students	1,75,000	1,76,565	1,75,000	48,737
20	Financial assistance to seriously ill SC under poverty line	Families			1850	869
21	Tutorial system in hostels	Hostel students			90 5440	90 2700
22	Book banks to Medical and Engineering students	Students	2000	1225	-	-
23	PCR & PA Act	Families	550	462	550	164
24	Coaching and Allied schemes	Center Students	3 2000	2700	2000	
25	Development of dependence of SC who were engaged in unclean occupation in the past	Families	800	835	800	
26	Post matriculation studies SC	Students	95,000	91,306	95,000	2,80,551
27	Upgradation of merit of SC students	Students	400	401	400	
28	Corpus fund	Families		11004		
29	SCA to SCP	Beneficiaries	400	371	400	
30	Land and Building for training centers	Centers	3	3		
31	Renewal of post matric hostels	Hostels	9	9		
32	Boys hostels for SC students	Hostel	5	5		
33	Construction of hostels for SC girls	Hostel	3	3	3	

Source : Scheduled Castes Development Department

Appendix 14.22

Details of Scholarships, Stipends and other benefits given to Scheduled Caste Students During 2004-05 and 2005-06 (up to 31-10-2005)

(Rs.in lakh)

Name of Scheme		Standard	No of Students Benefited		Rate	Amount Spent			
						2004-05		2005-06 upto 31.10.05	
Sl. No.	Plan		2004-05	2005-06 upto 31.10.2005		Plan	Non Plan	Plan	Non Plan
1.	Special Incentive to talented students	SSLC Professional Courses	5157	1358	SSLC – 750 Plus 2, TTC, Poly, V.H.S.C. – 1000 Degree – 1500 P.G& Professional 2000	75.61	--	18.89	--
2.	Post Matric Hostels	Plus 2 and above	1102	548	Monthly food expenditure Rs 700/-, Pocket Money 65-80.	96.64	95.67	55.60	–
3.	Model Residential Schools	5 to +2	7 school 952	7 school 986	--	692.16	—	308.31	—
4.	Audio Visual Education & Bharath Darsan	SSLC Diploma Courses	60	---	----	8.00	---	—	—
5.	Financial Assistances to failed SC students for continuing education	SSLC to Degree	6343	---	--	47.08	--	0.01	---
6.	Upgradation of SC	5 to 10	1	1 school	Mess	39.76	---	13.30	—

	students in Sports and Games		school 145.	180	Allowances Rs. 800/-				
7.	Centre of Excellence		1		----	43.78	---	—	---
8.	Pre examination Training Centres			4 centres	Monthly stipend Rs.500/-	---	26.43	0.49	19.35
9.	Grand to Civil Services Examination training society	Civil Service	30	---		30.00	---	32.50	---
10.	High tech training in Electronics Computer and IT	Professional Course	---	---		75.00	---	—	---
11.	Para Medical Education	Para medical institute	2199	271		40.2	---	11.00	—
12.	Tutorial System in Hostels	---	—	90 Hostels 2700 students		---	---	0.10	—
13.	Coaching and Allied Schemes		2700	---		18.91	---	11.10	---
14.	Pre matriculation studies SC	Nursery to SSLC	422440	293000		6.53	1011.29	---	1050.42
15.	Post matriculation studies SC 100%	Plus 1 and above	91305	280551		4533.79	1441.49	3116.58	260.40
16	Pre matriculation studies OBC	Nursery to SSLC	128545	67735		49.96	238.23	41.39	245.17
17.	Post matriculation studies OBC	+2 and above	176565	48737		80.00	1503.55	105.01	2591.47
18.	Upgradation of merit of SC students	Central School	401	---		1.5	—	—	—
19.	Book Banks to Medical and Engineering Students	Engg. and Medical students	1225	---		36.27	—	—	—
	Total					5875.19	4316.68	3714.28	4166.82

Appendix 14.23

Financial and Physical Target and Achievements of Schemes for Scheduled Tribes during 2004-05

(Rs.in lakh)

Sl.No	Name of Scheme	Achievement		Physical Target & Acheivement			Remarks
		Budgeted provision	Expenditure	Unit	Target	Achievement	
1	2	3	4	5	6	7	8
	1. State Sector Schemes						
1	IEC Project [Information, Education & Communication	30.00	23.17	project	1	1	
2	Improvement of Tribal Hostels	50.00	72.32	Hostel	5	16	Addl. Authorisation Rs. 65.80 lakh
3	Tutorial scheme for schoolGoing students and failedstudents	100.00	75.16	student	5000	1722	
4	Girls Hostels [50% State share]	100.00	152.62	Hostels	2		Construction of 2 Pre-matric hostels in progress
5	Boys Hostels [50% State share]	100.00	86.57	Hostels	3		Construction of 7 Pre-matrichostels in different stages
6	Providing Better Educationfacilities for Talented Student	5.00	3.45	students	-	25	
7	Purchase of land for construction of tribal hostels	100.00	1.15	No. of plots	5	-	-
8	Bharat Darshan	6.00	6.00	students	60	44	
9	Incentive to Specially Talented Youths in Arts and sports	1.00	0.02	youths	100	4	
10	Health project Mananthavady under Article 275[1]	5.00	5.00	project	1 hospital	1 hospital	
11	Support to Group Farms	57.00	56.69	Farms	3	3	
12	Grant in Aid to Anappady Co-op Farming Society for conductinga School and a Hospital	10.00	10.00	Society	1	1	
13	Grant in Aid to Ambedkar Memorial Rural Institute for Development [AMRID], Wayanad	3.00	3.00	Institution	1	1	
14	Modernisation of Tribal Development Department	35.00	30.31	Project	1	1	
15	Share capital contribution toKerala State Development Corporation for SC/ST forImplementing Schemes benefitingScheduled Tribes [State share 51%]	9.80	5.00	Share Capital	Share Capital	Share Capital	

Appendix 14.23 (Contd...)

Financial and Physical Target and Achievements of Schemes for Scheduled Tribes during 2004-05

(Rs.in lakh)

Sl No	Name of Scheme	Achievement		Physical Target & Achievement			Remarks
		Budgeted provision	Expenditure	Unit	Target	Achievement	
1	2	3	4	5	6	7	8
16	Grant in aid to Kerala Institute forResearch Training and Developmentstudies for SC/ST [State share 50%]	35.00	21.36	Project	1	1	
17	Provision of Additional Apprenticeship for ITC/ITI passed candidates	0.20	0.18	students	50	4	
18	Special Programme for Primitive TribalGroups Adiyas and Panyas	100.00	90.00	Beneficiaries	5000	7976	Rs.8 lakh
19	Tribal promoters	180.00	149.91	promoter	1000	931	Rs. 30 lakh re-appropriation
20	Conduct of Tribal Youth Festivals	12.00	1.00	Youth festivals	15	-	
21	Special Incentive to Brilliant students	20.00	17.95	students	600	705	
22	Enforcement of Prevention of Atrocities Act 1989 [State Share 50%]	10.00	3.25	claims		6 claims	
23	Providing Health Care Package toTribal Individuals affected by diseases	50.00	49.11	patients	2000	7784	Rs. 20 lakh addl.
24	Implementation of Land Alienation Act 1975	0.10	0.00	-	-		
25	Food Support Programme	150.00	150.00	families	20000	62381	
26	Assistance to Adikala Kendram	10.00	4.50	Institution	1	1	
27	Health project Attappady [State Share 25%] Article 275(1)	10.00	10.00	OP clinics	2	2 OP clinics	
28	Health Project Idukky [State Share 25%] Article 275(1)	20.00	11.35	OP clinics	5		5 OP clinics 4448 patients
29	Post-matric Hostels for Tribals	30.00	4.50	Hostel	3	1 Hostel, 17 students	
30	Peripatetic education to the PTG's	50.00	5.21			21 Centres	Rs. 25 lakh re-appropriation
31	Ayyankali Memorial Talent Search and Development Scheme	25.00	20.37	students	300	530	
32	Organisation of Oorukoottam	40.00	17.74	Oorukoottam	500	1895. 34 camps	Rs. 20 lakh re-appropriation
33	Assistance to Non-Government Organisation	50.00	24.99	NGO's	10	-	Rs. 25 lakh re-appropriation
34	Opening of Grain Banks	9.00	8.00	centres	40	6	
35	Trade & Arts Festivals of STs	10.00	8.25	Festival	1	1	
36	Resettlement of Landless Tribals	1550.00	1550.00	TRDM Project	-	-	
37	Model Residential Schools [18 Nos] [Revenue]	600.00	646.21	students		1731	

Appendix 14.23 (Contd..)

Financial and Physical Target and Achievements of Schemes for Scheduled Tribes during 2004-05

(Rs.in lakh)

Sl.No	Name of Scheme	Achievement		Physical Target & Achievement			
		Budgeted provision	Expenditure	Unit	Target	Achievement	Remarks
1	2	3	4	5	6	7	8
38	Dr. Ambedkar Bhavan for Dalit empowerment	45.00	45.00	Building	-	-	
39	Corpus Fund for Tribal Sub Plan	4277.76	4187.50				
40	Peripatetic Education to the Primitive Tribes	25.00	5.21	Centres		21	
	Sub Total	**4906.86**	**4570.05**				
36	**Centrally Sponsored/Central Sector Schemes**						
1	Construction of Building for Model Residential Schools [10 Schools 50% CSS]	600.00	650.07	Construction of school building	15	Completed- 2 WIP - 7	
2	Post Matric Scholarship [100% CSS]	200.00	199.77	students	5000	4977	
3	Vocational Training Institute [100% CSS]	40.00	19.22	Institution students	3	3 institution 94 students	
4	Award of Research fellowship in various aspects of tribal Development [100% CSS]	1.00	0.00	Research Scholarship	-	-	
5	Upgradation of Merits of ST students [100% CSS]	1.50	1.50	students	10	10	
6	Construction of MRS. Idukki	100.00	103.91	School building	1	Work started by the PWD	
7	Construction of Attappady Health project Hospital	50.00	107.13	Building	-	Construction of Hospital building is almost completed	
8	Construction of MRS Ponkode Article 275[1]	100.00	1.08	School building	1		
9	Construction of MRS Njarineeli, Art 275[1]	100.00	74.01	School building	1	WIP	
10	New Central Sector Scheme for PTG's [100% CSS] [Insurance coverage]	2.50	0.50	Families	500	500	
11	Exchange of visits by tribals	1.94	0.09				
12	SCA to TSP	350.00	272.17	families	6000	4658	
	Sub Total	**1546.94**	**1429.36**				
	Total	**6453.80**	**5999.41**				

Source: Scheduled Tribes Development Department

Appendix 14.24

Kerala State Development Corporation for SC/ST Ltd - Financial and Physical Achivements

(Rs. in lakhs)

Sl.No	Scheme	Outlay		Expenditure		Physical Achivements(No.)	
		2004-05	2005-06	2004-05	2005-06 (upto October)	2004-05 Achievement	2005-06 Achievement upto October
1	2	3	4	5	6	7	8
1	Agricultural Land Purchase Scheme	372.00	306.00	339.91	62.65	255	48
2	Micro Credit Finance Scheme	97.50	52.50	38.45	14.63	276	100
3	Mini Venture Loans	110.00	227.50	19.29	21.83	15	13
4	Transport Schemes	141.44	192.19	136.46	33.06	188	39
5	Small Enterprises Loans	15.00	40.00	5.59	0.55	7	2
6	Schemes for Women Empowerment						
a	Adivasi Mahila Sashthikaran Yojana	12.50	19.00	1.85	0.64	7	2
b	Mahila Samridhi Yojana		7.50	4.22	9.36	30	87
7	Scheme for Tribal Medicine Practitioners				2.89		3
8	Beneficiary Oriented Scheme	32.50	32.50	7.15	15.31	21	35
9	Housing Schemes	50.16	9.00	0.82	1.47	24	31
10	Training Programmes		6.91	1.43		52	
11	Other Schemes	73.50	76.75	19.41	13.15	57	39
	Total	904.60	969.85	576.58	175.56	912	379

Source: *Kerala State Development Corporation for SC/ST*

Appendix 15.1

Month-wise Consumer Price Index (Cost of Living Index Numbers) for Agricultural and Industrial workers - Kerala 2004 & 2005

(Base: 1998 = 100)

Sl. No	Name of commodity	2004					2005							
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Thiruvananthapuram	127	128	127	130	131	132	130	130	129	131	132	133	132
2	Kollam	126	127	126	127	128	128	128	127	128	129	129	132	131
3	Punalur	116	117	117	119	119	119	119	118	118	119	120	121	121
4	Pathanamthitta	122	122	122	123	123	124	123	122	122	123	125	127	127
5	Alappuzha	122	122	122	124	124	124	123	122	121	122	124	125	125
6	Kottayam	122	122	122	123	122	122	122	121	121	122	123	125	126
7	Mundakkayam	121	119	119	121	121	121	120	120	119	120	121	122	121
8	Munnar	119	119	119	120	120	120	120	119	119	119	121	122	122
9	Ernakulam	121	122	123	123	124	124	125	123	123	124	126	127	127
10	Chalakkudy	120	120	119	121	121	121	122	121	121	123	124	125	124
11	Thrissur	120	120	120	121	121	121	121	120	121	122	123	124	124
12	Palakkad	122	122	122	123	123	123	122	122	123	124	125	126	126
13	Malappuram	122	123	122	124	125	125	125	124	125	125	126	127	128
14	Kozhikode	120	120	120	121	121	121	121	121	121	122	123	124	124
15	Meppady	118	118	118	119	119	118	118	118	119	120	121	122	122
16	Kannur	127	127	126	127	127	126	126	125	124	124	125	126	126
17	Kasaragod	127	127	127	127	127	127	128	127	128	128	129	130	130
	Average	122	122	122	123	123	123	123	122	122	123	125	126	125

Source: Directorate of Economics & Statistics

Month-wise average retail prices of essential commodities 2004 & 2005

Sl. No	Name of commodity	Unit	October	November	December	January	February	March	April	May	June	July	August	September
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	Cereals													
1	Rice (Matta (OM)	Kg	13.57	13.53	13.56	13.54	13.60	13.60	13.50	13.41	13.45	13.60	13.45	13.30
2	Rice Wehite (OM) Andhra vela	Kg	12.99	13.20	13.22	13.30	13.60	13.61	13.77	13.85	13.85	13.80	13.78	13.75
B	Pulses													
3	Greengram	Kg	27.65	27.67	27.32	28.08	28.68	29.67	31.58	32.65	34.15	34.01	34.69	32.08
4	Blackgram split (without husk)	Kg	28.23	28.05	28.24	29.02	29.17	29.22	29.84	30.78	33.05	34.74	35.23	34.15
5	Redgram	Kg	18.11	18.44	19.13	19.02	18.83	19.13	19.98	20.42	21.54	22.14	22.29	21.48
6	Dhal (Tur)	Kg	37.03	36.47	35.06	33.57	31.77	30.97	31.02	31.52	32.26	33.61	33.97	34.35
C	Other Food Items													
7	Sugar (OM)	Kg	16.99	17.06	18.10	19.33	18.58	18.86	18.68	18.55	18.23	18.82	19.01	18.38
8	Milk (Cow's)	Ltr.	14.00	14.00	14.00	14.30	14.00	14.30	14.46	14.46	14.92	14.93	14.93	14.77
9	Egg (Hen's Narian)	Dozen	28.61	29.00	29.40	29.27	29.78	29.31	28.75	28.82	29.30	29.70	29.88	28.88
10	Egg(Hen's White Legon)	Dozen	18.54	19.70	19.52	19.75	20.25	17.42	16.41	16.18	18.34	18.67	17.11	16.87
D	Oil and Seeds													
11	Coconut Oil	Kg	73.40	77.73	77.58	77.22	77.99	70.45	66.37	64.49	62.39	60.54	59.26	60.13
12	Groundnut Oil	Kg	68.35	68.63	68.64	68.93	68.53	68.23	66.00	68.45	68.47	66.29	68.6	68.15
13	Refined Oil (Postman)	Kg	80.43	80.44	80.01	84.00	85.08	85.21	85.73	85.56	85.30	85.31	84.7	83.97
14	Gingelly Oil	Kg	69.38	70.44	70.80	70.09	68.87	67.33	67.53	67.36	65.79	64.81	63.68	63.80
15	Coconut (with out husk)	100 Nos	683.32	708.41	733.57	735.54	744.91	675.23	644.46	627.32	601.82	589.37	583.84	592.07
E	Spices and Codiments													
16	Coriander	Kg	29.80	29.27	29.34	29.93	30.28	30.26	29.76	30.05	30.55	30.32	30.18	30.33
17	Chilies (Dry)	Kg	41.56	41.69	41.47	40.86	40.32	37.48	35.64	34.45	32.70	32.74	32.84	33.83
18	Onion (Small)	Kg	14.44	13.06	13.80	12.55	12.50	11.55	12.79	12.18	12.33	12.39	12.14	12.20
19	Tamarind (without seed)	Kg	43.66	44.54	45.13	43.29	39.02	36.77	37.48	36.71	35.73	35.73	34.73	34.50
F	Tubers													
20	Chenai (Elephant Foot)	Kg	9.86	10.46	10.10	10.61	10.88	10.89	11.57	11.93	13.0	12.5	10.75	10.60
21	Tapioca (Raw)	Kg	5.93	6.11	6.08	5.98	5.98	5.70	6.13	6.11	6.06	6.06	6.47	6.37
22	Potato	Kg	11.43	12.27	10.91	9.26	8.35	8.31	10.11	10.23	11.83	12.06	11.2	10.61
23	Colocassia	Kg	14.50	14.29	13.01	12.45	12.40	12.13	14.83	15.14	15.69	15.24	16	17.47
G	Fruits & Vegetables													
24	Onion (Big)	Kg	8.55	8.91	8.27	8.65	12.24	7.40	7.46	7.42	7.75	8.62	10.8	13.52
25	Bringal	Kg	11.80	14.96	13.33	12.21	11.80	9.95	11.08	10.59	10.40	10.33	11.20	11.37
26	Pumpkin	Kg	6.94	7.08	6.74	7.14	6.86	6.35	6.63	6.75	7.70	7.94	7.55	7.35
27	Cucumber	Kg	9.15	8.87	7.17	8.71	8.14	6.95	6.82	7.54	8.34	8.07	9.14	8.77
28	Lady'sfinger	Kg	12.31	13.11	12.11	14.77	10.36	9.04	11.16	11.41	10.04	11.09	10.55	11.37
29	Cabage	Kg	9.49	10.39	9.24	9.34	8.7	6.35	8.32	9.77	11.75	10.83	10.05	9.71
30	Bittergourd	Kg	15.83	14.5	14.74	14.0	13.56	12.66	14.52	14.39	16.86	17.25	18.90	18.24
31	Ashgourd	Kg	6.55	5.53	6.80	7.29	7.21	5.87	6.71	7.07	7.86	8.17	9.35	8.21
32	Snakegourd	Kg	11.71	12.82	11.34	10.91	9.98	9.21	9.88	9.59	11.63	12.16	13.23	12.42
33	Chilies (Green)	Kg	12.80	15.84	15.16	14.27	12.95	12.16	13.45	13.75	18.35	16.97	14.91	15.24
34	Banana (Green)	Kg	14.74	13.81	11.24	10.83	10.11	10.98	11.80	13.29	16.04	13.62	16.64	19.07
35	Plantain (Green)	Kg	9.84	9.87	9.71	9.88	9.81	9.55	9.7	9.79	9.79	9.55	9.89	10.75

Source: Directorate of Economics & Statistics

Appendix 15.3

Per 1000 distribution of persons in rural sector over 12 MPCE classes for selected States and all-India - 2003 (59th Round NSS)

Sl. No	State	MPCE classes (Rs.) 0-225	%	225-255	%	255-300	%	300-340	%	340-380	%	380-420	%	420-470	%	470-525	%	525-615	%	615-775	%	775-850	%	850 & more	%	Average MPCE (Rs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra Pradesh	41	4.1	37	3.7	48	4.8	75	7.5	82	8.2	87	8.7	121	12.1	100	10.0	118	11.8	142	14.2	81	8.1	69	6.9	587
2	Assam	9	0.9	31	3.1	58	5.8	50	5.0	65	5.0	100	10.0	151	15.1	115	11.9	174	17.4	157	15.7	56	5.6	31	3.1	520
3	Bihar	41	4.1	69	6.9	129	12.9	145	14.5	121	12.1	110	11.0	68	6.8	106	10.6	84	8.4	63	6.3	22	2.2	13	1.3	415
4	Gujarat	8	0.8	13	1.3	64	6.4	49	4.9	72	7.2	72	7.2	61	6.1	126	12.6	117	11.7	214	21.4	92	9.2	113	11.3	826
5	Haryana	0	0	0	0	5	0.5	20	2.0	29	2.9	26	2.6	61	6.1	89	8.9	201	20.1	185	18.5	182	18.2	203	20.3	781
6	Karnataka	7	0.7	11	1.1	35	3.5	88	8.8	105	10.5	125	12.5	79	7.9	139	13.9	120	12.0	170	17.0	52	5.3	65	6.5	958
7	Kerala	3	0.3	4	0.4	15	1.5	26	2.6	25	2.5	30	3.0	41	4.1	63	6.3	106	10.6	150	15.0	154	15.4	363	36.3	981
8	Madhya Pradesh	50	5.0	47	4.7	94	9.4	110	11.0	110	11.0	82	8.2	94	9.4	159	15.9	112	11.2	75	7.5	33	3.3	27	2.7	855
9	Maharashtra	18	1.8	21	2.1	46	4.6	88	8.8	73	7.3	71	7.1	125	12.5	96	9.6	149	14.9	150	15.0	74	7.4	88	8.8	984
10	Orissa	154	15.4	90	9.0	140	14	124	12.4	113	11.3	57	5.7	84	8.4	57	5.7	74	7.4	45	4.5	24	2.4	37	3.7	896
11	Punjab	0	0	8	0.8	11	1.1	4	0.4	32	3.2	47	4.7	56	5.6	92	9.2	125	12.5	178	17.8	134	13.4	314	31.4	986
12	Rajasthan	8	0.8	16	1.6	48	4.8	69	6.9	104	10.4	87	8.7	127	12.7	121	12.1	134	13.4	131	13.1	70	7.0	87	8.7	970
13	Tamil Nadu	20	2.0	37	3.7	53	5.3	69	6.9	69	6.9	60	6.0	116	11.6	100	10.0	131	13.1	164	16.4	64	6.4	118	11.8	809
14	Uttar Pradesh	26	2.6	37	3.7	81	8.1	111	11.1	101	10.1	96	9.6	120	12.4	103	10.3	117	11.7	98	9.8	50	5.0	56	5.6	909
15	West Bengal	10	1.0	20	2.0	50	5.0	78	7.8	100	10.0	103	10.3	123	12.3	119	11.9	143	14.3	137	13.7	62	6.2	61	6.1	538
	All-India	30	3.0	34	3.4	69	6.9	89	8.9	90	9.0	85	8.5	105	10.5	107	10.7	121	12.1	124	12.4	65	6.5	82	8.2	554

Source: NSSO

Appendix 15.4

Per 1000 distribution of persons in urban sector over 12 MPCE classes for selected States and all-India - 2003 (59th Round NSS)

Sl. No	State	MPCE classes (Rs.) 0-300	%	300-350	%	350-425	%	425-500	%	500-575	%	575-665	%	665-775	%	775-915	%	915-1120	%	1120-1500	%	1500-1925	%	1925 & more	%	Average MPCE (Rs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra Pradesh	23	2.3	15	1.5	74	7.4	106	10.6	77	7.7	78	7.8	126	12.6	100	10.0	111	11.1	119	11.9	52	5.2	108	10.8	1065
2	Assam	26	2.6	36	3.6	76	7.6	42	4.2	49	4.9	109	10.9	242	24.2	105	10.5	147	14.7	82	8.2	49	4.9	39	3.9	875
3	Bihar	89	8.9	59	6.0	109	10.9	113	11.3	94	9.4	73	7.3	144	14.4	69	6.8	47	4.7	57	5.7	35	3.5	22	2.2	674
4	Gujarat	3	0.3	5	0.5	13	1.3	35	3.5	116	11.6	121	12.1	118	11.8	140	14.0	128	12.8	155	15.5	83	8.3	75	7.5	1046
5	Haryana	0	0	6	1.6	56	5.6	45	4.5	53	5.3	104	10.4	103	10.3	86	8.6	202	20.2	170	17.0	58	5.8	107	10.7	1141
6	Karnataka	10	1.0	21	2.1	76	7.6	66	6.6	102	10.2	88	8.8	110	11.0	135	13.5	112	11.2	129	12.9	85	8.5	60	6.0	960
7	Kerala	13	1.3	7	0.7	28	2.8	45	4.5	91	9.1	98	9.8	105	10.6	69	6.9	149	14.9	148	14.8	82	8.2	144	14.4	1000
8	Madhya Pradesh	39	3.9	59	5.9	107	10.7	102	10.2	100	10.0	73	7.3	94	9.4	46	4.6	107	10.7	91	9.1	113	11.3	60	6.0	1029
9	Maharashtra	14	1.4	27	2.7	47	4.7	66	6.6	76	7.6	77	7.7	80	8.0	117	11.7	117	11.7	158	15.8	94	9.4	115	11.5	1106
10	Orissa	96	9.6	18	1.8	104	10.4	77	7.7	52	5.2	95	9.5	114	11.4	90	9.0	149	14.9	97	9.7	61	6.1	26	2.6	832
11	Punjab	5	0.6	1	0.1	25	2.5	32	3.2	58	5.8	112	11.2	85	8.5	152	15.2	125	12.5	175	17.5	94	9.4	134	13.4	1000
12	Rajasthan	17	1.7	27	2.7	62	6.2	108	10.8	117	11.7	124	12.4	91	9.1	121	12.1	127	12.7	87	8.7	56	5.6	63	6.3	912
13	Tamil Nadu	11	1.1	18	1.8	36	3.6	59	5.9	93	9.3	92	9.2	101	10.1	121	12.1	137	13.7	155	15.5	84	8.4	93	9.3	987
14	Uttar Pradesh	82	8.2	62	6.2	109	10.9	124	12.4	110	11.0	90	9.0	103	10.3	93	9.3	65	6.5	62	6.2	41	4.1	43	4.3	786
15	West Bengal	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	75	[illegible]	102	10.2	76	7.6	107	10.7	108	10.8	149	14.9	137	13.7	[illegible]	[illegible]	80	8.0	997

Appendix 15.5

Month-wise Wholesale Price Index of Agricultural Commodities - Kerala (2004 & 2005)

Base 1952-53 = 100

S. No	Crops	2004												2005					
		January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Rice (Red)	2595.93	2588.42	2544.38	2577.63	2535.22	2665.54	2628.84	2622.13	2607.78	2582.18	2590.69	2572.05	2500.42	2644.34	2605.70	2638.11	2616.30	2603.75
2	Molasses	2264.51	2301.75	2314.95	2549.35	2843.91	3103.12	3003.91	3122.76	3477.06	3623.95	3848.13	3202.77	2858.37	2791.51	2862.80	3017.45	2972.14	2873.94
3	Condiments & Spices	2799.52	2436.15	2471.24	2500.70	2318.38	2502.3	4025.45	3206.39	2544.04	2443.71	2435.37	2498.57	2537.58	2501.63	2564.92	2777.49	2595.44	3704.87
4	Fruits & Vegetables	3680.55	3522.77	3778.47	3708.94	3405.82	3376.39	3414.40	3452.97	3430.16	3402.02	3416.90	3430.06	3435.16	3446.09	3395.96	3492.39	3523.38	3525.44
5	Food Crops	2704.00	2761.26	2733.68	2785.89	2882.68	2953.26	3001.83	2875.08	2772.34	2730.86	2748.46	2725.26	2728.09	2767.78	2741.03	2817.18	2941.60	2947.28
6	Oil Seeds	3690.84	3539.45	3548.67	3673.52	3614.26	3500.74	4019.19	4759.20	4168.59	4229.15	4204.38	4185.58	4337.77	4442.37	3655.38	3653.30	3425.66	3391.13
7	Plantation Crops	1459.03	1458.02	1566.35	1538.16	1588.72	1632.57	2147.71	2084.16	2082.34	2073.58	2075.52	2066.23	1614.66	1589.18	1664.78	1700.40	1579.89	1657.54
8	Non-Food Crops	3010.83	2910.85	2950.88	3099.17	3002.57	3215.45	3454.00	3612.34	3538.64	3575.58	3561.59	3546.44	3511.87	3580.71	3193.82	3263.52	2896.46	2867.59
9	All Crops	2816.18	2817.13	2812.98	2885.62	2926.44	3040.96	3165.18	3144.18	3052.00	3040.79	3045.25	3074.99	3012.89	3090.37	2906.28	2907.09	2925.85	2918.19

Source: Directorate of Economics & Statistics

Appendix 15.6

District-wise Foodgrain Distribution Under PDS-2004 (Tonnes)

Sl.No	Name of District	BPL Scheme						APL Scheme					
		Wheat			Rice			Wheat			Rice		
		Lifting	As % of allocation	Off-take	Lifting	As % of allocation	Off-take	Lifting	As % of allocation	Off-take	Lifting	As % of allocation	Off-take
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	11143	98.61	10704	33375	100.34	33536	15130	34.04	15885	1949	0.79	1280
2	Kollam	14145	96.87	13911	27157	94.08	25778	8209	22.44	7872	1346	0.84	1901
3	Pathanamthitta	5823	91.02	5457	12036	97.25	11991	2749	14.64	2533	408	0.27	172
4	Alappuzha	11568	95.12	11466	32183	89.47	32584	3744	12.82	3749	2381	1.07	1327
5	Kottayam	6097	98.39	8607	26595	104.58	28153	9123	33.46	8072	2710	1.47	1287
6	Idukki	5797	98.63	5841	17490	102.35	18133	7621	42.64	7534	1633	3.38	1964
7	Ernakulam	9540	96.7	9511.15	26710	104.71	27479	17948	42.55	17859	1513	0.59	1092
8	Thrissur	13850	95.51	13428.5	38563	103.84	41691	26823	64.77	25930	3300	1.42	1792
9	Palakkad	7305	88.24	7893	28925	91.6[illegible]	26529	11280	32.29	11390	5630	0.26	4808
10	Malappuram	12456	94.59	12053	43080	99.74	41493	5970	16.53	7233	3409	6.6[illegible]	7178
11	Kozhikode	7679	91.85	8072	33339	100.79	35123	5430	17.74	6504	6283	4.94	5324
12	Wayanad	1932	92	1949	11253	97.47	10974	1450	17.17	1396	7294	22.97	8626
13	Kannur	6588	96.12	6035	20247	107.28	25315	13907	43.74	10935	10683	10.27	3192
14	Kasargod	4235	95.02	4050	13899	111.37	15170	1411	9.53	[illegible]	6416	14.16	5790
								7840			8725		
	TOTAL	120128	95.33	120041.7	373883	100.92	381227	139679	29.79	133451	89077	3.59	48863

Source: Civil Supplies Department

Appendix 15.7

Monthly Distribution of Kerosene and Sugar in Kerala - 2000-2005

Month	Kerosene (KL)						Sugar (in MT)					
	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005
1	2	3	4	5	6	7	8	9	10	11	12	13
January	32408	33275	29658	25020	24150	23766	17403.75	11289.72	3637.64	156.8	52.41	2752.34
February	32672	31137	28816	25417	24077	26838	11957.24	3004	3103.[illegible]	[illegible]	316.02	1713.7
March	31703	30313	28397	24638	22980	27836	11993.66	3706.20	2986.04	46.91	245.01	2489.91
April	31975	30640	26400	24397	22672		11542.79	3752.91	2044	[illegible]	310.63	
May	32748	29078	25547	23792	22523		11402.9	3686.40	[illegible]	[illegible]	1935.25	
June	33056	29513	26100	23656	22831		11340.67	3808.35	1253.47		2130.34	
July	33722	28675	27384	23973	22698		11506.69	3673.49	501[illegible]	94.65	2029.75	
August	33876	28597	25412	24155	22623		12239.97	12245.28	3608.[illegible]	[illegible]	[illegible]	
September	33472	28760	25389	24304	22607		19830.00	3550.52	1357.28	[illegible]	244.57	
October	33420	26349	25427	24338	22565		11371.09	3564.98	1350.74	[illegible]	1859.7	
November	33104	26731	25700	24229	22067		11285.55	3705.42	910.21	180.43	1331.74	
December	32911	26797	24778	24267	22630		12712.61	14450.97	[illegible]	95.[illegible]	2587.51	
Total	395040	351321	314658	292481	276012	78440	164429.79	201348.30	22471.94	5203.30	21585.30	6955.95

Appendix 16. 1
EXPORTS, IMPORTS AND TRADE BALANCE OF INDIA - 1949-50 TO 2004-05

(RS. IN CRORES)

Sl No.	Year	Exports (including re-exports)	Imports	Trade Balance	Rate of Change (Per cent)	
					Export	Import
1	2	3	4	5	6	7
1	1949-50	485	617	-132		
2	1950-51	606	608	-2	24.9	-1.5
3	1951-52	716	890	-174	18.2	46.4
4	1952-53	578	702	-124	-19.3	-21.1
5	1953-54	531	610	-79	-8.1	-13.1
6	1954-55	593	700	-107	11.7	14.8
7	1955-56	609	774	-165	2.7	10.6
8	1956-57	605	841	-236	-0.7	8.7
9	1957-58	561	1035	-474	-7.3	23.1
10	1958-59	581	906	-325	3.6	-12.5
11	1959-60	640	961	-321	10.2	6.1
12	1960-61	642	1122	-480	0.3	16.8
13	1961-62	660	1090	-430	2.8	-2.9
14	1962-63	685	1131	-446	3.8	3.8
15	1963-64	793	1223	-430	15.8	8.1
16	1964-65	816	1349	-533	2.9	10.3
17	1965-66	810	1409	-599	-0.7	4.4
18	1966-67	1157	2078	-921	42.8	47.5
19	1967-68	1199	2008	-809	3.6	-3.4
20	1968-69	1358	1909	-551	13.3	-4.9
21	1969-70	1413	1582	-169	4.1	-17.1
22	1970-71	1535	1634	-99	8.6	3.3
23	1971-72	1608	1825	-217	4.8	11.7
24	1972-73	1971	1867	104	22.6	2.3
25	1973-74	2623	2955	-432	28	58.3
26	1974-75	3329	4519	-1190	31.9	52.9
27	1975-76	4036	5265	-1229	21.2	16.5
28	1976-77	5142	5074	68	27.4	-3.6
29	1977-78	5408	6020	-612	5.2	18.6
30	1978-79	5726	6811	1085	5.9	13.1
31	1979-80	6418	9143	-2725	12.1	34.2
32	1980-81	6711	12549	-5838	4.6	37.3
33	1981-82	7806	13608	-5802	16.3	8.4
34	1982-83	8803	14293	-5490	12.8	5
35	1893-84	9771	15831	-6060	11	10.8
36	1984-85	11744	17134	-5390	20.2	8.2
37	1985-86	10895	19658	-8763	-7.2	14.7
38	1986-87	12452	20096	-7644	14.3	2.2
39	1987-88	15674	22244	-6570	25.9	10.7
40	1988-89	20232	28235	-8003	29.1	26.9
41	1989-90	27658	35328	-7670	36.7	25.1

Appendix 16.1 (Contd..)
EXPORTS, IMPORTS AND TRADE BALANCE OF INDIA - 1949-50 TO 2004-05

(RS. IN CRORES)

Sl.No	Year	Exports (including re-exports)	Imports	Trade Balance	Rate of Change (Per cent)	
					Export	Import
1	2	3	4	5	6	7
42	1990-91	32553	43198	-10645	17.7	22.3
43	1991-92	44041	47851	-3810	35.3	10.8
44	1992-93	53688	63375	-9687	21 9	32 4
45	1993-94	69751	73101	-3350	29.9	15.3
46	1994-95	82674	89971	-7279	18 5	23 1
47	1995-96	106353	122678	-16325	28 6	36 4
48	1996-97	118817	138920	-20103	11.7	13.2
49	1997-98	130100	154176	-24076	9.5	11
50	1998-99	139752	178332	-38580	7 4	15.7
51	1999-2000	159561	215236	-55675	14 2	20.7
52	2000-01	203571	230873	-27302	27 6	7.3
53	2001-02	209018	245200	-36182	2 7	6 2
54	2002-03	255137	297206	-42069	22 1	21.2
55	2003-04	293367	359108	-65741	15	20 8
56	2004-05 (Apr - Dec.)	242435	333907	-91472	21.3	31 3

Note: For the years 1956-57, 1958-59 & 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the elsewhile Ministry of Foreign Trade.

Source DGCI & S.

Appendix 16.2

Commodity-wise Export through Kochi Port, 2000-01 to 2004-05 (Quantity in M.T, value Rs. Crore)

Sl No	Commodity	2000-01			2001-02			2002-03			2003-04			2004-05		
		Quantity	value	Growth rate (%)	Quantity	value	Growth rate (%)	Quantity	value	Growth rate (%)	Quantity	value	Growth rate (%)	Quantity	value	Growth rate (%)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Tea	94539	190.8	22.82	96155	205.48	1.39	103644	325.23	7.60	86794	259.93	-16.18	86589	96.2	-0.24
2	Cashew Kernels	57447	1235.67	1.03	96155	1466.66	15.07	84284	1585.47	28.23	86994	1147.24	5.0	91729	1717.3	3.07
3	Sea Foods	104064	1146.39	9.04	66104	1233.33	6.73	84215	623.76	24.12	[illegible]	986.93	20.54	103721	[illegible]	2.17
4	Coir Products	58140	270.12	3.45	[illegible]	394.73	4.68	99319	428.92	63.19	113638	259.27	14.42	88470	1.07	-22.2
5	Spices	32602	586.64	-47.19	60851	608.61	4.08	46284	673.76	35.01	20419	141.86	-45.00	24546	53.55	2.20
6	Coffee	169402	339.27	8.4	34031	973.33	-13.8	115156	387.37	-21.22	119384	443.42	3.67	115265	462.97	-0.45
7	Miscellaneous	1566999	1911.96	7.9	1453977	1368.86	-7.15	1591876	2508.25	9.40	2019510	2731.8	26.89	2642724	4544.8	30.83
	Total	2082573	5689.05	-5.57	1968384	6251.20	5.48	2125159	6532.76	7.97	2555656	5980.45	20.26	3153344	8033.7	23.39

Source:- Cochin Port Trust

Appendix 16.3

Commodity-wise Import through Kochi Port, 2000-01 to 2004-05 (Quantity in M.T)

S. No.	Commodity	2000-01		2001-02		2002-03		2003-04		2004-05	
		Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)
1	2	3	4	5	6	7	8	9	10	11	12
1	Fertilizers & Raw materials	621646	-7.07	645515	3.8	630778	-2.28	504264	20.06	566350	12.31
2	Foodgrains	6541	93.81	9218	40.93	0	-100	0	0.00	0	0
3	Iron, Steel & Machinery	134948	1.82	144787	7.29	231033	59.57	61427	-73.41	76278	24.18
4	Newsprint	24608	-3.95	36471	47.66	40692	11.55	67311	65.40	46926	-30.28
5	Cashewnut	63510	-68.9	217249	241.9	259726	19.56	309096	19.00	280483	9.26
6	Miscellaneous	10909751	6.93	9037516	-11.4	9736627	7.74	10074562	3.47	9980101	-0.94
	Total	11061094	4	10090756	-8.7	10898856	8.01	11016869	1.08	10950140	-0.6

Source Cochin Port Trust

Appendix 16.4

Item-wise Export of Marine Products from India,2000-01 & 2004-05

Quantity in MT, Value in Rs. Crore

Sl. No.	Item	Quantity/ Value	2000-01	2001-02	2002-03	2003-04	2004-05	Variation	%
1	2	3	4	5	6	7	8	9	10
1	Frozen Shrimp	Q	111874	127700	134815	129768	138085	8317	6.41
		V	448151	413992	460831	401307	422067	20760	5.17
3	Frozen Fin Fish	Q	212903	174979	196322	138023	159689	21666	15.70
		V	87468	71311	84165	62073	75927	13854	22.32
5	Frozen Cuttlefish	Q	33677	30568	41381	39610	44239	4629	11.69
		V	28899	28007	41709	43518	47401	3883	8.92
7	Frozen Squid	Q	37528	39790	37838	37832	48124	10292	27.20
		V	32443	32667	38437	37292	47726	10434	27.98
9	Dried Items	Q	7532	8307	8178	12574	9692	2882	-22.92
		V	7022	6796	8423	14568	12101	-2467	-16.93
11	Live Items	Q	1844	1628	2115	2341	2262	-79	-3.37
		V	3988	4057	5366	511	5075	4564	893.15
13	Chilled Items	Q	3820	3284	3350	3779	3988	209	5.53
		V	7163	6366	5914	6404	6814	410	6.40
15	Others	Q	31195	38209	43298	48090	55250	7160	14.89
		V	29254	32209	43286	38923	47558	8635	22.18
	Total	Q	**440473**	**424470**	**467297**	**412017**	**461329**	**49312**	**11.97**
		V	**644389**	**595705**	**688131**	**609195**	**664669**	**55474**	**9.11**

Q-Quantity, V-Value

Source: Marine Products Export Development Authority

Appendix 16.5

Market-wise Export of Marine Products from India,2001-02 to 2004-045

(Qty. in Tonnes & Value in Rs Crore)

Sl. No.	Market	2001-02				2002-03				2003-04				2004-05			
		Qty.	% to total	Value	% to total	Qty	% to total	Value	% to total	Qty.	% to total	Value	% to total	Qty.	% to total	Value	% to total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Japan	64905	15.3	1820.69	30.6	54910	11.8	1534.76	22.3	50020	12.1	1163.66	19.1	57832	12.5	1202.45	18.1
2	USA	49041	11.6	1421.38	23.7	61703	13.2	2051.12	29.8	53153	12.9	1882.06	27.6	50045	10.8	1556.09	23.4
3	Europe	82572	19.5	1145.49	19.3	94541	20.2	1388.47	20.2	96284	23.4	1470.99	24.2	117742	25.5	1819.28	27.4
4	China	134767	31.8	597.23	10	170811	36.6	762.48	11.1	123738	30	676.46	11.1	124826	27.1	693.25	10.4
5	S.E. Asia	52424	12.4	538.75	9	44097	9.4	642.38	9.3	50670	12.3	545.77	9	63842	13.8	628.83	9.5
6	Middle East	19159	4.5	181.06	3	19658	4.2	204.74	3	14711	3.6	201.52	3.3	16624	3.6	244.42	3.7
7	Others	21602	5	252.45	4.2	21561	4.6	297.36	4.3	23441	5.7	351.46	5.8	30418	6.6	502.37	7.6
	TOTAL	424470	100	5957.05	100	467297	100	6881.31	100	412017	100	6091.95	100	461329	100	6646.69	100

Source : Marine Products Export Development Authority

Appendix 16.6

Kerala's Share in the Export of Marine Products from India, 1990-91 to 2003-04

(Qty in Tonnes & Value in Rs. Crore)

Sl No.	Year	India		Kerala		Kerala's Share (%)	
		Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8
1	1990-91	139415	893.37	50997	313.79	36.58	35.12
2	1991-92	171820	1375.89	58743	444.47	34.19	32.3[illegible]
3	1992-93	209025	1768.56	49094	414.25	23.49	23.42
4	1993-94	243960	2503.52	63848	622.12	26.17	24.86
5	1994-95	307337	3573.27	74553	817.09	24.29	22.85
6	1995-96	296277	3501.11	78895	856.9	26.63	24.48
7	1996-97	378199	4121.36	92288	936.22	24.4	22.72
8	1997-98	385818	4697.48	89366	948.02	23.16	20.18
9	1998-99	302934	4625.87	70641	816.55	23.32	17.65
10	1999-2000	343031	5116.67	92148	1146.96	26.86	22.42
11	2000-01	440473	6443.89	88852	1046.47	20.17	16.24
12	2001-02	424470	5957.05	72756	950.55	17.14	15.97
13	2002-03	467297	6881.31	81393	1045.82	17.42	15.2
14	2003-04	412017	6091.95	76627	1099.13	18.60	18.04
15	2004-05	461329	6646.69	87379	1157.40	18.94	17.42

Source : Marine Products Export Development Authority

Appendix 16.7

Item-wise Export of Spices from India, 2000-01 to 2004-05

(QTY In M T ; Value in Rs. Lakhs)

Sl. No.	Item	2000-01		2001-02		2002-03		2003-04		2004-05		
		QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	Average value per Kg.(Rs.)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Pepper	21,630	38081 57	22,877	20268 79	21,609	17887 98	16,700	14350 50	14150	12140	85 80
2	Cardamom (small)	1,545	8468.02	1 031	6169 8	682	47.7 42	757	3591 70	650	2389 5	367,62
3	Cardamom (large)	1,506	2451 30	1,577	2291 66	1,450	2057.08	924	1234 46	950	1134	119,37
4	Chil	52,448	22973 30	69,998	25244 02	81 022	31514.68	86,575	36687.81	138000	49900 5	36 16
5	Ginger	6,288	2682 06	6,464	2311 47	8,461	2396 59	4,696	2275 45	13000	5950	45 77
6	Turmeric	44,627	11557 62	37,778	9073.71	32,402	10337 99	37,044	131 1.73	43000	15650	36.40
7	Coriander	12,480	3736 43	15 925	4833 87	18,065	5564 64	21,018	7200 95	33750	8266	24.49
8	Cumin	18,891	17835.28	17,248	14818 03	10,422	9328 33	7,957	5983 79	13750	10190	74 11
9	Celery	4,565	1410 87	4,251	1236 59	3,960	1225 43	4,815	1520 33	4100	1300 5	31.72
10	Fennel	4,417	1881.71	4,274	1695.82	4,160	1783.75	5 007	2211 48	7100	2529 5	35 63
11	Fenugreek	9,353	1977 99	6,582	1617 14	13,193	2551.06	6,932	1554 56	13750	2660 5	19,35
12	Other Seeds (1)	3,706	1431 08	9,979	2790 79	14,920	3617 36	14 031	3396.85	11100	2613 5	23.55
13	Garlic	11,087	1275 25	1,106	409 78	1,529	698.68	3,691	1422 64	2250	560 5	24.91
14	Tamarind	10,025	2248 60	7,707	1778 24	12,590	2275 35	12,077	1852 11	7500	2000	26 67
15	Nutmeg & Mace	856	1630 19	1,346	1990 19	1 381	2047 36	1,420	2638 14	1250	2235	178 80
16	Vanilla	22	505 14	27	1760 61	25	2225 72	27	3872 04	43	2875.9	6688 14
17	Other Spices (2)	8,382	4037 38	12,822	4738 33	11,307	5107 76	7,214	4096 64	8495	3843 1	45 24
18	Curry Powder	5 841	4299 56	6,305	5052.61	8,492	6893 67	8,218	6805 28	7750	6610	85 29
19	Mint Products	4,185	15498 22	11 295	48474 34	13 589	56557 94	10,110	39435 51	9300	40776 5	438.45
20	Oils & Oleoresins	3,860	39371 33	4,510	37317 10	4,839	39094 23	5,133	37991 76	5600	46375	828 13
	Total	235,917	183352.9	243,203	194054.9	264,107	208671	254,382	191160.19	335488	220000	65.58
	Value in Mill.US$		400.51		407.85		431.45		416.56		490.6	

(1) Include Bishops Weed (Ajwanseed), Dill Seed, Poppy Seed, Aniseed, Mustard etc

(2) Include Tamarind, Asafoetida, Cinnamon, Cassia, Vanila, Saffron etc

Source: Spices Board.

Appendix 16.6

Market-wise Export of Cashew Kernals from India - 2003-04 to 2004-05

(Qty. in Tonnes & Value in Rs. Crore)

Sl. No.	Countries	2003-04				2004-05			
		Qty.	% to total	Value	% to total	Qty	% to total	Value	% to total
1	2	3	4	5	6	7	8	9	10
1	USA	48504	48.11	881.55	48.85	61543	48.65	1288.49	47.56
2	Netherlands	12237	12.14	215.03	11.92	15691	12.39	345.67	12.76
3	U.K.	5392	5.35	95.61	5.3	7108	5.61	158.33	5.84
4	U.A.E.	6239	6.19	102.42	5.68	8690	6.86	148.3	5.47
5	Japan	5522	5.48	101.95	5.65	5047	3.98	111	4.1
6	France	2444	2.42	43.61	2.42	3129	2.63	66.49	2.45
7	Saudi Arabia	2011	1.99	32.95	1.83	2998	2.37	61.55	2.27
8	Spain	2198	2.18	41.11	2.28	2870	2.27	64.8	2.39
9	Russia	1413	1.4	22.09	1.22	2331	1.84	43.41	1.6
10	Germany	1574	1.56	26.11	1.45	1966	1.55	42.39	1.56
11	Canada	1354	1.34	22.72	1.26	1540	1.22	31.39	0.6
12	Greece	830	0.82	15.97	0.89	1511	1.19	33.74	1.25
13	Norway	890	0.88	15.9	0.88	1318	1.04	29.15	1.08
14	Italy	946	0.96	17.74	0.98	1119	0.88	23.7	0.88
15	Israel	508	0.5	9.71	0.54	964	0.76	23.26	0.86
16	Australia	276	0.27	4.38	0.24	873	0.69	18.36	0.68
17	Hong Kong	477	0.47	10.25	0.57	719	0.57	17.71	65
18	Lebanon	561	0.56	11.28	0.62	655	0.52	14.95	0.55
19	Kuwait	847	0.84	15.34	0.85	574	0.45	12.78	47
20	Singapore	513	0.51	9.24	0.51	510	0.4	11.6	0.43
21	Bahrain	439	0.44	8.82	0.38	362	0.28	7.08	0.26
22	Korea Rep.	311	0.31	5.83	0.32	213	0.17	5.22	19
23	New Zealand	332	0.33	5.58	0.31	261	0.16	4.46	6
24	Malaysia	40	0.04	0.69	0.04	62	0.05	1.39	5
25	Others	4930	4.89	91	5.04	6470	5.11	143.87	531
	Total	100828	100	1804.43	100.00	126567	100.00	2709.24	100.00

Source : Cashew Export promotion Council of India

Appendix 16.9

Export of Coir and Coir Products from India 2000-01 to 2004-05

Quantity in Tonnes, Value in Rs. Lakh

Sl. No.	Items	2000-01		2001-02		2002-03		2003-04		2004-05	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Coir Fibre	1053.98	148.18	1010.30	122.13	1036.87	103.80	1120.75	142.44	1350.45	186.03
2	Curled Coir	533.56	80.33	572.52	80.63	492.37	80.05	76.54	14.02	69	11.97
3	Coir Pith	9926.96	752.80	13725.65	1014.34	21064.19	1493.00	29179.35	1975.92	43420.54	3042.41
4	Coir Rope	482.12	145.21	348.64	108.04	332.4	102.05	308.88	111.46	299.67	116.91
5	Coir Yarn	14607.31	4187.49	13206.9	3728.60	11482.48	2996.78	12364.43	3498.71	10987.59	3358.16
6	Coir Geo-Textiles	1402.3	625.38	1752.05	780.13	2140.68	985.22	2599.54	1184.74	2323.19	1049.76
7	Coir Rugs	2720.43	1958.64	1329.97	1039.77	1327.08	932.41	1654.56	1071.36	1727.34	1002.64
8	Handloom Mats	24718.47	15917.67	26147.89	17009.85	33058.74	20711.80	36306.99	22133.69	40127.35	25129.27
9	HandloomMattings	6323.37	4287.86	4423.27	2921.03	4772.63	3191.41	4545.56	2838.66	3518.9	2334.04
10	Powerloom Mats	606.95	442.73	686.51	458.19	954.85	585.52	1026.28	672.13	1433.22	931.16
11	Powerloom Mattings	410.70	284.05	274.05	226.08	183.16	111.78	309.04	215.44	188.94	138.92
12	Tufted Mats	3835.64	2104.17	7129.54	4112.36	6429.05	3434.74	11772.50	6359.52	16502.26	9499.05
13	Rubberised Coir	385.07	267.24	454.62	350.37	535.23	403.42	461.78	334.67	475.92	340.57
14	Coir Other Sorts	488.23	164.47	272.9	106.61	372.86	138.55	-490.21	196.9	502.4	199.38
	Total	**67493.09**	**31366.22**	**71334.81**	**32058.33**	**84162.59**	**35270.53**	**102253.41**	**40749.66**	**122926.77**	**47340.27**

Source:- Coir Board

Appendix 17.1

State wise Financial Assistance Disbursed by NABARD and NCDC during 2004-05

(Amount Rs Crore)

Sl. No.	Name of State	Disbursement by NABARD		Disbursement by NCDC		Total Disbursement	
		Amount	%	Amount	%	Amount	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Andrapradesh	894.94	10.43	184.73	17.41	1079.67	11.21
2	Assam	133.04	1.55	N.A	-	133.04	1.38
3	Bihar	176.45	2.06	14.88	1.40	191.33	1.98
4	Gujarat	304.59	3.55	18.22	1.72	322.81	3.35
5	Haryana	593.51	6.92	10.03	0.96	603.54	6.26
6	Karnataka	455.44	5.31	29.37	2.77	484.81	5.03
7	Kerala	448.01	5.22	109.24	10.30	557.25	5.78
8	Madyapradesh	524.51	6.11	74.11	6.98	598.62	6.21
9	Maharashtra	475.88	5.55	165.77	15.63	641.65	6.66
10	Orissa	322.62	3.76	0.11	0.01	322.73	3.35
11	Panjab	1041.81	12.15	0.10	0.01	1041.91	10.81
12	Rajasthan	415.73	4.85	18.15	1.71	433.88	4.50
13	TamilNadu	389.20	4.54	149.92	14.13	539.12	5.59
14	Uttarpradesh	1473.57	17.18	15.05	1.42	1488.62	15.45
15	WestBengal	474.11	5.53	23.30	2.19	497.41	5.16
	Total	**8123.41**	**94.71**	**812.98**	**76.64**	**8936.39**	**92.72**
	All India Total	**8577.46**	**100**	**1060.72**	**100**	**9638.18**	**100**

Source: Annual Reports of NABARD and NCDC 2004-05

Note: Percentages are to All India Total

Appendix 17.2

State wise Cumulative Financial Assistance Disbursed by NABARD and NCDC as at the end of March 2005

(Amount Rs Crore)

Sl. No.	Name of State	Disbursement by NABARD		Disbursement by NCDC		Total Disbursement	
		Amount	%	Amount	%	Amount	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Andrapradesh	8211.81	10.12	545.33	6.21	8757.14	9.72
2	Assam	1062.44	1.31	85.95	0.98	1148.39	1.28
3	Bihar	2542.88	3.13	163.11	1.86	2705.99	3.01
4	Gujarat	4104.85	5.06	273.16	3.11	4378.01	4.87
5	Haryana	4887.02	6.02	148.70	1.69	5035.72	5.60
6	Karnataka	5508.97	6.79	660.64	7.52	6169.61	6.86
7	Kerala	3575.61	4.40	750.30	8.54	4325.91	4.81
8	Madyapradesh	4505.85	5.55	624.88	7.11	5130.73	5.70
9	Maharashtra	7410.33	9.13	2001.67	22.79	9412.00	10.46
10	Orissa	2879.37	3.55	128.40	1.46	3007.77	3.34
11	Panjab	6482.29	7.99	291.52	3.32	6773.81	7.53
12	Rajasthan	4561.40	5.62	338.13	3.85	4899.53	5.44
13	TamilNadu	6090.50	7.50	734.79	8.36	6825.29	7.59
14	Uttarpradesh	12660.49	15.60	613.77	6.99	13274.26	14.76
15	WestBengal	3703.15	4.56	377.05	4.29	4080.20	4.53
	Total	**78186.96**	**96.33**	**7737.40**	**88.08**	**85924.36**	**95.52**
	All India Total	**81166.47**	**100**	**8784.03**	**100**	**89950.47**	**100**

Source: Annual Reports of NABARD and NCDC 2004-05

Note: Percentages are to All India Total

Appendix 17.3

State wise Financial Assistance Disbursed by All India Financial Institutions during 2003-04 (Rs. Crore)

Sl. No	State	IDBI	%	IFCI	%	ICICI	%	UTI	%	LIC	%	NABARD	%	NCDC	%	Grand Total	%
1	2	3	4	5	6	7	8	9	10	13	14	15	16	17	18	19	20
1	Andra Pradesh	647.4	13.9	7.4	2.6	1734.3	6.7			194.3	1.23	807.3	8.0	7.0	1.1	3197.7	5.7
2	Assam	39.0	0.8									73.5	1.0			112.5	0.2
3	Bihar	2.9	0.1			32.0	0.1					95.7	1.3	8.6	1.4	140.2	0.3
4	Gujarat	456.8	9.8	37.1	13.2	1162.6	4.5			373.2	2.36	324.5	4.3	50.6	8.1	2404.7	4.3
5	Haryana	50.5	1.1	28.7	9.5	1105.8	4.3			20.0	0.13	508.1	6.7	29.4	4.7	1740.5	3.1
6	Karnataka	689.2	14.8	2.6	0.9	1455.4	5.6			178.9	1.13	473.4	6.2	77.1	12.3	2876.6	5.2
7	Kerala	25.2	0.5			118.8	0.5			80.0	0.51	342.1	4.5	96.6	15.4	662.7	1.2
8	Madhya Pradesh	78.1	1.7			127.9	0.5			88.9	0.56	370.4	4.9	41.0	6.5	706.3	1.3
9	Maharashtra	1039.9	22.3	100.6	35.8	5792.*	22.4	55.0	13.3	7097.3	45	457.7	6.0	136.4	21.8	14679.0	26.3
10	Orissa	108.1	2.3	10.9	3.9	341.3	1.3					308.4	4.1	6.0	1.0	774.7	1.4
11	Panjab	58.6	1.3	4.2	1.5	120.5	0.5					62.7	0.8			246.0	0.4
12	Rajasthan	124.0	2.7			325.9	1.3			75.0	0.48	361.7	4.8	3.5	0.6	890.1	1.6
13	Tamil Nadu	259.9	5.6	2.3	0.8	1025.7	4.0			477.0	3.02	733.1	9.6	92.2	14.7	2590.2	4.6
14	Uttar Pradesh	99.9	2.1	19.2	6.8	720.9	2.8			71.2	0.45	1221.8	16.1	4.2	0.7	2137.2	3.8
15	West Bengal	158.5	3.4	26.4	9.4	734.0	2.8			360.4	2.28	613.2	8.1	22.4	3.6	1912.9	3.4
			0.0														
	Total	3836.0	82.4	237.4	84.4	14797.1	57.3	55.0	13.3	9018.2	57.1	6554.6	86.2	575.0	91.8	35071.3	62.8
	All India Total	4656	100.0	281.2	100.0	25831.0	100.0	414.7	100.0	15781.8	100.0	7605.3	100.0	626.6	100.0	55196.4	98.8

Source Annual Reports of IDBI, NABARD & NCDC 2003-04

Appendix 17.4

State wise Financial Assistance Disbursed by All India Financial Institutions as at the end of March 2004 (Rs.Crore)

Sl. No	State	IDBI	%	IFCI	%	ICICI	%	UTI	%	LIC	%	NABARD	%	NCDC	%	Grand Total	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	20
1	Andra Pradesh	15019.7	8.9	3590.3	8.1	9452.7	6.5	531.5	1.2	1539.0	2.4	7316.9	10.1	360.6	4.7	37810.7	6.6
2	Assam	687.8	0.4	305.2	0.7	540.7	0.3	50.2	0.1	32.8	0.05	929.4	1.3	86.0	1.1	2632.1	0.5
3	Bihar	1025.7	0.6	103.8	0.2	459.9	0.3	189.5	0.4	355.7	0.56	2366.4	3.3	148.2	1.9	4649.2	0.8
4	Gujarat	22812.9	13.5	6905.2	15.5	23141.0	13.5	2711.1	5.9	3725.7	5.82	3800.2	5.2	254.9	3.3	63351.0	11.0
5	Haryana	4571.7	2.7	1147.4	2.6	4536.3	2.6	79.4	0.2	112.4	0.18	4293.5	5.9	138.7	1.8	14879.4	2.6
6	Karnataka	12072.7	7.1	2726.6	6.1	11308.6	6.6	999.1	2.2	899.9	1.41	5053.5	7.0	631.3	8.2	33691.7	5.8
7	Kerala	2459.6	1.5	344.0	0.8	1174.9	0.7	56.3	0.1	569.8	0.87	3127.6	4.3	641.1	8.3	8363.3	1.5
8	Madhya Pradesh	7228.9	4.3	2133.2	4.8	3827.8	2.2	364.3	0.8	535	0.84	3981.4	5.5	550.8	7.1	18621.4	3.2
9	Maharashtra	36400.3	21.5	8022.9	18.1	48053.8	28.0	6730.5	14.6	26791.8	41.8	6934.5	9.6	1835.9	23.8	134769.7	23.4
10	Orissa	3083.3	1.8	941.7	2.1	2317.2	1.3	188.7	0.4	339.0	0.53	2556.7	3.5	1203	1.7	9554.9	1.7
11	Panjab	5612.1	3.3	2115.0	4.8	2042.3	1.2	2138	0.5	344.1	0.54	5440.5	7.5	291.4	3.8	15059.2	2.8
12	Rajasthan	8024.6	4.7	1710.5	3.9	4324.8	2.5	298.6	0.6	701.0	1.09	4146.7	5.7	320.0	4.1	19526.2	3.4
13	Tamil Nadu	14746.3	8.7	3265.8	7.4	12806.0	7.5	679.8	1.5	2001.0	3.12	5701.3	7.9	584.8	7.6	39785.0	6.9
14	Uttar Pradesh	11136.9	6.6	4433.0	10.0	7374.6	4.3	866.8	1.9	827.9	1.29	11186.9	15.4	598.7	7.8	36424.5	6.3
15	West Bengal	7173.3	4.2	1678.5	3.8	8617.3	5.0	530.5	1.2	2380.7	3.72	3229	4.4	353.7	4.6	23963.0	4.2
																	0.0
	Total	152055.8	89.7	39423.1	88.8	139977.9	81.5	14490.1	31.5	41145.8	64.2	70064.8	96.5	6924.4	89.7	464081.8	80.6
	All India Total	169514.7	100.0	44399	100.0	171698.3	100.0	46003.3	100.0	64045.2	100	72589.0	100.0	7723.3	100.0	575973.5	100.0

Source: Annual Reports of IDBI, NABARD & NCDC 2003-04

Appendix 1 r.o

State-wise Percapita Assistance Disbursed by All India Financial Institutions During 2001-02 to 2003-04

S. no	State	IDBI			IFCI			ICICI			LIC			LTI			GIC			TOTAL		
		01-02	02-03	03-04	01-02	02-03	03-04	01-02	02-03	03-04	01-02	02-03	03-04	01-02	02-03	03-04	01-02	02-03	03-04	01-02	02-03	03-04
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Andhra Pradesh	97.6	24.4	85.5	12.2	1.6	1.0	229.1			122.4	4	25.7	7.6				0.6	0.5	457.9	30.6	112.7
2	Assam	12.7		14.6	4.8															17.5		14.6
3	Bihar	0.7	1.5	0.3	0.1			3.9												4.7	1.5	4.2
4	Gujarat	178.3	22.1	80.3	35.2	71.7	7.3	229.7			282.3	34	72.8				2.7	1.0	4.1	548.2	128.8	176.5
5	Haryana	113.8	46.7	23.9	54.0		12.7	574.1					9.5						14.2	897.9	46.7	60.3
6	Karnataka	104.8	26.5	130.7	19.9	29.8	0.5	276.2			1250	17.1	32.9				2.8	5.3	12.1	1654.0	177.2	177.2
7	Kerala	32.0	13.3	7.9	10.4			37.4				3.1	25.1						6.2	80.8	16.4	39.3
8	Madhya Pradesh	51.7	12.4	12.9	8.6			21.2			1.9	11.4	14.7					0.2		83.4	24.0	27.6
9	Maharashtra	441.9	148.1	107.5	45.6	54.5	10.4	598.4			2273	248.2	733.6	14.8	5.7		12.4	6.4	30.6	3386.4	462.9	882.1
10	Orissa	13.4	1.8	29.4	3.6		3.0	83.0			10.6									125.6	1.8	32.4
11	Punjab	250.3	25.6	24.1	100.0	82.0	1.7	49.6			66.1	18.5					1.8			470.8	147.1	25.8
12	Rajasthan	52.3	14.3	22.0	9.2			57.7			210.3		1.2					2.7	1.6	329.3	17.0	25.1
13	Tamil Nadu	89.6	55.0	41.8	14.4	2.8	0.4	165.2			199.3	7.6	78.8				2.0	1.6	6.9	470.5	67.1	125.9
14	Uttar Pradesh	12.7	4.7	6.0	0.8	2.4	1.2	43.4			61.8	8.1	4.3	0.9			2.5		0.1	121.6	13.2	11.6
15	West Bengal	40.2	11.1	19.5	5.8	7.1	3.3	91.5			294.7	38.0	44.9	5.1				3.7	3.5	443.3	59.9	171.2
	All India Total	100.3	26.5	45.3	1.0	17.5	2.7	251.5			88.8	60.4	153.7	12.4	6.0		18.8	3.2	6.4	471.7	121.620	208.1

Source: Report on Development Banking in India (various issues)

(Values of 2001-02 - Provisional) ICICI has been merged with ICICI bank on 3.5.2002 (b)

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Appendix 17.6

State wise distribution of commercial bank branches and population per bank office.

	Number of Banks as at the end of							Percentage to total number of offices as at the end of							Average Population per bank branch(in '000s)						
States	Jun-99	Jun-00	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05	Jun-99	Jun-00	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05	Jun-99	Jun-00	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Andhra Pradesh	5107	5112	5171	5207	5267	5284	5393	6.9	7.8	7.8	7.8	7.9	7.9	7.9	14	15	15	15	15	14	14
2 Assam	74	1234	1237	1223	1220	1221	1235	0.9	1.9	1.9	1.8	1.0	1.0	1.0	193	21	22	22	22	22	22
3 Bihar	273	3008	3561	3564	3564	3569	3587	3.3	7.6	5.4	5.4	5.3	5.3	5.3	207	20	21	21	21	22	23
4 Gujarat	852	3642	3670	3657	3670	3668	3705	10.3	5.6	5.6	5.5	5.5	5.5	5.4	34	13	13	14	14	23	14
5 Haryana	172	1494	1516	1551	1591	1615	1668	2.1	2.3	2.3	2.3	2.4	2.4	2.5	07	13	13	13	13	14	13
6 Karnataka	756	4720	4761	4779	4804	4834	4949	6.2	7.2	7.2	7.2	7.2	7.2	7.3	37	11	11	11	11	13	11
7 Kerala	301	3255	3298	3334	3370	3404	3493	7.3	5.0	5.0	5.0	5.1	5.1	5.1	34	10	10	10	10	11	9
8 Madhya Pradesh	343	4497	3456	3458	3450	3453	3489	4.2	6.9	5.2	5.7	5.2	5.2	5.1	16	18	18	18	19	10	17
9 Maharashtra	1118	6224	6294	6320	6317	6334	6439	13.5	9.5	9.5	9.5	9.5	9.5	9.5	40	15	15	15	15	16	15
10 Orissa	100	2218	2220	2227	2227	2240	2267	1.2	3.4	3.4	3.4	3.3	3.3	3.3	2.1	16	5	16	17	15	16
11 Punjab	346	2508	2534	2571	2515	2541	2755	4.2	3.8	3.8	3.9	3.9	3.9	4.0	42	9	9	9	9	17	9
12 Rajasthan	364	3321	3323	3336	3342	3350	3408	4.4	5.1	5.0	5.0	5.0	5.0	5.0	58	16	17	17	17	9	16
13 Tamil Nadu	1060	4797	4785	4740	4746	4757	4849	12.8	7.3	7.2	7.2	7.1	7.1	7.1	37	13	13	13	13	37	13
14 Uttar Pradesh	747	8209	8155	8159	8217	8213	8299	9.0	13.6	12.3	12.3	12.3	12.3	12.2	114	19	20	20	20	19	20
15 West Bengal	504	4394	4424	4430	4446	4468	4515	6.1	6.7	6.7	6.7	6.7	6.7	6.6	35	18	18	18	19	20	19
TOTAL	7077	61303	58405	58376	58841	59043	60048	85.3	83.4	88.3	88.3	88.2	88.2	88.2	-	-	-		-	19	15
All India Total	8262	65621	66113	66055	66692	66970	68118	100.0	100.0	100.0	100.0	100.0	100.0	100.0	65	15	15	16	16	15	15

Source: Banking Statistics, Quarterly (various issues), RBI

Appendix 17.7

State-wise Deposits, Credits and Credit- Deposit Ratio of Public Sector Banks. (Rs. Crore)

	Jun-89			Mar-03			Jun-03			Mar -04			Jun - 04			Mar -05			Jun - 05		
States/Uts	Deposit	Credit	C-D Ratio	Deposit	Credit	C-D Ratio	Deposit	Credit	C-D Ratio	Deposit	Credit	C.D Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio
1	2	3	4	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1 Andhra Pradesh	12[illegible]	122	100.8	57384	37308	65.0	57108	37353	65.4	71489	48399	67.7	71961	48431	67.3	84005	63469	75.55	84520	64884	76.76
2 Assam	33	13	39.4	11204	3186	28.4	10909	3456	31.7	14543	4543	31.2	14413	4578	31.8	17223	6103	35.44	17098	6661	38.96
3 Bihar	169	53	31.4	26087	6100	23.4	26898	6334	23.5	35697	9224	25.8	34048	8718	25.6	40705	11400	27.99	38541	11369	29.50
4 Gujarat	40[illegible]	195	48.6	63546	27153	42.7	64836	25570	39.6	74128	31093	41.9	74804	30101	40.2	82659	37877	45.58	80272	37824	46.87
5 Haryana	49	23	48.9	22628	10886	48.1	22795	10742	47.1	26527	16827	62.7	26495	14002	52.8	30038	18021	59.99	30371	18014	59.31
6 Karnataka	188	143	76.1	50463	33981	67.3	51703	34485	66.7	67246	46673	69.6	69070	48019	69.5	81884	62918	76.84	81275	64966	79.93
7 Kerala	117	77	65.8	38811	16883	43.7	38803	16933	43.6	45193	22553	49.9	44329	23529	53.1	47271	28079	59.4	46592	29092	62.44
8 Madhya Pradesh	102	83	58.9	37404	15886	48.4	32107	15159	47.2	42120	20156	47.9	44289	19827	44.8	64620	24975	55.97	45985	25286	55.05
9 Maharashtra	903	917	101	145950	129534	88.8	147227	122192	83.0	188022	139852	74.4	200738	139404	69.6	232635	207111	89.03	237280	212285	89.47
10 Orissa	29	15	51.7	16805	7713	45.9	16191	7673	47.4	21947	12148	55.4	21584	12244	56.7	25542	16116	63.1	25475	16401	64.38
11 Punjab	186	50	27	52357	22417	42.8	52439	21503	41.0	57098	26227	44.2	56995	24135	43.6	69998	27904	46.51	59553	29590	49.85
12 Rajasthan	74	38	51.4	27441	14851	54.1	27281	14738	54.0	33366	19943	59.8	32932	20132	61.1	36517	26393	72.26	36632	26977	73.64
13 Tamil Nadu	233	311	133.5	58971	48246	80.4	50249	48760	80.8	69841	58053	83.1	70370	58201	82.7	79045	73694	93.1	79538	76119	95.70
14 Uttar Pradesh	337	154	45.7	92065	28381	30.8	90671	27926	30.8	113502	38616	34	111950	37910	33.9	127215	48243	37.92	125633	47646	37.92
15 West Bengal	456	526	115.4	66378	33443	48.2	70150	31640	45.1	81948	40330	49.2	84699	39687	46.9	93068	49539	53.23	94794	50191	52.95
TOTAL	3402	2655	78.2	788305	435852	58.9	788137	424469	53.2	942867	533587	56.6	957147	529226	55.3	1082462	701542	64.81	1083508	717104	66.18
All India Total	3897	3035	77.3	854330	538031	58.4	860057	521680	54.3	1175439	648972	55.2	1163914	645593	54.1	1358760	848483	62.44	1368446	867392	63.52

Source: Banking Statistics Quarterly Handbook RBI (various issues)

Appendix 17.8
Banking Statistics of Kerala – 1990-2005.

(Rs. crore)

	State Bank Group				Other Nationalised Banks				Gramin Bank				Total Public Sector Banks			
Ending March	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1990	2408.71	800.3	1551.12	64.45	2716.06	832.34	1535.28	56.89	87.74		179.83	204.96	5212.51	1832.64	3326.24	63.81
1991	2854.68	949.59	1797.9[illegible]	62.98	3205.41	987.48	1749.2	54.57	109.78		195.61	178.37	6169.65	1947.05	3742.82	60.66
1992	3410.27	1195.89	1850.95	54.28	3866.81	1262.66	1830.95	47.36	142.2		213.37	149.94	7418.38	2456.55	3895.25	52.51
1993	4285.20	1778.54	2145.1	50.06	4743.08	1815.06	2064.89	43.53	171.56		232.16	135.52	9199.93	3594.6	4440.15	48.30
1994	5312.22	2369.6	2404.91	45.27	5753.17	2410.1	2126.1	36.95	211.59		262.75	124.18	11276.98	4768	4793.76	42.51
1995	6154.52	2698.96	2904.99	47.69	6516.3	2806.37	2387.85	36.84	280.7		313.9	120.41	12931.52	5503.33	5636.58	43.59
1996	6935.68	3059.13	3135.42	45.21	7281.92	3140.39	2890.17	39.6	263.39		351.71	133.53	14460.97	6199.52	6377.3	44.10
1997	7736.39	3648.84	3604.73	46.59	8380.93	3872.62	3262.32	38.93	334.85		439.27	131.19	16452.17	7521.76	7306.32	44.41
1998	8965.43	4310.78	4131.4	46.08	9729.35	4763.39	4084.84	41.99	404.95		515.73	127.34	19098.77	9074.17	8731.97	45.72
1999	10498.17	5299.59	4670	44.48	10141.59	4491.7	4082.02	40.25	510.72		613.52	120.13	21150.48	9791.29	9266.54	44.28
2000	12617.34	6755.85	5580.48	44.23	13536.21	6708.45	5192.83	38.36	648.06		755.89	116.47	26802.55	13464.3	11529	43.01
2001	14663.45	7568.28	6508.93	44.36	15175.61	7786.79	5666.13	38.67	796.85	2[illegible].53	967.16	121.37	30635.91	15296.6	13344.22	43.56
2002	15894.74	8874.44	7560.15	45.34	17080.96	8032.07	6573.0[illegible]	40.82	1000.14	76.35	1086.68	108.65	34075.84	16978.87	15719.84	44.94
2003	19510.69	10124.41	9042.21	46.32	19944.88	9506.81	8744.2	43.84	1271.05	183.45	1202.23	94.58	40726.58	19796.67	18986.67	48.62
2004	21473.4	10764.57	10544.34	49.10	21712.62	9778.40	10716.95	49.36	1571.51	198.98	1456.37	86.33	44607.53	20741.88	22717.36	50.62
2005	22980.85	10545.72	13021.69	56.84	22220.2	9280.74	13169.57	59.27	1752.84	100.12	1852.38	106.25	46953.89	19906.56	28053.84	59.73
Sept 04	21655.53	10585.05	11377.18	52.54	21406.67	9169.43	11715.25	54.73	1595.59	193.64	1612.31	101.05	44658	19617	24705	55.32
Sept 05	23499.13	10579.49	14823.38	63.08	22461.07	8866.43	14883.61	66.27	1832.02	188.10	2077.81	113.10	47792.22	19734.02	31778.78	66.49

Appendix - 17.8 (Contd.)

	Co-operative Banks				Private Banks				Foreign Banks				Grand Total			
Ending March	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1990					1407.58	285.09	791.02	56.26	39.47	14.19	68.97	174.74	6659.56	1932.92	4187.10	62.87
1991					1587.81	357.29	895.27	53.04	77.12	19.95	77.15	100.04	7934.78	2318.6	4715.34	59.43
1992					2252.55	579.33	1107.71	49.18	115.82	77.12	90.43	78.08	9786.75	3116	5093.39	52.04
1993					2912.31	904.31	1374.84	47.21	149.2	100.48	42.52	28.50	12261.44	4599.39	5860.51	47.80
1994					3864.17	1225.63	1647.79	44.97	197.19	137.73	42.31	21.46	15138.34	6152.36	6484.03	42.64
1995					4526.39	1382.71	2159.94	47.72	236.39	157.67	46.04	19.48	17894.3	7043.71	7842.56	44.32
1996					5710.33	1903.86	2583.81	45.24	247.56	152.93	45.75	18.47	20418.06	8255.33	9008.66	44.11
1997					6576.72	2434.92	3175.5	48.29	324.48	221.41	83.28	25.67	23352.67	10178.09	10565.1	45.24
1998					8056.02	3385.64	3542.4	43.92	400.27	275.17	89.87	22.01	27572.08	12734.96	12364.24	44.84
1999					9914.39	3204.45	4107.97	41.43	466.97	332.79	103.16	22.08	31531.64	13328.53	13575.67	43.06
2000					11442.39	4946.17	4312.78	37.69	373.9	311.14	99.07	26.50	38618.84	18723.61	15940.98	41.28
2001					13848.15	5791.53	5741.5	41.46	365.39	242.7	94.55	25.83	44850.15	21430.83	19180.27	42.77
2002					16302.23	7329.28	6248.91	38.33	377.71	227.56	83.18	24.87	51855.78	24533.71	22061.94	42.71
2003					18293.05	8641.09	7875.67	43.06	379.73	257.81	144.19	37.97	58399.35	28695.57	27006.53	46.47
2004					20891.72	9146.59	8981.31	47.99	371.86	211.82	188.64	45.05	65961.11	30100.39	31067.31	48.31
2005	2276.84	1.68	3046.94	133.91	22037.96	9928.22	12870.78	57.50	353.96	194.82	223.87	56.83	71672.68	29121.40	43997.43	61.39
Sept 04					20644	8989	10163	49.23	381.34	202.23	206.32	54.10	65851.5	29088.84	36877.57	56.00
Sept 05	2436.42	1.47	3146.04	134.03	22406.22	8847.93	13646.32	60.89	429.90	237.15	235.87	54.87	73204.78	28820.57	49007.01	66.95

Source Banking Statistics of Kerala Reported by State Level Bankers Committee

Note. Details of Co-operative Bank statistics are available through SLBC from 2004-05 onwards

Appendix 17.9

District Wise distribution of number of branches, aggregate deposits, gross bank credit and CD Ratio of sheduled commercial banks-Kerala, March 2005

(Amount Rs Crore)

Sl No.	District	State Bank Group				Nationalised Banks				Regional Rural Banks				Other Commercial Banks				All Commercial Banks			
		No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio
(*)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1	Thiruvananthapuram	117	4251	2440	57.4	151	3032	3318	107.3					92	2919	1307	44.8	360	10262	7066	68.9
2	Kollam	50	1593	980	62.3	86	1249	885	70.9					61	1306	718	54.8	197	4148	2584	62.5
3	Pathanamthitta	63	2690	717	26.7	81	1923	402	20.9	5	6	4	66.7	101	2412	517	21.2	250	7051	1640	23.2
4	Alappuzha	71	1761	1066	60.5	66	1403	595	39.5					81	1526	586	37.1	218	4695	2188	46.6
5	Kottayam	108	2357	1482	62.9	59	1076	581	53.9	8	41	25	61.0	104	1962	750	38.2	279	5438	2838	52.2
6	Idukki	38	371	359	96.8	30	171	259	151.5					31	245	207	84.5	99	787	825	104.8
7	Ernakulam	114	3586	2735	76.7	196	4190	3259	77.8	12	69	33	47.8	198	6247	3752	60.1	520	14072	9779	69.5
8	Thrissur	66	1984	825	41.6	100	2571	852	33.9	22	137	71	51.8	198	3832	1447	37.8	386	8464	3195	37.7
9	Palakkad	52	1810	843	57.9	112	1425	827	58.0	14	42	48	114.3	84	668	451	67.5	262	3245	1969	60.7
10	Malappuram	34	1119	381	34.0	63	1154	349	30.2	81	422	431	102.1	54	642	306	47.7	232	3337	1466	43.9
11	Kozhikode	44	1127	685	61.1	97	1450	777	53.6	67	328	383	116.8	55	697	697	100.0	263	3603	2546	70.7
12	Wayanad	11	105	184	175.2	27	154	183	118.8	27	71	183	257.7	9	67	78	116.4	74	397	628	158.2
13	Kannur	30	1102	473	42.9	63	1099	644	37.8	76	381	352	92.0	37	493	307	62.3	225	3865	1776	46.2
14	Kasaragod	10	237	109	46.0	54	690	317	45.9	48	199	244	122.6	16	241	171	121.3	128	1267	841	66.4
	Total	808	23373	13096	56.0	1205	22194	13209	59.5	359	1707	1774	103.9	1121	23187	11272	48.6	3493	70481	39351	55.8

Source: Reserve Bank of India March 2005

Appendix 17.10

Bank wise performance 2004-05, Kerala.

Sl No	Name of Bank	Total Deposit	NRE Deposit	Total Advances	CD Ratio
1	2	3	4	5	6
A	State Bank Group				
1	State Bank of India	7381.74	3662.59	4166.68	56.45
2	State Bank of Bikaner & Jaipur	39.63	1.23	15.97	40.30
3	State Bank of Mysore	106.68	22.71	52.97	49.65
4	State Bank of Saurashtra	13.17	1.26	24.98	189.67
5	State Bank of Hyderabad	72.76	3.88	47.49	65.27
6	State Bank of Travancore	15376.87	6864.05	8713.8	56.67
	Total State Bank Group	22990.85	10545.72	13021.89	56.64
B	Nationalised Banks				
1	Allahabad Bank	35.61	2.62	71.59	198.55
2	Andhra Bank	172.07	8.05	197.56	114.81
3	Bank of Baroda	1213.11	839.21	426.33	35.14
4	Bank of India	726.90	225.05	585.64	80.61
5	Bank of Maharashtra	150.21	1.89	15.6	10.39
6	Canara Bank	6413.20	3332.64	3841.91	59.91
7	Central Bank of India	1199.53	398.66	764.05	63.70
8	Corporation Bank	798.31	267.42	481.13	60.27
9	Dena Bank	98.44	9.66	52.11	52.94
10	Indian Bank	1865.79	669.66	564.05	35.59
11	Indian Overseas Bank	2449.95	1355.10	955.61	39.01
12	Oriental Bank of India	100.21	16.36	67.33	67.21
13	Punjab National Bank	1181.32	206.62	798.37	67.58
14	Punjab & Sind Bank	20.16	0.28	17.46	86.65
15	Syndicate Bank	1900.17	613.04	1202.12	63.26
16	Union Bank of India	2626.82	1036.64	2142.68	81.57
17	United Bank of India	25.45	0.21	77.04	303.31
18	Uco Bank	367.29	41.43	309.48	84.28
19	Vijaya Bank	874.85	217.11	499.17	57.06
	Total Nationalised Banks	22220.20	9260.74	13169.57	59.27
C	Regional Rural Banks				
1	North Malabar Gramin Bank	725.47	90.90	723.62	99.74
2	South Malabar Gramin Bank	1027.37	99.22	1138.76	110.84
	Total Regional Rural Banks	1752.84	190.12	1862.38	106.25
	TOTAL PUBLIC SECTOR BANKS	46963.89	19996.58	28053.84	59.73
D	Private Sector Banks				
1	Bharat Overseas Bank	65.56	2.44	56.43	86.07
2	Catholic Syrian Bank	2671.37	949.62	1109.41	41.53
3	Dhanalakshmi Bank	1639.73	187.26	748.6	45.71
4	Federal Bank	8296.82	4298.17	4366.08	52.62
5	Karnataka Bank	155.99	20.00	98.1	62.89
6	Karur Vysya Bank	118.22	20.07	74.62	63.12
7	Lakshmivilas Bank	48.61	1.93	9.55	19.65
8	Lord Krishna Bank	1032.24	181.17	284.24	27.54
9	South Indian Bank	5301.5	2529.54	2178.65	43.56
10	Tamil Nadu Mercantile Bank	148.47	5.89	59.89	40.33
11	ING Vysya Bank	323.54	136.62	331.43	102.40
12	IDBI Bank	188.02	22.66	28.28	15.04
13	City Union Bank	62.32	10.68	38.2	61.59
14	Centurion Bank	344.48	66.68	185.47	53.84
15	Indus Ind Bank	129.26	6.79	507.41	392.55
16	HDFC Bank	626.24	191.97	766.12	122.34
17	Bank of Rajasthan	2.15	3.03	0.87	40.47
18	ICICI Bank	878.5	245.81	1694.81	192.92
19	Jamm & Kashmir Bank	4.46	0.52	11.41	263.82
20	UTI Bank	303.79	61.37	119.82	39.44
	Total-Private Sector Banks	22037.99	8928.34	12670.78	57.50
E	Foreign Banks				
1	Stan Chart Grindlays	97.84		97.71	58.98
2	HSBC	236.41	139.23	165.66	70.07
3	Oman Int. Bank	55.71	55.59	0.5	0.84
	Total - Foreign Banks	393.96	194.82	223.87	56.83
	TOTAL - COMMERCIAL BANKS	69393.84	29119.74	40946.49	59.01
F	Co-operative Banks				
1	KSCARDB	0	0	1586.8	
2	Kerala State Co-op. Bank	2276.84	1.68	1463.14	64.26
	Total: Co-op. Bank	2276.84	1.68	3048.94	133.91
	TOTAL BANKING SECTOR	71672.68	29121.42	43997.43	61.39

Source SLBC Kerala

Appendix 17.11
DISTRICT WISE FLOW OF CREDIT
(2002-03 to 2004-05 March)

(Rs. in lakhs)

DISTRICT	Agriculture Advances			Total Advances to Priority Sector		
	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	3	4		6	7	
Thiruvananthapuram	28568	36334	56688	82685	121738	182863
Kollam	26125	22013	30466	159642	175378	224750
Pathanamthitta	14445	19450	30717	35814	53984	77011
Alappuzha	20093	25198	43164	69055	88033	115152
Kottayam	30099	40568	56240	76590	109217	147280
Idukki	18962	24807	30844	46534	60246	71483
Ernakulam	20517	33063	53002	136672	160205	197262
Thrissur	28639	44726	62956	95168	142111	184565
Palakkad	27905	34868	62669	63057	78285	127779
Malappuram	32638	48990	82499	61764	88233	140521
Kozhikode	30503	41689	59144	64098	87041	110372
Wayanad	31201	30802	45963	40666	40273	56244
Kannur	25029	29325	41756	92582	115724	148346
Kasaragod	18495	23099	28112	31990	41127	55112
STATE TOTAL	**351417**	**454912**	**685438**	**1056317**	**1359597**	**1838720**

Source SLBC

Appendix 17.12

Operations of the Kerala State Co-operative Bank Limited (1996-97 to 2004-05)

(Rs. in Lakhs)

Sl.No	Particulars	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10	11
1	Share Capital	1851.46	2073.53	2073.53	2127.85	2195	2268	2269	2289	2269
2	Reserves	2656.07	2846.91	3081.50	3633.25	4174	5131	6994	7230	8384
3	Deposits	57915.93	77522.27	123616.97	153972.09	168724	191501	202676	242747	240734
4	Borrowings	22950.86	19904.82	9351.17	8440.35	14598	20973	8779	16430	37568
5	Working Capital	84893.36	101957.59	137566.39	180810.00	189174	216173	250179	267134	288907
6	Loans & Advances	52219.64	51809.69	46811.19	101905.94	117931	122643	123713	111750	137230
7	Investments	19093.64	23549.84	41738.70	45551.24	52004	54691	71233	118050	107523
8	Net Profits	69.55	81.38	126.13	25.06	50	71	612	505	419
9	Total Assets	-	-	-	-	204894	235400	263421	287971	302282
10	Own fund	-	-	-	-	6369	7400	9263	9499	10853
11	Interest spread	-	-	-	-	0.98%	1.22%	1.46%	0.07	
12	Operational expens	-		-	-	1156	1222	1436	1192	1267

Source: Kerala State Co-operative Bank Ltd

Appendix 17.13

Purpose - wise Disbursed Loans in the Kerala State Co-operative Bank Limited (1997-98 to 2004-05)

(Rs. in Crores)

Sl.No	Purpose	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10
1	Agriculture	167.61	155.38	175.72	120.69	79.83	114.39	113.85	219.57
2	Procurements/Marketing/ Distribution	102.69	96.59	103.71	175.47	84.89	82.74	176.91	192.12
3	Cottage and Small Scale Industries	68.47	70.65	53.01	65.65	66.22	50.12	60.12	82.34
4	Other Industries	22.68	15.57	11.49	30.11	33.95	40.70	68.55	68.61
5	Consumer Activities	1.91	6.43	1.02	0.12	2.92	13.96	5.70	13.72
6	Consumption Purpose	59.21	29.69	42.00	110.45	115.74	136.92	184.14	240.15
7	Housing	50.04	55.83	20.56	113.99	128.82	140.21	192.32	253.87
8	Other Purposes	45.49	25.89	608.52	560.83	714.00	650.09	315.92	301.9
	Total	**518.10**	**466.11**	**1019.05**	**1179.31**	**1225.42**	**1237.13**	**1117.51**	**1372.28**

Source: Kerala State Co-operative Bank Ltd

Appendix 17.14

Operational Indicators of District Co-operative Banks during 2004-05

(Rs In lakhs)

District	Paid of Share Capital	Reserves and Other Funds	Deposits	Borrowings	Working Capital	Investments in Govt. & Other Securities	Investments in Share of Other Institutions	Loan & Advances	Total NPA	Net Profit
1	2	3	4	5	6	7	8	9	10	11
Thiruvananthapuram	1702 51	13190.40	97324.03	11153 82	126067.86	24027 86	209.64	87366 04	10167.12	537 39
Kollam	657.36	3811 75	52431.07	6997 24	80275 46	16043 97	187 85	46005 79	9097.74	397 83
Alappuzha	943.48	2086.48	37882.26	3801.13	44363 19	9679.76	65.80	33678 26	5843.41	585.31
Pathanamthitta	319 51	1545.55	31723 72	268.10	32741 65	15975 49	40.59	17028.28	2588.30	201 43
Kottayam	676.88	5154 85	53989 99	3820 88	67542.29	16013 49	129 66	41051 84	7368 50	148.71
Idukki	963 03	1737 23	29705 01	7625.86	39769.11	6461 93	296 44	31057 12	3826.82	310.47
Ernakulam	1111 22	2643 63	112189 78	435.36	117222.84	42931 52	101 32	70813 07	1720 40	3014 58
Trichur	660.55	4135 78	74015 75	2152 13	86231 88	42937 37	70 55	38864.96	9716 24	85 11
Palakkad	765 32	4187 93	35532.99	5057.97	41586 88	10004 60	108 51	28421 92	4321 88	147 04
Malappuram	575 08	3342 40	46381 32	24414 79	49720 89	16275.29	114.82	34296 67	4767 24	115 38
Kozhikod	436 93	1443 21	39525 82	36856 77	43750 19	9436 48	131 07	34053 51	5002 46	116 34
Wayanad	474 29	686.49	10748 70	6682 39	17852 50	3752 46	373.05	14369 59	1629.71	20 43
Kannur	1189.79	5092 47	50954 44	8998 10	49639 48	16658 73	376 44	50130 40	9131 15	396 53
Kasargod	520 26	1460 80	16641 10	4321 57	21698 76	5304 03	157.88	16265 03	623 91	28 96

Appendix 17.15

Purpose-wise Classification of Long Term Loans Issued by Primary Co-operative Agricultural & Rural Development Banks (1998-99 to 2004-05)

(Rs. In Lakhs)

Sl.No	PURPOSE	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 (Tentative)
1	2	3	4	5	6	7	8	9
I	**Ordinary Loan**							
1	Construction of Wells/Tanks	11.41	20.63	55.34	149.91	17.33	20.12	33.24
2	Renovation of Wells/Tanks	0.40	1.10	9.31	2.34	4.71	0.37	1.91
3	Pumpsets	2.44	1.98	9.71	8.79	2.10	-	-
4	Plantation & horticulture	93.49	141.33	217.05	114.44	186.22	163.86	136.18
5	Agricultural Mechinary	-	-	-	-	-	0.45	
6	Animal Husbandary	109.90	46.12	74.92	48.09	80.93	57.27	36.95
7	Land Development	133.05	105.26	107.49	160.30	231.61	120.48	105.24
8	Construction of Godowns/Cattle	42.81	57.56	92.83	178.49	110.53	157.33	151.71
9	Barbed wire or stonefencing	12.95	18.28	36.54	42.36	61.84	33.21	29.74
10	Construction of drainage channels	1.50	0.15	3.62	3.83	-	5.01	
11	Loans for Redemption of prior debts	-	-	-	-	-	-	-
12	Others	62.18	70.84	46.06	83.70	66.61	53.34	70.11
	Total	***470.13***	***463.65***	***652.84***	***792.25***	***761.88***	***611.44***	***566.08***
II	**Scheme Loan**							
1	Minor Irrigation	1496.15	1572.75	1899.84	2086.31	2094.05	1314.021	1303.75
2	Plantation & Horticulture	3513.84	4276.50	4637.57	5187.60	3186.15	2242.39	3048.06
3	Agricultural Mechinary	676.34	590.04	1268.60	337.74	853.93	78.54	
4	Dairy & Animal Husbandry	24.65	23.14	24.70	12.55	15.40	850.27	626.15
5	Land Development	1688.53	1471.79	2308.23	2360.40	2204.50	2478.27	2421.17
6	Poultry	1477.73	1554.53	1585.21	1228.97	1042.31	-	
7	Fisheries	202.82	200.32	229.85	375.44	176.15	172.25	118.1
	Others	342.43	235.49	194.41	169.92	522.40	1518.28	2066.21
	Total	***9522.49***	***10224.56***	***12148.41***	***11768.93***	***9894.89***	***8654.00***	***9583.44***

Kerala State Co-operative Agricultural & Rural Development Bank Ltd

Appendix 17.14

Operational indicators of District Co-operative Banks during 2004-05

(Rs. in lakhs)

District	Paid of Share Capital	Reserves and Other Funds	Deposits	Borrowings	Working Capital	Investments in Govt & Other Securities	Investments in Share of Other Institutions	Loan & Advances	Total NPA	Net Profit
1	2	3	4	5	6	7	8	9	10	11
Thiruvananthapuram	1702 51	13190.40	97324.03	11153 82	126067 86	24027 88	209 64	87366 04	16187 12	537 39
Kollam	657 36	3611 75	52421 07	6097 24	60275 46	18043 97	167.85	46005 79	9097 74	397.83
Alappuzha	543.48	2066 48	37862.26	380' 13	44363 19	9579.76	65 80	33678 26	5843 41	585.31
Pathanamthitta	319 51	1545 55	31720 72	288.10	32741 65	15875 49	40 59	17028.28	2568.30	20'.43
Kottayam	876 88	5154 85	53969 99	3820 88	67542.29	160'3 49	129.66	41051 84	7368.50	148 71
Idukki	953 03	1737.23	29705.01	7825 86	39769 11	6451 03	296.44	31057 12	3826 82	310 47
Ernakulam	1111 22	2643 63	112169 78	435.26	117222 84	42931 82	101.32	70813 07	1720.40	3014.59
Trichur	680 55	4135 78	74015 75	2152 13	86231 88	42937 37	70 55	38884 96	07'6 24	85 11
Palakkad	765 32	4187.93	35532 99	5057 97	4'588 88	10004 60	108.51	28421 02	4321 88	147 04
Malappuram	575 08	3347 40	46381 32	24414.79	49720.89	16275 29	114 82	34296 67	4767 24	115 38
Kozhikod	436 83	1443 21	39525 82	36656 77	43750 19	9436 48	131 07	34053 51	5092 46	116.34
Wayanad	474 29	686 49	'0748 70	6682 39	'7852 50	3752 40	373 05	'4369.59	1929 71	20 43
Kannur	1189 79	5092 47	50954 44	8969 10	49639 48	16658 70	375.44	50130 40	8131 15	296 53
Kasargod	520 26	1460.80	16641 10	4321 57	21696 76	5304 03	167.88	16265 03	823 91	28 98

Appendix 17.15

Purpose-wise Classification of Long Term Loans Issued by Primary Co-operative Agricultural & Rural Development Banks (1998-99 to 2004-05)

(Rs. In Lakhs)

Sl.No	PURPOSE	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 (Tentative)
1	2	3	4	5	6	7	8	9
I	**Ordinary Loan**							
1	Construction of Wells/Tanks	11.41	20.63	55.34	149 91	17.33	20.12	33.24
2	Renovation of Wells/Tanks	0.40	1.10	9.31	2.34	4.71	0.37	1.91
3	Pumpsets	2.44	1 98	9 71	8.79	2 10	-	-
4	Plantation & Horticulture	93.49	141 33	217.05	114 44	186.22	163.86	138 18
5	Agricultural Mechinary	-	-	-	-	-	0.45	
6	Animal Husbandary	109.90	46.12	74.92	48 09	80.93	57.27	36 95
7	Land Development	133.05	105.26	107.49	160.30	231.61	120.48	105.24
8	Construction of Godowns/Cattle	42 81	57.86	92.83	178.49	110 53	157.33	151.71
9	Barbed wire or stonefencing	12 95	18.28	36 51	42.36	61.84	33 21	29.74
10	Construction of drainage channels	1.50	0.15	3.62	3.83	-	5.01	
11	Loans for Redemption of prior debts	-	-	-	-	-	-	-
12	Others	62 18	70.84	46 06	83.70	68.61	53 34	70 11
	Total	***470.13***	***463.55***	***652.84***	***792.25***	***761.88***	***611.44***	***565.08***
II	**Scheme Loan**							
1	Minor Irrigation	1496.15	1572 75	1899.84	2086 31	2094.05	1314 021	1303 75
2	Plantation & Horticulture	3613.84	4278.50	4637.57	5187 60	3186 15	2242 39	3048.06
3	Agricultural Mechinary	676 34	890 04	1288 60	337.74	653.93	78 54	
4	Dairy & Animal Husbandry	24.65	23.14	24.70	12 55	15 40	850.27	626.15
5	Land Development	1688.53	1471 79	2308.23	2360.40	2204.50	2478 27	2421 17
6	Poultry	1477.73	1554.53	1585.21	1228 97	1042.31	-	
7	Fisheries	202 82	200 32	229.85	375.44	176.15	172 25	118.1
8	Others	342.43	235.49	194.41	169.92	522.40	1518.26	2068.21
	Total	***9522.49***	***10224.56***	***12148.41***	***11758.93***	***9894.89***	***8654.00***	***9583.44***

Source: *Kerala State Co-operative Agricultural & Rural Development Bank Ltd.*

Appendix 17.16

Annual Long Term Loan Disbursement and Debentures floated by Kerala State Co-operative Agricultural and Rural Development Bank Ltd.

(Rs. in Crores)

Year	Loan advanced						Debenture Floated				
	Ordinary	Scheme	NFS*	Rural Housing	Gold Loan	Total	Ordinary	Scheme	NFS	Rural Housing	Total
1	2	3	4	5	6	7	8	9	10	11	12
1993-94	11.80	31.76	27.64	13.71		84.91	11.50	30.65	26.92	24.32	93.39
1994-95	10.63	45.60	30.77	24.31		111.31	10.00	30.46	25.07	14.86	80.39
1995-96	10.44	67.54	40.53	35.49		154.00	11.00	45.78	37.65	40.53	134.96
1996-97	17.96	80.93	61.51	47.06		207.46	12.00	90.19	51.09	24.32	177.60
1997-98	10.84	78.38	51.01	95.07		236.30	17.25	102.82	61.33	60.98	242.38
1998-99	4.64	94.75	45.85	86.70		231.93	4.10	80.28	37.22	69.07	190.67
1999-2000	4.44	100.97	72.84	123.03		301.28	4.24	95.59	66.61	98.66	265.11
2000-01	6.65	121.61	81.37	123.79		333.32	3.25	104.31	77	86.18	270.74
2001-02	7.66	117.4	74.2	119.81		319.07	9.85	146.89	86.83	133.64	377.21
2002-03	7.67	98.77	65.72	121.15		293.31	2.40	104.89	69.78	187.76	364.81
2003-04	6.56	86.05	49	126.95		268.56		82.72	48.86	118.72	250.30
2004-05	5.40	98.06	73.62	141.62	14.16	332.85		72.87	37.19	114.29	224.35

*NFS Non Farm Sector

Source: Kerala State Co-Operative Agricultural and Rural Development Bank Ltd.

Appendix 17.17

Agency-wise Disbursement of Refinance Assistance by NABARD in Kerala (1996-97 to 2004-05)

Sl. No.	Agency	1996-97		1997-98		1998-99		1999-2000		2000-01		2001-02		2002-03		2003-04		2004-05	
		Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	KSCARD Bank Ltd	131.97	71.70	153.67	75.20	113.00	69.30	153.44	72.10	172.47	72.90	303.36	81.30	284.66	86.00	225.90	66.00	205.59	46
2	Commercial Banks	9.28	5.00	8.26	4.00	21.55	13.90	16.30	7.70	32.72	13.80	22.66	6.10	9.53	3.00	27.40	8.00	29.88	7
3	State Co-op. Banks	15.21	8.30	18.91	9.30	1.49	0.90	18.59	8.70			24.29	6.50	12.16	4.00	67.18	20.00	145.10	32
4	Regional Rural Banks	27.82	15.00	23.55	11.50	25.74	16.20	24.49	11.50	31.46	13.30	22.96	6.10	21.41	7.00	21.57	6.00	67.04	15
	Total:	184.06	100.00	204.39	100.00	158.78	100.00	212.82	100.00	236.65	100.00	373.28	100.00	307.70	100.00	342.05	100.00	448.01	100.00

Source: NABARD

Appendix 17.18

Purpose-wise Refinance by NABARD (1996-97 to 2004-05)

Sl. No.	Purpose	1996-97		1997-98		1998-99		1999-2000		2000-2001		2001-2002		2002-03		2003-04		2004-05	
		Refinance	%	Refinance	%	Refinance	%	Refinance	%	Refinance	%	Refinance	%	Amount	%	Amount	%	Amount	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Irrigation	26.09	14.20	25.92	12.70	15.30	9.60	22.70	10.70	18.52	7.80	28.69	7.60	19.40	6.30	13.59	4.00	11.18	2.60
2	Land Development	9.24	5.00	16.29	8.00	14.02	8.80	16.18	7.60	23.56	10.00	27.16	7.30	29.57	9.60	28.62	8.30	25.60	5.70
3	Mechanisation	3.79	2.10	7.41	3.60	2.12	1.30	3.76	1.80	3.12	1.30	1.68	0.40	1.22	0.50	0.63	0.20	0.75	0.06
4	Plantation & Horticulture	42.17	22.90	43.53	21.30	34.94	22.00	41.35	19.40	39.49	16.70	53.54	14.30	30.66	10.00	19.91	6.00	17.15	3.83
5	Dairy Development	10.42	5.70	12.73	6.20	12.45	7.80	13.49	6.30	14.16	6.00	14.49	3.90	8.04	2.60	4.87	1.40	9.78	2.18
6	Fisheries	2.22	1.20	2.10	1.00	2.56	1.60	2.22	1.00	2.78	1.10	2.55	0.70	2.47	0.80	1.51	0.50	0.79	0.18
7	Poultry	8.42	4.60	6.40	3.20	4.94	3.10	6.55	3.10	5.96	2.50	7.12	1.70	3.80	1.00	2.16	0.80	1.73	0.39
8	Biogas	0.10	0.10	0.11	0.10	0.16	0.10	0.06	0.00	0.21	0.10	0.71	0.20	0.49	0.30	0.23	0.10	0	0
9	I.R.D.P	8.67	4.70	9.55	4.70	8.62	5.40	8.26	3.90	-	-	-	-	-	-	-	-	-	-
10	Non-Farm Sector	72.33	39.30	76.84	38.60	59.13	37.20	88.20	41.50	110.25	46.60	211.57	56.40	187.76	61.00	226.96	66.40	343.31	76.66
11	SC & ST Action Plan	-	-	-	-	-	-	-	-	0.01	-		-	-	-	-	-	-	-
12	SGSY	-	-	-	-	-	-	-	-	5.64	2.40	7.43	2.00	2.67	0.90	0.84	0.30	1.37	0.31
13	Self Help groups	-	-	-	-	-	-	-	-	4.39	1.90	6.58	1.70	11.27	4.00	9.97	3.00	20.92	4.67
14	Agro Processing	0.46	0.20	0.53	0.70	1.09	0.70	0.98	0.00	-		-	-	-	-		-	-	-
15	Others	0.15	0.10	0.92	0.40	3.45	2.20	9.91	4.70	8.55	3.60	12.51	3.40	10.27	3.30	32.47	9.30	16.20	3.62
	Total	184.06	100.00	204.39	100.00	158.78	100.00	212.82	100.00	236.65	100.00	373.29	100.00	307.70	100.00	342.02	100.00	448.01	100.00

Source: NABARD

Appendix 18.1

District-wise Details of Elderly population in Kerala 1999 and 2004

Districts	1999			2004		
	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7
Thiruvananthapuram	10 6	11.1	10 9	13 62	13 92	13 77
Kollam	10 7	12	11 4	13 21	12 27	12 73
Pathanamthitta	17 5	13.6	15.5	20 48	21 21	20 86
Alappuzha	13 9	13.1	13 4	14.29	15.6	14.97
Kottayam	12.8	12.6	12 7	17 3	19 34	18.32
Idukki	8 9	6 [illegible]	7 6	11 43	9 47	10 47
Ernakulam	12	13.3	12 7	15 01	16.31	15 67
Thrissur	10 5	12	11.3	12 25	13 89	13.11
Palakkad	11 7	11 3	11 5	12.57	14 27	13 47
Malappuram	7 9	7 7	7 7	9 64	9 58	9 61
Kozhikode	10	11	10 5	13.15	13.07	13 11
Wayanad	7 4	7.6	7 5	8 57	10 14	9.38
Kannur	8 7	10 2	9.4	12 06	13 6	12 87
Kasaragod	8	8.6	8 3	10.51	10.53	10.52
Kerala	10.7	11	10.9	13.17	13 85	13.52

Note Special Tabulation from the Kerala Migration Survey and South Asian Migration Surveys, CDS, 2004

Appendix 18.2

The details of women contestants in Local Bodies Election- Kerala - 2005

District	Total Women Candidates	No. of winning women candidates
Thiruvanthapuram	2086	626
Kollam	1958	577
Pathanamthitta	1255	355
Alappuzha	1753	549
Kottayam	1618	539
Idukki	986	330
Eranakulam	2016	673
Thrissur	2038	726
Palakkad	1798	673
Malappuram	2026	808
Kozhikode	1654	614
Wayanad	569	190
Kannur	1346	606
Kasaragod	533	195
Total	21637	7461

Source State Election Commission ,Kerala,2005

*Total number of seats - 17095,

Seats Reserved for women - 6184

Appendix 18.3
District-wise distribution of the elected members from kudumbhasree CBO's

No	District	Urban Local Bodies	District Panchayat	Block Panchayat	Gram Panchayat	Total
1	Thiruvanantpuram	12	0	5	66	83
2	Kollam	6	2	6	51	65
3	Pathanamthitta	4	0	0	78	82
4	Alappuzha	9	0	0	36	45
5	Idduki	1	1	12	93	107
6	Kottayam	2	0	0	37	39
7	Ernakulam	13	0	10	147	170
8	Thrissur	11	0	6	65	82
9	Palakkad	16	0	12	169	197
10	Malapuram	2	1	7	34	44
11	Kozhikkode	14	1	8	99	122
12	Wayanad	2	0	1	12	15
13	Kannur	7	1	7	198	213
14	Kasaragode	7	1	9	127	144
	Total	***106***	***7***	***83***	***1212***	***1408***

Source: Kudumbhasree, State Poverty Eradication Mission, TVPM.

Appendix 19.4
Number of Professional and Technical Work Seekers

Year (at the end of December)	Medical Graduates	Engineering Graduates	Diploma holders in Enggl	ITI Certificate Holders	Agricultural Graduates	Veterinary Graduates	Total
1	2	3	4	5	6	7	8
1996	1976	7274	28565	89847	1265	32	128959
1997	2158	7059	31787	96241	1327	25	138597
1998	2126	7314	37201	106690	1324	95	154750
1999	1698	8334	39408	101384	1206	119	152148
2000	2455	9858	42991	109592	1284	21	166201
2001	2691	10349	46377	115736	1496	383	177032
2002	3736	8506	43128	123387	881	480	180118
2003	3567	8116	40660	105221	697	436	158897
2004	3910	9213	42539	118518	1862	796	176638
5-Jun	3895	9661	40806	110469	907	637	166375

Source: Directorate of Employment & Training

Appendix 19.5
District-wise Distribution of Work Seekers (as on 31.03.2005)

Sl.No.	District	General Work Seekers	Professional/Technical Work Seekers	Total	Men	Women
1	2	3	4	5	6	7
1	Thiruvananthapuram	548295	31565	579860	232814	347046
2	Kollam	367629	17441	385070	159852	225418
3	Pathanamthitta	136596	5777	142373	55796	86577
4	Alappuzha	333290	14211	347501	151511	195990
5	Kottayam	224216	10468	234684	98183	136501
6	Idukki	118267	4439	122706	52500	70206
7	Eranakulam	331749	26406	358155	155920	202235
8	Thrissur	299134	12706	311840	113977	197863
9	Palakkad	240927	21582	262509	124821	137688
10	Malappuram	226556	7210	233766	111431	122335
11	Kozhikode	349673	13647	363320	157704	205616
12	Wayanad	74671	1745	76416	35834	40582
13	Kannur	209797	7671	217468	91781	125687
14	Kasaragopd	86009	2159	88168	41387	46781
	TOTAL	3561949	161887	3723836	1583311	2140525

Source: Directorate of Employment & Training

Appendix 19.6
Unemployment Assistance and Self Employment Scheme

Year (at the end of December	Unemployment Assistance			Self Employment Scheme		
	Application received	No of Beneficiaries	Amount Disbursed (Rs. Lakhs)	Application received	No of Beneficiaries	Amount Disbursed (Rs. Lakhs)
1	2	3	4	5	6	7
1996	140003	297253	1464.84	144	438	2.42
1997	138277	294568	3206.69	1985	26	0.03
1998	147380	271959	1926.89	3548	1582	9.52
1999	168584	369863	2366.09	3384	885	7.09
2000	56906	346114	3689.39	17097	469	29.75
2001	65245	351685	2175.97	7114	330	12.69
2002	180586	332287	2516.4	nil	416	29.69
2003	186029	348027	1423.10	7659	668	36.61
2004	192796	387370	7398.43	1920	734	50
2005	170972	344698	10243.38	1944	238	16.85

Source: Directorate of Employment & Training

Appendix 19.7
Statewise Employment Scenario

(Current Daily Status basis)

Sl.No.	States	Employment('000) 1999-2000	Employment Growth 1993-94 to 1999-2000	Unemployment Rate	
				1999-2000 (%)	1993-94 (%)
1	Andhra Pradesh	30614	0.35	8.03	6.69
2	Assam	7647	1.99	8.03	8.03
3	Bihar	30355	1.59	7.32	6.34
4	Gujarat	18545	2.31	4.55	5.7
5	Haryana	5982	2.43	4.77	6.51
6	Himachal Pradesh	2371	0.37	2.96	1.8
7	Karnataka	20333	1.43	4.57	4.94
8	**Kerala**	**8902**	**0.07**	**20.97**	**15.51**
9	Madhya Pradesh	28725	1.28	4.45	3.56
10	Maharashtra	34979	1.25	7.16	5.09
11	Orissa	11928	1.05	7.34	7.3
12	Punjab	8013	1.96	4.03	3.1
13	Rajasthan	19930	0.73	3.13	1.31
14	Tamil Nadu	23143	0.37	11.78	11.41
15	Uttar Pradesh	49387	1.02	4.08	3.045
16	West Bengal	22656	0.41	14.99	10.06
	All India	**336736**	**1.07**	**7.32**	**5.99**

Appendix 16.4

District-wise distribution of complaints received by Kerala Womens Commission from Jan - 30th sep 2005

Sl.No.	Item	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Idukki	Kottayam	Ernakulam	Thrissur	Palakkad	Malappuram	Wyanad	Kozhikode	Kannur	Kasargod	Total
1	Harassment of women	176	17	20	66	15	44	38	34	35	27	9	20	6	8	515
2	Dowry Harassment	42	6	3	6	4	14	7	6	0	1	3	0	0	1	93
3	Harassment by husband	179	24	19	106	24	46	42	6	17	11	8	33	25	15	555
4	cheating	15	5	8	5	1	14	14	7	10	5	3	12	10	7	120
5	Divorced by husband	12	1	2	2	0	8	8	0	0	0	2	0	0	1	36
6	Suspicious death	18	1	2	5	1	4	4	8	4	6	3	11	3	2	72
7	Property related	97	20	15	40	16	26	40	28	25	8	4	20	12	7	358
8	Job related	35	4	7	7	2	21	18	21	5	8	4	20		3	144
9	Sexual harassment	23	10	4	5	9	15	20	2	5	3	4	17	10	6	133
10	Use of abusive language	41	20	12	13	14	29	26	5	6	1	3	8	8	4	185
11	Violence	127	7	8	40	29	29	37	18	15	10	4	20	12	6	357
12	Against police	17	4	3	4	0	5	7	7	3	3	0	1	3	4	61
13	Nuisance of anti-social elements	23	3	0	10	1	35	40	4	8	2	2	17	3	1	149
14	To get divorce	6	1	2	4	0	3	1	1	0	0	2	0	0	1	23
15	Alimony	59	9	3	10	1	3	1	3	0	0	3	1	0	3	96
16	Economic help	7	3	8	0	8	2	1	7	4	0	3	4	3	5	55
17	Path problems	22	5	4	2	2	14	14	1	1	1	5	12	3	2	88
18	Doctors neglicence	2	2	0	0	0	1	0	0	1	0	1	0	0	0	7
19	Child marriage	2	1	0	0	0	0	0	0	0	0	1	0	0	2	1
20	Miscellaneous	185	149	76	50	56	18	9	28	13	12	3	40	10	22	671
21	Total	1088	292	199	375	180	321	329	181	158	100	72	224	110	98	3727

Source: Kerala Women's Commission, 2005-TVPM

Appendix 19.1

State wise Current Daily Status Unemployment Rate Among the Youth (15-29)

Sl.No.	State/U.T	Rural			Urban		
		Male	Female	Persons	Male	Female	Persons
1	2	3	4	5	6	7	8
1	Andhra Pradesh	10.8	8.7	9.9	14.3	16.7	14.8
2	Assam	12.3	24.9	14.6	22.4	42.7	28.6
3	Bihar	11.5	8.8	11.0	24.0	28.0	24.4
4	Gujarat	6.8	6.4	6.7	8.0	11.4	8.5
5	Haryana	9.0	2.4	8.1	8.0	9.9	8.3
6	Himachal Pradesh	8.1	2.8	6.1	16.8	37.5	20.5
7	Karnataka	6.0	5.6	5.8	10.4	10.3	10.5
8	Kerala	32.3	45.8	36.3	26.6	50.4	34.3
9	Madhya Pradesh	5.4	4.0	4.9	14.9	12.3	14.6
10	Maharashtra	11.3	8.9	10.4	15.6	21.1	16.5
11	Orissa	12.6	8.4	11.3	26.8	20.1	25.5
12	Punjab	8.0	3.6	7.0	8.9	13.9	9.5
13	Rajasthan	5.0	3.3	4.4	8.4	10.4	8.8
14	Tamil Nadu	19.7	15.3	18.1	15.5	15.6	15.6
15	Uttar Pradesh	6.8	2.0	6.1	12.4	12.7	12.5
16	West Bengal	23.0	39.1	26.8	23.4	27.2	24.0
17	All India	11.1	10.6	11.0	14.7	19.1	15.4

Source : Report of the Steering Committee on Labour & Employment for the 10th Five Year Plan of Planning Commission.

Appendix 19.2
Total Work Seekers in Kerala

Year(at the end of December)	General Work Seekers	Professional/Technical Work Seekers	Total Work Seekers
1	2	3	4
1996	3158515	128959	3287474
1997	3412211	138597	3550808
1998	3629499	154750	3784249
1999	3748493	152148	3900641
2000	4049082	166201	4215283
2001	4254307	177032	4431339
2002	3499774	180118	3679892
2003	3845641	158897	4004538
2004	3579675	176638	3756313
Jun-05	3619575	166375	3785950

Source: Directorate of Employment and Training

Appendix 19.3
Distribution of Work Seekers in Kerala by Educational Level

Year (at the end of December)	Below SSLC	SSLC	PDC	Degree	PG	SSLC & above	% to total work seekers	Total work seekers
1	2	3	4	5	6	7	8	9
1996	622183	1984136	287766	161962	31427	2465291	75	3287474
1997	658219	2144636	327753	182555	37645	2692589	75	3550808
1998	935092	2224481	372921	206243	45512	2849157	75	3784249
1999	904194	2300026	415298	228976	52147	2996447	77	3900641
2000	952434	2416709	530231	256772	59137	3262849	77	4215283
2001	966914	2574722	542815	280618	66270	3464425	78	4431339
2002	711714	2162627	510063	242060	53428	2968178	80	3679892
2003	746129	2364016	564939	268124	61330	3258409	81	4004538
2004	673301	2222940	559854	239701	60517	3083012	82	3756313
5-Jun	653823	2266795	577068	231774	56490	3132127	82 7	3785950

Source: Directorate of Employment & Training

Appendix 19.8

Employment in Organised Public and Private Sectors – All India

(in lakhs)

Sl. No.	Years	Public Sector			Private Sector			Public and Private Sector (Total)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	1996	167 94	26 35	194.29	67.2	17 92	85 12	235.14	44 26	279 41
2	1997	168 31	27 28	195 59	57 77	19.09	86 86	236 08	45 37	282 45
3	1998	166.55	27.63	194 18	67 37	20 11	87 48	233.92	47.74	281.66
4	1999	166 04	28.11	194 15	66 8	20 18	86 98	232 84	48 29	281 13
5	2000	164.57	28.57	193.14	65 8	20 66	86 46	230 37	49.23	279 6
6	2001	162 79	28.59	191.38	65 62	20 9	86.52	228 4	49 49	277 89
7	2002	158 86	28 87	187.73	63 83	20 49	84.32	222.71	49 35	272 06
8	2003	156 75	29.05	185.8	63 57	20 64	84 21	220 32	49 68	270

Source: Economic Survey

Appendix 19.9

Employment in the Public and Private Sectors in Kerala

Public Sector				Private Sector				Total					
Men	Women	Total	Index	Men.	Women	Total	Index	Women	Index	Men	Index	Total	Index
2	3	4	5	6	7	8	9	10	11	12	13	14	15
433717	188258	621975	100	296343	259898	556241	100	448156	100	730060	100.00	1178216	100
452037	191747	643784	103 51	303529	272272	575801	103 52	464019	103 54	755566	103 49	1219585	103 51
452023	191904	643927	103 53	302377	285960	588337	105 77	477864	106 63	754400	103 33	1232264	104 59
457374	193867	651241	104 71	306901	293390	600291	107 92	487257	108 72	764275	104 69	1251532	106 22
450771	194959	645670	103 81	290235	289200	588435	105 79	484159	108.03	749946	102 72	1234105	104 74
445932	192064	637996	102 58	300768	281540	582308	104 69	473604	105 66	746700	102 28	1220304	103.57
429208	190055	619263	99 56	275407	274163	549570	98 80	464218	103 58	704615	96.52	1168833	99.20
427228	187973	615201	98 91	265333	265337	530670	95 40	453310	101 15	692561	94 86	1145871	97 26

Appendix 19.10
District-wise Employment both in Public and Private Sectors in Kerala as on 31st March

Sl.No	District	2000	2001	2002	2003	2004	2005
1	Thiruvananthapuram	174370	179327	182508	185154	184978	183849
2	Kollam	103957	103746	101780	99232	93476	91673
3	Pathanamthitta	38592	42031	40937	42067	48986	41819
4	Alappuzha	60627	60415	59013	59347	58111	50601
5	Kottayam	63515	62445	61604	62028	61362	60524
6	Idukki	90044	92263	96761	97760	88222	78544
7	Ernakulam	166170	160995	159010	158835	162166	163871
8	Thrissur	98788	110252	107677	105898	106381	106298
9	Palakkad	83179	80150	79160	76393	63412	67554
10	Malappuram	69470	69600	67237	63399	76315	62553
11	Wayanad	31748	32250	18751	30507	35131	30678
12	Kozhikode	96405	95648	89755	88712	90147	72922
13	Kannur	93199	91331	89595	88679	82491	79614
14	Kasargod	55857	61241	60215	53388	53245	49473
	State	***1225921***	***1241694***	***1214003***	***1211399***	***1204423***	***1139773***

Source: Directorate of Employment

Appendix 19.11

District wise employment in Public Sector in Kerala as on 31st March 2004

Sl.No.	District	Central Government		State Government		Central Quasi		State Quasi		Local Bodies		Total	
		Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	27634	5819	54886	20007	19359	5224	29802	6253	6377	2576	138058	39679
2	Kollam	698	230	16884	7263	5323	1332	19385	10791	3387	1089	45677	20705
3	Pathanamthitta	1730	626	11347	4152	3929	788	7836	3067	1324	557	26166	9190
4	Alappuzha	461	113	17014	6628	3702	803	9344	3096	1391	217	31912	10857
5	Kottayam	903	261	15949	6884	7782	2053	7846	1535	1331	424	33811	11157
6	Idukki	1266	257	11990	3390	1192	269	3131	466	1091	284	18670	4666
7	Ernakulam	12591	2763	26825	10391	31929	5604	18433	3070	3269	986	91047	22894
8	Thrissur	6040	1579	25873	10971	5645	1521	11904	3970	2196	782	51658	18723
9	Palakkad	18138	1756	10034	3871	4386	850	3673	272	1148	316	37380	5495
10	Malappuram	1139	280	22783	8510	3027	527	5148	831	1411	375	33488	10523
11	Kozhikode	3102	728	21645	7091	8170	1633	6339	1151	2246	650	41502	11253
12	Wayanad	829	186	10355	3073	905	153	1684	50	377	85	13949	5117
13	Kannur	2150	574	19191	5949	6154	1273	6937	2995	1506	435	35938	11226
14	Kasaragod	898	187	10693	4144	1370	260	2063	426	535	110	15559	5127
	State	***77379***	***15359***	***275448***	***102224***	***102873***	***22370***	***131525***	***37973***	***27589***	***8886***	***614815***	***186812***

Appendix 19.12

Number of Placement through Employment Exchanges and Monthly Average No of Employers using Employment Exchanges in Kerala

Year	No. of Placements	Monthly average no. of Employers using employment Exchanges
1	2	3
1960	10574	198
1970	18150	
1980	36543	
1990	14230	540
1996	16996	486
1997	18268	374
1998	19375	350
1999	19661	447
2000	23012	388
2001	15750	376
2002	12409	312
2003	9902	223
2004	8711	225
Jun-05	7290	309

Source: Directorate of Employment & Training

Appendix 20.1

Score and Rank of various indicators in Human Development of States

Sl No.	State	Agriculture	Infrastructure	Primary Education	Primary Health	Consumer Market	Budget and Prosperity	Investment Scenario	Law and Order	Economically most free State	Best facilitator	Lowest Poverty
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Kerala	0.82 (10)	2.56 (6)	3.81 (2)	2.62 (1)	1.85 (4)	1.98 (9)	1.00 (16)	4.16 (1)	0.37 (3)	0.29 (15)	8.7 (5)
2	Tamil Nadu	1.77 (3)	2.29 (9)	3.11 (4)	2.13 (3)	1.60 (7)	2.26 (6)	1.45 (9)	1.82 (2)	0.37 (5)	0.34 (8)	7.9 (10)
3	Rajasthan	0.86 (9)	1.49 (12)	1.75 (16)	0.87 (12)	1.08 (11)	1.62 (12)	1.09 (13)	1.38 (3)	0.35 (7)	0.26 (18)	8.5 (7)
4	Karnataka	1.16 (6)	2.23 (10)	2.69 (8)	1.90 (4)	1.42 (10)	1.94 (11)	1.71 (6)	1.37(4)	0.31 (12)	0.36 (7)	8.0 (9)
5	Madhya Pradesh	0.69 (13)	1.44 (13)	1.83 (15)	0.74 (14)	0.74 (14)	1.45 (14)	1.01 (15)	1.32 (5)	0.33 (9)	0.32 (11)	6.3 (15)
6	Himachal Pradesh	0.45 (16)	3.22 (2)	4.26 (1)	2.40 (2)	2.07 (2)	2.44 (2)	2.04 (4)	1.21 (6)	0.30 (15)	0.30 (13)	9.2 (3)
7	Gujarat	1.29 (5)	2.53 (7)	2.33 (12)	1.45 (8)	1.69 (6)	2.40 (4)	2.18 (1)	1.02 (7)	0.40 (1)	0.46 (2)	8.6 (6)
8	Andhra Pradesh	1.31 (4)	2.20 (11)	2.37(11)	1.43 (9)	1.03 (12)	2.01 (8)	1.34 (11)	0.98 (8)	0.38 (2)	0.42 (3)	8.4 (8)
9	Maharashtra	0.71 (11)	2.89 (3)	3.06 (5)	1.78 (6)	1.76 (5)	2.23 (6)	1.58 (7)	0.97 (9)	0.37(6)	0.34 (9)	7.5 (11)
10	Chhattisgarh	0.06 (20)	0.92 (17)	1.75 (17)	0.44 (19)	0.58 (18)	1.06 (17)	2.08 (2)	0.92 (10)	0.37 (4)	0.47 (1)	-
11	Haryana	2.67 (2)	2.85 (4)	2.25 (13)	0.66 (17)	1.94 (3)	2.40 (3)	2.01 (5)	0.83 (11)	0.35 (8)	0.29 (14)	9.1 (4)
12	Punjab	4.03 (1)	3.77 (1)	2.79 (7)	1.62 (7)	2.44 (1)	2.76 (1)	2.07 (3)	0.58 (12)	0.28 (17)	0.30 (12)	9.4 (2)
13	Orissa	0.32 (17)	0.75 (18)	2.41(10)	0.80 (13)	0.39 (19)	0.94 (18)	0.83 (18)	0.55 (18)	0.32 (11)	0.17 (20)	5.3 (17)
14	West Bengal	0.98(8)	1.08 (14)	2.18 (14)	1.27 (11)	0.88 (13)	1.56 (13)	0.99 (17)	0.47 (14)	0.30 (14)	0.36 (5 0	7.3 (12)
15	Uttaranchal	0.58 (14)	2.80 (5)	3.27 (3)	1.29 (10)	1.43 (9)	1.97 (10)	1.55 (8)	0.37 (15)	0.28 (18)	0.33 (10)	-
16	Jharkhand	0.26 (18)	0.59 (19)	1.48 (18)	0.87 (16)	0.59 (17)	0.87 (19)	1.16 (12)	0.32 (16)	0.29 (16)	0.36 (6)	-
17	Jammu & Kashmir	0.46 (15)	2.40 (8)	2.75 (8)	1.85 (5)	1.54 (8)	0.02 (7)	1.45 (10)	0.31 (17)	0.33 (10)	0.21 (19)	9.7 (1)
18	Assam	0.16 (19)	1.08 (15)	2.84 (6)	0.70 (15)	0.65 (16)	1.21 (16)	0.80 (19)	0.30 (18)	0.22 (20)	0.28 (17)	6.4 (14)
19	Bihar	0.70 (12)	0.32 (20)	0.84 (20)	0.37 (20)	0.21 (20)	0.65 (15)	0.53 (20)	0.29 (19)	0.26 (19)	0.36 (4)	5.7 (16)
20	Uttar Pradesh	1.11 (7)	0.97 (16)	1.28 (19)	0.45 (18)	0.71 (15)	1.42 (16)	1.05 (14)	0.28 (20)	0.30 (13)	0.28 (16)	6.9 (13)

Note: 1) Col. 3 to 10 - score and number in bracket is rank (Figures are as on 2005)

2) Col. 11 to 13 Inadex and Nos. in braket are rank

3) The figures in the cols. 11 and 12 are as on 2005 and in col 13 as on 1999.

Source: India Today Special Issues, August 2005.

Appendix 20 2

GROSS ENROLMENT RATIO IN CLASSES I -VAND VI-VIII AND I-VIII

2002 2003										
Sl.No	States/Uts	Classes I - V (6 - 11Years)			Classes VI - VIII (11 - 14 years)			Classes I - VIII 6 - 14 years)		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	Andhra Pradesh	95 47	96 41	95.93	65 81	60 27	63.12	84 35	83 04	83 71
2	Arunachal Pradesh	112.36	99 15	105.93	69 76	61 48	65.69	97.36	85.73	91 68
3	Assam	88.17	85 43	86 83	52.00	50 39	56.22	74.93	72.72	73 85
4	Bihar	80 74	66 58	73 52	30.36	18 77	24 98	62.62	49.25	56 31
5	Chattisgarh	107 3	101.54	104 45	79.18	62 75	71 12	96 57	86.89	91.8
6	Goa	106 22	102 13	104.22	109.08	101 45	105 34	107.35	101 86	104 67
7	Gujarat	114 06	108.51	111.5	82.85	68 12	75 94	102 3	93 4	98 12
8	Haryana	80 78	8[illegible].23	80.98	70.28	63 97	67.33	76 81	74.5	75.74
9	Himachal Pradesh	116 56	116 27	116 42	106.83	101 15	104.06	[illegible]12 66	110 07	111 41
10	Jammu&Ksshmir	89.92	78.54	84 39	67.02	54 42	60.93	80.97	69 17	75.25
11	Jharkhand	8[illegible] 31	67.93	74.79	36 19	26.32	31 46	64 79	53 01	59.09
12	Karnataka	112 13	109 11	110.65	7 34	7[illegible].09	74.28	98 27	94 01	96.18
13	kerala	98.48	97 73	98 11	99 27	94.77	97.07	98 8	96 52	97.69
14	Madhya Pradesh	98.62	91 15	95 02	72.94	53 01	63.5	88 93	77 09	83.26
15	Maharashtra	107 74	105 27	106 55	89.51	84.22	86 97	100.41	96 86	98 7
16	Manipur	146 83	144 86	146 88	80 76	80.14	80 46	122 24	119 67	120.98
17	Meghalaya	113.50	1[illegible]8 85	116.[illegible]9	50 25	55 97	53.08	90 26	95.67	92.93
18	Mizoram	131.38	125 91	128 7	78.7	78 23	78.47	111 [illegible]	107.49	109 33
19	Nagaland	66 00	64.39	65 22	34.89	35 32	35 1	53.05	52 91	53 3
20	Orissa	106 12	99.77	[illegible]03 02	61.07	51.57	56.43	89 29	81 75	85 61
21	Punjab	68.55	74 26	71 12	57 84	60.53	59 09	64 42	68.8[illegible]	66.42
22	Rajasthan	101.6	92 43	97.25	68 93	40.78	55 67	89 83	73 98	82.33
23	Sikkim	120 46	[illegible]22 02	12[illegible] 68	62.13	68.35	65.[illegible]9	97 04	101 32	99.16
24	Tamil Nadu	1[illegible]6 61	[illegible]14 34	1[illegible]5 5	100.21	97.88	99.08	110 24	107 96	109 13
25	Tripura	126.98	[illegible]20 58	123.85	73 51	69.24	71 42	105 00	99 54	102 33
26	Uttar pradesh	93 02	89 26	91.25	51 57	41.43	46 84	78.01	72 18	75 27
27	Uttaranchal	106 90	108 87	107 87	81 53	75 96	78.84	97 26	96 23	96 76
28	West Bengal	[illegible]02 6	103 41	102 99	60 28	55.6	58 00	86 42	85 10	85.82
29	Andaman &Nicober Island	119 02	113 64	116 38	96 81	91.64	95 3	110 88	104.81	107.9
30	Chandigarh	73 25	71 85	72 61	74 45	74.95	74 68	73.7	73 03	73.39
31	Dadar & Nagar Haveli	136 77	117 03	126 99	64 43	62.00	78 83	121.48	97.88	109 91
32	Daman & Diu	116 46	111.37	114 00	107 74	97 67	102 81	113.32	106.35	109 93
33	Delhi	90 73	93 [illegible]	91.83	88 75	87 87	88.34	89 98	91 1[illegible]	90 51
34	Lakshadweep	118 1	103 43	1[illegible]0.99	[illegible]12 72	97 52	105.44	115 88	101 02	108 71
35	Pondicherry	1[illegible]7 26	115.01	116 [illegible]7	122 92	117 52	120.27	119 51	116 02	117.8
	India	97.53	93 07	95.39	65.34	56.22	60.99	85.43	79 33	82.51

Source. Selected Educational Statistics, 2002-03 Ministry of HRD, Government of India

Appendix 20.3

Distribution of the disabled by sex and residences (%) - 2001

District	Sex	Total		Rural		Urban	
		Total disabled people	% to total population in the catogary	Total disabled rural population	% to Total population in the catogary	Total disabled rural population	% to total population in the catogary
1	2	3	4	5	6	7	8
Kasargod	Person	28422	3	23119	4	5303	2
	Male	15269	3	12483	4	2786	2
	Female	13153	3	10636	4	2517	3
Kannur	Persons	57931	7	29399	5	28532	13
	Male	29447	6	15219	4	14228	12
	Female	28484	7	14180	5	14304	14
Wayanad	Persons	18401	2	17656	3	745	0.2
	Male	10081	2	9696	3	385	0.34
	Female	8320	2	7960	3	360	0.36
Kozhikode	Person	81853	10	24748	8	29883	14
	Male	42659	9	27222	8	15437	14
	Female	39194	10	24748	8	14446	15
Palakkad	Person	65329	8	56809	9	8520	4
	Male	34166	7	29348	9	4818	4
	Female	31163	8	27461	9	3702	4
Malappuram	Person	88430	10	79479	12	8951	4
	Male	45862	10	41335	12	4527	4
	Female	42568	11	38144	13	4424	4
Thrissur	Person	74615	9	54389	8	20226	9
	Male	40245	9	29282	9	10963	10
	Female	34370	9	25107	8	9263	9
Ernakulam	Person	79234	9	44981	7	34253	16
	Male	43693	10	24700	7	18993	17
	Female	35541	9	20281	7	15260	15
Idukki	Person	36143	4	34479	5	1664	1
	Male	20279	4	19335	6	944	1
	Female	15864	4	15144	5	720	1
Kottayam	Person	55732	6	46762	7	8970	4
	Male	30702	7	25623	7	5079	4
	Female	25030	6	21139	7	3891	4
Alappuzha	Person	63539	7	45186	7	18353	9
	Male	33897	7	23943	7	9949	9
	Female	29647	7	21243	7	8404	8
Pathanamthitta	Person	35280	4	32200	5	3080	1
	Male	19248	4	17598	5	1650	1
	Female	16032	4	14602	5	1430	1
Kollam	Person	82922	10	67168	10	15754	7
	Male	42703	9	34521	10	8182	7
	Female	40219	10	32647	11	7572	8
Thiruvananthapuram	Person	92963	11	64185	10	28778	14
	Male	50104	11	34186	10	15918	14
	Female	42859	9	29999	10	12860	13
Kerala	Persons	860794	4	647782	4	213012	4
	Male	458350	4	344491	4	113859	4
	Female	402444	4	303291	4	99153	4
All India	Person	21905769		16388382		5518387	
	Male	12605535		9410185		3195450	
	Female	9301134		6978197		2322937	

Source : Sences - 2001

Appendix 22.1

Major Sectorwise Distribution of Plan Grant of Local Governments in the Annual Plan 2004-2005

(Rupees in lakhs)

Sl No	Sector	Plan Grant	Percentage to Total Plan Grant	Percentage to Sectoral Total
1	2	3	4	5
1	Agriculture and Allied Sectors	10873.95	9.3	45.59
2	Irrigation and Flood Control	143.99	0.12	0.6
3	Industries	4483.42	3.84	18.8
4	Environmental protection	8350.71	7.15	35.01
	Production Total	***23852.07***	***20.41***	***100***
5	Education,Arts,Culture and Sports	5521.44	4.72	8.91
6	Health	1493.79	1.28	2.41
7	Social Welfare	8426.94	7.21	13.59
8	Mother and Baby Care	6033.95	5.16	9.73
9	General economic Service	40516.34	34.67	65.36
	Service Total	***61992.47***	***53.05***	***100***
10	Energy	1152.62	0.99	4.57
11	Transport	3121.31	2.67	12.38
12	Public Buildings	20948.4	17.93	83.05
	Infrastructure Total	***25222.34***	***21.58***	***100***
13	Programmes and Projects not included in Sectoral Division	5798.75	4.96	100
	Grant Total	**116865.62**	**100**	

Source Information Kerala Mission

Appendix 22.2

Physical Achievements of Local Governments 2004-2005 (Provisional)

Sl.No	Item	Unit	GEN	SCP	TSP	EFC	Total
1	2	3	4	5	6	7	8
1	Area brought under cultivation	Ha	8730 39	803 84	251 52	50 3	9836 05
2	Beneficiaries of vegetable cultivation	No	139517	5966	123	983	146590
3	Benfeciaries who received /Pesticides distributed through integrated agricultural development programmes	No	248073	8248	154	.2265	258739
4	Manures/distributed through integrated agricultural development programmes	Ton	934	128	14	2	1077
5	Pesticides/distributed through integrated agricultural development programmes	Ton	145	5	0	0	150
6	Seed distributed through integrated agricultural development programmes	Ton	454	32	0	0	486
7	Benifeciaries who received Planting materials distributed through integrated agricultural development programmes	No	71390	7542	1530	0	80462
8	Pumpset distributed through integrated agricultural development programmes	No	6298	396	24	0	6718
9	Sprayers distributed through integrated agricultural development programmes	No	3875	94	0	36	3805
10	Agricultural implements distributed through integrated agricultural development programmes	No	1357	23	0	0	1381
11	Construction of bunds in Kole land	No	3474	0	0	0	3474
12	Distribution of tractors Under agricultural development projects	No	11	0	0	0	11
13	Distribution of tillers under agricultural development projects	No	152	0	0	0	152
14	Removal of diseased coconut trees	No	141306	3202	111	14801	159420

Sl.No	Item	Unit	GEN	SCP	TSP	EFC	Total
1	2	3	4	5	6	7	8
15	Poultry-egg rearing units	No	10057	959	0	0	11016
16	Poultry-broiler units	No	278	0	0	0	278
17	Fresh water fish culture(Area)	Ha	104	37	0	0	141
18	Construction of cattlesheds	No	11219	691	23	44	11977
19	Fodder production	Ton	868	0	0	0	868
20	Watershed development projects	No	4487	121	176	35	4819
21	Land brought under cultivation through watershed development projects	Ha	7449	169	102	0	7720
22	New industrial units	No	2526	217	4	45	2792
23	Rehabilitation of traditional industrialunits	No	226	51	16	0	293
24	Industrial workers who received job	No	11203	567	0	0	11770
25	Persons who received industrial entrepreneurship training	No	3257	1068	193	0	4518
26	Skill development(Persons trained)	No	25676	6583	25	0	32284
27	Micro enterprises started	No	3050	230	35	0	3316
28	Self employment units started	No	3983	321	28	4	4337
29	Self employed persons	No	21203	4581	116	29	25930
30	Employment training programme for destitutes	No	2927	211	0	18	3157
31	Self employment units started by poor people	No	806	62	0	0	869
32	Self employment units for destitutes	No	119	336	0	0	455
33	Destitutes trained (Persons)	No	71	187	0	0	258
34	Computer training (Persons trained)	No	62888	15313	0	2784	80966
35	Area of land distributed to landless	Ha	3038	5622	132	0	8793
36	Distribution of house plots	No	3878	4257	245	0	8180
37	Houses constructed	No	32312	15040	1922	375	49650
38	Distribution of land to land less(beneficiaries)	No	1135	2011	294	0	3440
39	Renovation of houses	No	20397	9135	1119	2	30652
40	shelter upgradation	No	5675	1125	144	116	7059
41	Renovation of SC/ST houses	No	1123	7251	787	2	9162
42	Integrated development SC habitates	No	0	521	39	0	560

Sl.No	Item	Unit	GEN	SCP	TSP	EFC	Total
1	2	3	4	5	6	7	8
43	Hostals constructed for scheduled caste	No	38	168	0	0	206
44	Electric wiring of houses	No	5786	2954	1323	202	10264
45	Construction of sanitation units	No	43545	11167	1009	13205	68927
46	Drinking water projects	No	2030	1124	63	193	3409
47	Beneficiaries of drinking water projects	No	140709	56720	2025	17215	216669
48	Drinking water projects implemented with beneficiary contribution	No	585	251	0	92	928
49	New wells	No	7473	2674	103	1004	11254
50	New public water tap connection installed	No	3264	1835	43	266	5407
51	New water tap connection to households	No	1538	256	0	18	1812
52	Renovation of ponds	No	1625	40	0	90	1755
53	Pump sets	No	1669	184	4	23	1879
54	Ordinary roads (Number)	No	7093	1369	70	55	8587
55	Ordinary roads (Length)	Km	6920.03	7398 14	407.59	184	14910
56	Other District Roads (Number)	No	143	22	0	0	165
57	Other District Roads(Length)	Km	318.83	59.45	0	0	378
58	Roads above 8M width(Number)	No	29	11	0	2	42
59	Roads above 8M width(Length)	Km	102.12	15 89	0	10 36	128
60	Roads between 6 and 8 M width(Number)	No	1273	303	15	2	1593
61	Roads between 6 and 8 M width(Length)	Km	892.04	373.75	7.14	6.12	1279
62	Roads below 6M width(Number)	No	3149	567	38	5	3759
63	Roads below 6M width(Length)	Km	2059.98	536.1	19 02	3.38	2618
64	All other roads (Number)	No	1110	184	0	0	1294
65	All other roads (Length)	Km	1200.39	120.9	0	0	1321
66	New culverts	No	513	46	0	2	561
67	New bridges	No	159	11	7	0	178
68	New school buildings	No	89	6	3	3	102
69	Anganwadi Buildings	No	663	25	4	45	737
70	Hospital buildings (extension)	No	119	0	0	5	124
71	Office buildings (extension)	No	239	0	0	8	247
72	Marketing complexes	No	111	0	0	2	113
73	Markets renovated	No	74	0	0	5	78
74	Renovation of school buildings	No	299	4	0	11	314

Sl.No	Item	Unit	GEN	SCP	TSP	EFC	Total
1	2	3	4	5	6	7	8
75	Renovation of hospital buildings	No	162	0	0	214	376
76	Renovation of drinking water projects	No	839	29	5	212	886
77	Renovation of other institutions	No	799	90	381	204	1474
78	Land acquired	Ha	158	48	6	1	214
79	IT@School programme implemented (No of schools)	No	111	0	0	2	113
80	Computer installed under IT@ School programme	No	478	0	0	8	486
81	Town planning projects	No	97	13	0	0	110
82	Solid waste disposal projects	Ton	92	0	0	133	226
83	Solid waste disposed(quantity)	No	1801	0	0	903	2703
84	Rehabilitation of puramboke dwellers (projects)	No	49	28	0	0	78
85	Beneficiaries of rehabilitation of puramboke dwellers	No	1574	1209	0	0	2782
86	Slum development projects	No	87	71	0	0	158

Source: Estimated from Annual expenditure statement of Local Governments by IKM

Appendix 25.1
Country profile of trade and tariff

Country	Trade to GDP (%)	Bound Tariff (%)			Statutory / Applied Tariffs (%)		
		All Goods	Agri. Goods	Non-Agri	All Goods	Agri. Goods	Non-Agri.
India @	30.7	49.8	114.5	34.3	18.3	36.9	15.5
Argentina ~	25.1	31.9	32.6	31.8	14.2	10.3	14.8
Australia ~	42.9	9.9	3.2	11.0	4.2	1.1	4.6
Brazil #	26.2	31.4	35.5	30.8	13.8	11.7	14.1
Canada #	83.6	5.1	3.5	5.3	4.1	3.1	4.2
Chile ~	64.1	25.1	26.0	25.0	6.0	6.0	5.9
China #	50.9	10.0	15.8	9.1	12.4	19.2	11.3
EU *	28.7	4.1	5.8	3.9	4.2	5.9	4.0
Indonesia #	77.0	37.1	47.0	35.6	6.9	8.2	6.7
Japan #	21.1	2.9	6.9	2.3	3.2	7.3	2.7
Korea Rep. of ~	73.0	16.1	52.9	10.2	11.6	42.1	7.0
Malaysia ~	218.1	14.5	12.2	14.9	7.3	2.1	8.1
Pakistan ~	39.1	52.4	97.1	35.3	17.1	20.4	16.6
S. Africa #	58.7	19.1	39.8	15.8	5.8	9.1	5.3
Thailand +	124.5	25.7	35.5	24.2	16.1	29.0	14.2
U.K. *	55.8	4.1	5.8	3.9	4.2	5.9	4.0
U.S. #	24.1	3.6	6.9	3.2	3.9	5.1	3.7

Source: Planning Commission, MTA

+ Applied Tariff Rates for 2001.
 # Applied Tariff Rates for 2002.
@Applied Tariff Rates for 2005
~ Applied Tariff Rates for 2003
** Applied Tariff Rates for 2004*

Appendix 25.2
Import-weighted average applied tariffs, by sector and country, 2005
(percent)

Importing Region	Agriculture and processed food	(Primary agriculture only)	(Processed food only)	Textiles and clothing	Other manufacturing
World	**15.2**			9.3	3.1
High-income	**15.9**			7.3	1.2
Australia & NZ	2.6	0.3	3.3	13.9	4.1
EU25 + EFTA	13.9	13.2	14.7	5.1	1.7
United States	2.4	2.3	2.5	9.6	0.9
Canada	9.0	1.2	14.1	8.7	0.5
Japan	29.3	48.0	20.8	9.0	0.4
S. Korea & Taiwan	53.0	84.5	22.4	9.2	3.6
Hong Kong & Sing	0.1	0.0	0.2	0.0	0.0
Developing countries [b]	**14.2**			14.3	7.1
Middle-income	**12.1**			13.6	6.0
Argentina	7.1	5.6	7.8	11.1	10.1
Brazil	5.0	2.4	9.0	14.7	9.7
China	10.3	9.9	11.0	9.6	5.5
Mexico	10.3	10.8	9.7	7.8	4.3
Russia	13.5	14.6	12.8	15.8	7.8
South Africa	8.6	5.9	10.6	21.9	5.4
Thailand	16.7	12.7	19.2	16.4	7.6
Turkey	16.6	16.4	17.0	3.8	1.2
Rest of East Asia	13.4	18.6	9.0	8.7	3.5
Rest of LAC	10.8	9.2	11.8	12.9	8.4
Rest of ECA	15.7	10.4	19.5	9.3	3.2
M. East & N. Africa	13.1	8.2	18.3	23.9	7.2
Low-income	**22.0**			17.9	14.1
Bangladesh	12.7	7.4	21.2	29.9	16.2
India	49.9	25.7	75.6	26.5	24.2
Indonesia	5.0	4.3	6.2	8.0	4.3
Vietnam	37.1	13.1	44.8	29.1	12.3
Rest of South Asia	21.1	14.2	32.0	6.6	14.3
Selected SS Africa [a]	11.8	10.2	13.0	12.5	7.5
Rest of SS Africa	21.2	18.0	23.6	26.2	14.0
Rest of the World	11.8	1.9	18.7	5.6	8.9

Source: World Bank 2005

[a] *The Selected Sub-Saharan African countries (for which national modules are available in the LINKAGE Model) include Botswana, Madagascar, Malawi, Mozambique, Tanzania, Uganda, Zambia, Zimbabwe.*

[b] *Numbers in parentheses are the averages at the start of 2005 following WTO accession by China and end of MFA.*

Appendix 25-3

Tariff Rates on Major Agricultural Commodities/Groups

Sl.No	Item description	Basic Duty (%)	Bound Duty (%)
1	2	3	4
1	Pulses other than peas	10	100
2	Rice in the husk	80	80
3	Fresh milk and cream	30	100
4	Butter, dairy spreads and melted butter (ghee)	30	40
5	Milk powder	60	60
6	Yoghurt	30	150
7	Tea	100	150
8	Coffee	100	100
9	Coconut	70	100
10	Copra	70	100
11	Cloves	70	100
12	Cassia and cinnamon	30	100
13	Other spices	30/70	150/100
14	Chicken leg (processed); sausages	100	150
15	Fish	30	unbound
16	Sugar	60	150
17	Frozen vegetables-peas, beans, spinach, sweet corn etc.	30	150
18	Arecanut	100	100
19	Planting materials of oil seeds	5	10
20	Palm Oil (for manufacture of Vanaspathi)	75	300
21	Coconut Oil	85/100	300
22	RBD Palmolein	70	300
23	Palm Oil	70	300
24	Coconut Oil Edible grade	85	300
25	Coconut Oil Other	100	300

Source: Agricultural Statistics, Government of India