



**GOVERNMENT OF KERALA
KERALA STATE PLANNING BOARD**

**FOURTEENTH FIVE-YEAR PLAN
(2022-2027)**

**WORKING GROUP ON
IDUKKI PACKAGE**

REPORT

**AGRICULTURE DIVISION
March 2022**

FOREWORD

Kerala is the only State in India to formulate and implement Five-Year Plans. The Government of Kerala believes that the planning process is important for promoting economic growth and ensuring social justice in the State. A significant feature of the process of formulation of Plans in the State is its participatory and inclusive nature.

In September 2021, the State Planning Board initiated a programme of consultation and discussion for the formulation of the 14th Five-Year Plan. The State Planning Board constituted 44 Working Groups, with more than 1200 members in order to gain expert opinion on a range of socio-economic issues pertinent to this Plan. The members of the Working Groups represented a wide spectrum of society and include scholars, administrators, social and political activists and other experts. Members of the Working Groups contributed their specialised knowledge in different sectors, best practices in the field, issues of concern, and future strategies required in these sectors. The Report of each Working Group reflects the collective views of the members of the Group and the content of each Report will contribute to the formulation of the 14th Five-Year Plan. The Report has been finalised after several rounds of discussions and consultations held between September to December 2021.

This document is the Report of the Working Group on Idukki Package. The Co-Chairpersons of Working Group were Sri.Jeevan Babu IAS and Smt.Sheeba George IAS. Dr.R.Ramakumar, Member of the State Planning Board co-ordinated the activities of the Working Group. Sri.S.S.Nagesh, Chief, Agriculture Division was the Convenor of the Working Group. The terms of reference of the Working Group and its members are in Appendix 1 of the Report

Member Secretary

PREFACE

As part of formulation of the 14th Five Year Plan, the Kerala State Planning Board had constituted working groups of experts in all the major sectors. In Agriculture and Allied Sectors, 6 working groups were constituted viz. Agriculture and Cooperation, Animal Husbandry and Dairy, Inland and Marine Fisheries, Forest and Environment, Water Resources and Regional Packages. To discuss and frame policies in each of these sectors, the working groups were further divided into 28 Expert Sub-Groups (ESG) with specific mandates.

Each Expert Subgroup held at least three meetings beside one focused group meeting before finalising the report. We, the Co-Chairs, place our deep appreciation and gratitude to all the esteemed members of the ESG for their valuable contributions in preparing the report. We are extremely grateful to Dr. V. K. Ramachandran, the Honourable Vice-Chairperson, Kerala State Planning Board, Dr. R. Ramakumar, Member, Kerala State Planning Board and Sri. S. S. Nagesh, Chief, Agriculture Division for their consistent guidance and suggestions in preparing the report. The support provided by Dr. C Anilkumar in bringing out this report is appreciated. The drafting team put in commendable work in bringing together all the views and opinions of the members. We sincerely hope the recommendations in the report can lead to important changes in the public policy for the holistic development of Idukki District.

Sri. Jeevan Babu IAS
Expert Co-chairperson

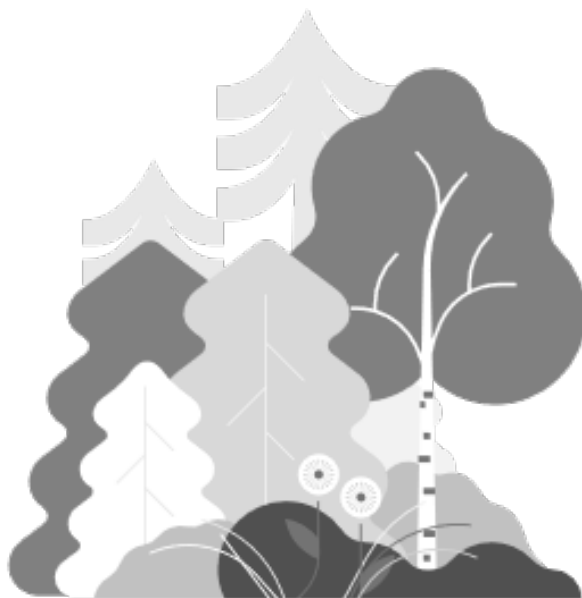
Smt. Sheeba George IAS
Official Co-chairperson

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HIGHLIGHTS

- A comprehensive package is proposed for the holistic development of Idukki.
- The main areas covered by the package are agriculture, animal husbandry, value-added processing industries, tourism, infrastructural facilities, poverty alleviation, and environmental protection



IDUKKI PACKAGE

1. IDUKKI PACKAGE

BACKGROUND

Government of Kerala has decided to introduce a special developmental package to address the socio economic and developmental backwardness of Idukki by integrating district development plans, local self- government plans, central and state government departments, co-operative sector and private sector. The package aims at the balanced and holistic development of the district in five years in a socially, economically, and environmentally sustainable manner. The Hon'ble Chief Minister of Kerala Shri. Pinarayi Vijayan has announced the special package amounting Rs. 12000 crores for various development schemes in the district. The package envisages the development of the district through the optimum utilization of the geographic & tropical conditions, environmental parameters, natural resources for the sustainable development of the sectors like agriculture and dairy development, tourism, development of the backward classes, power irrigation, soil and water management etc. Given the demographic and geographic diversity of the district, the package intends to expand the social infrastructure making the less privileged accessible to education, health care system.

IDUKKI DISTRICT AT A GLANCE

Idukki has a geographical area of 4358 Sq.Km, which is 11.2 % of Kerala. About 96% of the total area of the District is covered by rugged mountains, undulating hills, valleys and forests. The district has 3.32 % of Kerala's population. About 50% of its area is Reserved Forests. About 66% of the electric power of the state is generated here.

Climatic conditions of the district are suited to grow plantation and spices crops. Over 90 % area is rain-fed. The district has largest area under various spices, notably small Indian cardamom. Major crops grown here in order of economic importance are rubber, vegetables, tubers, plantains, coffee, tea, coconut, cocoa, and other spices such as ginger, turmeric, nutmeg, garlic, etc. The net sown area is 2.14 lakh ha and there are 2.11 lakh ha farm holdings. The average holding size is 1.01 ha and about 95 % of holdings are below 2 ha in size and only 0.3% of the holdings own more than 10 ha. Animal husbandry, particularly dairying is practiced in integration with crop husbandry. This is an important source of additional income. Animal population is 2.65 lakh and 94.5% of them are milk producing. About 10% of farm revenue of the district is earned from animal sector, where in milk contributes 90% share of this income. In addition to cattle, goat and poultry have important role in income generation. Nearly 10% of the population is engaged as workers in plantations.

History And Revenue Division

The Idukki district was formed on January 26, 1972 by carving out of Devikulam, Peerumedu and Udumbanchola taluks from the erstwhile Kottayam district and Thodupuzha taluk from the erstwhile Eranakulam district. It measures 115 km, south to north and 67 km, east

to west with 4358 sq. km in area.

Table 1: Block Panchayats and Grama Panchayats in Idukki District

Block Panchayats	Grama Panchayats
Devikulam	Marayoor, Kanthalloor, Vattavada, Munnar, Chinnakkanal, Santhanpara, Mankulam, Devikulam, Iddamalkudy
Adimali	Pallivasal, Adimali, Vellathooval, Byson valley, Konnathady
Elamdesom	Vannappuram, Kodikulam, Karimannnoor, Udumbannoor, Alakode, Velliamattom, Kudayathoor
Thodupuzha	Kumaramangalam, Manakkad, Purappuzha, Karimkunnam, Edavetty, Muttom
Nedumkan dam	Rajakumary, Rajakad, Senapathy, Udumbanchola, Nedumkandam, Pampadumpara, Karunapuram
Idukki	Kanjikuzhy, Vazhathoppu, Kamakshy, Arakkulam, Vathykudy, Mariapuram
Kattappana	Erattayar, Chakkupallam, ,Kanchiyar, Upputhara, Ayappankoil, Vandanmedu
Azhutha	Elappara, Kokkayar, Peruvanthanam, Peerumedu, Vandiperiyar, Kumily

Climate, Topography, Forest and Water bodies

The topographic classification of land in Idukki district is given in Table 2. The high ranges vary in altitude from 600 meter to more than 1600 meter above MSL. This diverse topography and associated climate promote diverse flora and fauna. Except a little area of midland in the western region of Thodupuzha taluk, all areas of this and remaining four taluks are entirely either in upland or high range regions. Almost 96 % of the total area of the district comes under the high land covered by rugged mountain ranges, hills and deep valleys. About 52 % of area in the district is claimed to be under forest.

Climate varies with altitude, land pattern and forest coverage. Moderate climate prevails in the midland area with temperature varying between 21° C to 30° C and having minimum seasonal variation. The eastern parts of the district located in the highland have a comparatively cold climate with temperature varying between -1° C to 25° C. The average rainfall is 3500 mm with variation from 2500 to 4500 mm and rarely going up to 7000 cm. The eastern and north eastern parts of the district, lying in the eastern side of the Western Ghats, are in a rain shadow region receiving only up to 1500 cm rainfall. The area comprising Marayur, Kanthalloor, Vattavada and Thalayar fall in this region. The three most important rivers of the district are Periyar, Thodupuzhayar and Thalayar. River Pamba also originates from the district. The three fresh water lakes of the district are Devikulam,

Eravikulam and Elaveezha Poonchira. Total area covered by water bodies is 13,130 ha.

Flora and Fauna

The valuable trees growing in the forests are teak, rosewood, deodars, sandal etc. All kinds of wild animals with the exception of lions abound in the forests of Idukki. The grasslands of Peermedu are a haven of carnivores like the tiger and the leopard. Bison, wild bear, langur and monkeys are a few other common denizens of the jungle. The Thar (striped goat) seen in Marayur region and Rajamala is exclusive to the region.

There is also good bird diversity. The district has the Idukki Wildlife Sanctuary, Chinnar Wildlife Sanctuary, Eravikulam National Park, Mathikettan Chola, Pambadumchola, Anamudichola, and Kurinjimala.

Table 2. Land use pattern of Idukki district

Altitude (M SL)	Land pattern	% land area
20m - 100m	Midland	4.5
100m-300m	Mid-upland	7.5
300m-600m	Upland	12.1
600m-1200m	Western Ghat High Range	48.3
1200m - Above	Top Western Ghat High Range	24

Socio-demographic profile

The socio-demographic data of Idukki, according to 2011 census, are provided in Table 3.

Idukki district has the second largest population of scheduled Tribes. Most of the tribes are living in acutely remote hilly tracts and in the deep interiors of thickly growing forests. Mannans, Mala Arayans, Urali, Muthuvans, Hill Pulaya, Paliyan and Ulladan are the different groups of tribals in the district. All these tribes are not aborigines and many of them are agriculturists. The Muthuvans of Marayoor, Kanthaloor and Vattavada panchayats speak Tamil dialects. Most of the scheduled cast work as agricultural laborers in the tea and cardamom estates in Ayyappancoil and Pampadumpara of Udumbanchola taluk, Kumali of Peerumedu taluk, Adimali and Marayur of Devikulam taluk, Vannappuram, and Velliyamattom of Thodupuzha and Vazhathhopp of Idukki thaluk.

Table 3: Comparative data of population in Idukki district

Particulars	Details as per 2011 census
Total Population	1108974
Density/sq. km.	254
Sex Ratio/1000 males	1006
Total house holds	279812
Scheduled caste population	145486

Scheduled tribe population	55815
Literacy Rate, %	Male 95: Female 89.0 total 92
Total Workers	415947
Agricultural labourers	1,12,391
Marginal workers	1,00,416
Cultivators	1,03,596
Small & marginal farmers	1,01,864
Average holding size (in ha)	1.01
Per capita availability of the land ,ha	0.24
Per capita income, Rs.	21,297
BPL Households	1,17,000

MAJOR IDENTIFIED PROBLEMS WHICH IS IMPEDING THE DEVELOPMENT AND LIVELIHOOD PROSPECTS OF THE DISTRICT.

- Failure to establish linkage between various sectors like agriculture, animal husbandry & dairy, soil conservation & water management, irrigation, forest & wild life, infrastructure development, drinking water & sanitation, health care, education, SC/ST Development, social welfare and tourism. Linkage between most of these sectors can be established in an effective manner by integrating appropriate schemes and programme through convergence of resources for attaining the target goal.
- Low productivity of the agriculture crops. Due to poor soil health, lack of irrigation facility, unscientific agriculture production methods, low quality fertilizers both organic and chemical, climate change etc. Absence of efficient market linkage and support system for agri products.
- Uncontrolled use of pesticides and other chemical compounds aiming to improve productivity resulted in high level of pesticide residue may affect the export prospects of spices specially small cardamom.
- Cash crops, which are being governed under the commodity boards are excluded from the ambit of HortiCorp mission and thus the State Government cannot allocate funds for their development.
- Lack of an effective financial support system to the farmer enabling them to avail hassle free financial assistance.
- Man- animal conflict that poses a major threat to the life of the people and agricultural crops.
- Accumulated debt burden of the small scale farmers due to the high cost of production of major crops and its volatile prices.
- Absence of value addition initiatives of agriproducts especially, perishable products like tapioca, jack fruit, vegetables, seasoned fruits etc.
- Lack of storage facility with refrigeration for agricultural products cause wastage.
- Unavailability of Minimum support price mechanism to the farmers.

- Unavailability and inaccessibility of insurance schemes meant for agri crops and livestock.
- Low price of milk compared to the high production cost due to the exorbitant price of cattle feed and fodder is a threat to Animal husbandry and Dairy sector.
- Absence of a system to give round the clock, round the year service of the veterinary doctor to the dairy farmers.
- Lack of effective system to promote breed upgradation of livestock.
- Absence of a mechanism to coordinate/integrate various tourism products/operation offered by different agencies viz., Tourism department, DTPC,KTDC, Hydel Tourism Center, Eco Forest department, Local Self Government Institutions and private players has been hindering hassle free tourism experience and there by retarding the pace of tourism development.
- Lack of cleanliness on approach roads. No effective mechanism to abate pollution due to plastic waste, degradable waste etc.
- Absence of a system/mechanism to brand Idukki as a single tourism products given its tropical uniqueness and climate conditions, picturesque nature, dam and water bodies, tea, coffee and spices plantation, indigenous culture, agritourism potential etc.
- Lack of initiative to set up thematic tourism clusters and networks to promote tourist attractions.
- Absence of world class wayside amenities, coffee shops and curial shop which may facilitate the decentralization of tourist footprint in the district.
- Absence of a mechanism to ensure the authenticity of services providing in the tourist destination especially Ayurveda and related wellness tourism packages.
- Absence of the system of motivation apart from career guidance to set higher goals in life, in the system of education especially in the UP and high school level.
- Lack of pre- employment training centres for preparing the job seekers for competitive examinations including civil services.
- Lack of access to quality higher education.
- Inadequacy of the allotment under the various housing scheme for the less privileged and members of SC/ST coupled with the prevailing uncertainty as regards the legal status of the land held by them.
- Non availability of building materials leads to delay in completing the infrastructure projects and housing scheme for the poor to the disadvantage of the locale people.
- Dilapidated and unhygienic condition of the quarters (layam) of the plantation labours is leading to socio- economic problems and heinous crimes.
- The socio-economic problems faced by the labours and surrounding communities due to the closing down of plantations.
- Low number of MSME in the District due to the hostile attitude of the department, lack of know how and financial support system.
- Unavailability of super speciality health services including treatment for cancer, psychiatric problems, cardiac problems etc.

- Lack of scientific and modern training facilities and infrastructure for potential sports aspirants.
- Lack of initiatives to rejuvenate the Rivers and streams with the participation of the local people and other stake holders.
- Backwardness of ST population due to the inefficiency in the Implementation of programme meant for them including the exploitation of middlemen.
- Absence of an effective monitoring system with authority to initiate penal action against the responsible persons acting against the interest of the ST beneficiaries while implementing the Government schemes meant for them.
- Uncertainty in the legal status of the land held by the people under the provisions of the various enactments and rules has been creating a lot of difficulty in extending support to the beneficiaries of life programme, small scale entrepreneurs and ofcourse to the entrepreneurs themselves.
- Vague and uncertain laws and Rules governing the forest and Environment is becoming an impediment for prestigious government programmes and ambitious private entrepreneurship initiatives.
- Failure due to Lack of co-ordination between various departments responsible for planning and Implementation of Central and State Governments, Commercial Boards viz., Spices Board, Coffee Board and Rubber Board. Research Institutions, Semi Governmental organisations, Government supported NGOs, Financial institutions Cooperative Institutions and Local Self Government Institutions.
- Absence of an effective mechanism to evaluate and monitoring the programmes and schemes from planning to implementation stage for ensuring the timely completion/ rendering service [Responsibility should be fixed and the officers may be made personally liable for the short coming if any.]
- Poor Road connectivity due to the vast area, topography and terrine of the District
Lack of sufficient govt. officials from the district.

2. CHIEF MINISTER'S ANNOUNCEMENT & FINANCIAL OUTLAY

Over the last two decades, the agrarian crisis, lack of alternative employment, and environmental issues have constrained the development of Idukki District. The Idukki development package envisages development programmes worth Rs 12,000 crore over next five years in the district. The main areas covered by the package are agriculture, animal husbandry, value-added processing industries, tourism, infrastructural facilities, poverty alleviation, and environmental protection.

Programmes in agriculture sector include fruit development, permanent storage facilities for cool season vegetables in Vattavada, Kanthalloor, and Marayoor, the establishment of mobile agro-clinics and pesticide residue testing labs and organic manure production units. The package will also support the establishment of farmer-producer companies for production, processing, branding, and marketing coffee and cocoa. It will support agri-based start-ups and small scale enterprises, the establishment of a megafood park, and cold storage facilities.

In Idukki, spice development programmes have been planned with particular emphasis on the rejuvenation and expansion of pepper gardens, promotion of spices such as nutmeg, ginger, turmeric, clove, and cinnamon, the construction of a Spices Park in Muttam, branding Idukki spices, and establishing supply chains to reach national and international market. Also planned are the establishment of a pesticide residue analysis lab and bio-input analysis lab for quality control of spices and bio-inputs.

Welfare schemes for plantation workers of the district include housing and drinking water project. The package includes cattle farming and dairy projects. Programmes for the development of fisheries sector in the district include homestead fish farming, biofloc fish farming, farming in natural ponds, and reservoir fish farming.

In the tourism sector, the resumption of the heritage tram service, promotion of farm tourism, ayurveda tourism, hydel tourism, responsible tourism, and the development of tourism clusters and circuits with the objective of enhancing the revenue potential are the major thrust areas. Other highlights of the package include the re construction of the Partiserry dam, the enhancement of basic infrastructure facility in Government colleges and the completion of the Idukki Medical college.

The power generation system in the district will be strengthened through the establishment of new Substation at Murikkaserry, Kumaly, Munnar, Marayoor, and through wind and solar energy sources. Programmes to alleviate human animal conflict and tribal development programmes are also envisaged.

Table 4: Financial Outlay for Idukki package

Department	Proposal	Amount in Crores
Medical College	Medical College at Idukki with most modern facilities including oncology department.	500
KSEB	<p>KSEB Transmission network upgradation - 400 Cr</p> <p>220 kV Substations at Chithirapuram and Nedumkandam</p> <p>Upgradation of transmission network in the district from 66kV to 110kV</p> <p>Koothattukulam- Thodupuzha, Mundakkayam Peermade transmission transmission links to increase transmission capacity</p> <p>33 kV substation at Munnar and Marayur</p> <p>11 kV substations at Kumily and Murikkassery</p> <p>Renewable Energy generation 1000 Cr</p> <p>Solar power generation from Idukki dam reservoir and Ramakkalmedu</p> <p>Expansion of Wind mills in Ramakkalmedu Green Corridor project</p> <p>(As per CMs announcement half of the above projects will be considered as part of IDP)</p> <p>Idukki Dam power generation project phase 2-3000 Cr (As per CMs announcement it is not part of Idukki package)</p>	880
KIFBII	Roads and Bridges	1000
KINFRA	250 acre Mega Spice park, Muttom	500
KSIDC	250 acre Mega Food Park in high range	500
Rebuild Kerala	Reconstruction of roads and bridges in flood/land-slide affected areas	435
Drinking Water	Jal Jeevan Mission	1100
Life Mission	4200 houses for SC, 7200 houses for ST, 20000 houses for general category	1043

Health	<p>Upgradation and renovation of Nedumkandam and Thodupuzha District Hospitals Peermade, Adimali, Kattappana taluk hospitals Establishing Munnar Taluk Hospital</p> <p>Upgradation of CHCs Upgradation of PHCs to FHCs</p> <p>Most modern facilities in the district for the early detection of cancer and other life style diseases.</p> <p>Comprehensive project for AYUSH</p>	500
Agriculture and Allied sectors	<p>Carbon neutral status for district- 100 Cr Tree bank scheme – 250 Cr</p> <p>Value addition and processing – 250 Cr</p> <p>Establish 5000 value addition& agricultural product processing units</p> <p>Support for small entrepreneurs</p> <p>Block level training canters and linking with higher education institutes.</p> <p>Special projects for procurement of Vegetables and fruits, Area expansion and marketing- Focusing on Vattavada, Kanthalloor and marayur.</p> <p>Special project for Marayur Jaggery</p> <p>District soil testing and pesticide testing lab – 25Cr</p> <p>Upgradation of tea factories in Cooperative sectors 20 Cr Vattavada, Kanthalloor, Marayur – Spl project procurement of vegetables - 100 cr</p> <p>Soil conservation activities and to rejuvenate streams – 250 cr</p> <p>Animal husbandry and veterinary services – 25*5=125 cr(Apart from Mattupetty farm)</p> <p>Rehabilitation of flood affected families, conservation of riparianecosystem, removal of silt in rivers and streams – 50 cr</p> <p>Pattiserry Dam – 435 Cr.</p>	2260

Tourism	<p>Tourism Development of the district – 400 Cr</p> <p>Munnar Tourism project including KTDC- KSRTC budget hotel – 100 Cr</p> <p>Munnar botanical garden phase 2, Revive Munnar narrow gauge, Munnar history Museum – 50 Cr</p> <p>Idukki Dam based tourism development – 100 Cr</p> <p>Responsible Tourism – 50 Cr Working womens Budget hotel at</p> <p>Painav – 50 Cr</p>	750
Education	<p>Primary and secondary educational institutions infrastructure development</p> <p>Basic Minimum facilities and upgradation of schools.</p> <p>Minority and Tribal School Development.</p> <p>ITI college buildings at Chithirapuram and Elappara.</p> <p>Ensure inclusive education. Higher education.</p> <p>New Colleges, Munnar Govt. College new building, Skill development.</p>	1000
SC/ST, Plantation workers	<p>SC/ST development – 500 Cr</p> <p>Planation workers rehabilitation –500 cr</p>	1000
Roads and Bridges	Roads & bridges (PWD)- 500Cr	500
Forest	<p>Tackling Human Animal conflict – 100 Cr</p> <p>Beekeeping – 50 Cr</p>	150
Sports Development & Digital Connectivity	<p>High Altitude Training Centre, Munnar – 171 Cr</p> <p>Stadium, synthetic tracks and other sports development activities – 329 Cr</p> <p>Digital connectivity – 50Cr</p>	550
Total	Category I & 2	12618

Total financial out lay can be increased through integration of Government and LSGI schemes with the package through convergence

3. RECOMMENDATIONS ON PRODUCTIVE SECTOR

A substantial amount of agricultural chemicals are consumed by the district. In addition, the district lacks a competent soil analysis and pesticide residue analysis service facility. As a result, a central laboratory facility with analysis services for soil, micronutrients, chemical inputs (especially fungicides and pesticides), and marketed organic inputs has long been desired. The Department of Agriculture, Kerala Agricultural University, and the Soil Survey and Soil Conservation Department have been chosen to manage this facility.

Production of certified quality planting material for cardamom, pepper, coconut, and other spices, production of various organic farming inputs with the required quality, management of various processing and value-added activities, warehousing facility, healthy cattle maintenance, scientific feeding, and mastitis management, among other things, that necessitate excellent capacity building and a better understanding of the programme.

Trainings must take place under the direction of the relevant implementing authorities in producing and distributing quality seedlings of advanced kinds utilised for vacancy filling in planters' fields as an example to follow. The various departments and research institutes should also support and train farmers as part of their outreach programme needs.

The loss of forest cover and canopy in CHR forests is a huge concern for the environment. Improving forest density with select tree species is critical and regulating tree canopy lopping to ensure long-term cardamom production. Because the Revenue Department cannot regulate this, the Forest Department must take on the supervisory function. Above all, farmers must adhere to a code of behaviour regarding tree density and canopy levels. The recommendation is to plant trees in the CHR area with farmer cooperation, using appropriate tree species, to restore optimum tree density and preserve at least 50% (shade) of the canopy. Support is advised to produce select species seedlings and their free distribution throughout 15,000 ha of cardamom gardens with low tree density. The GoK's ongoing initiative might be included in this, and action should be accelerated.

In forest areas, soil erosion and landslides significantly impact water retention, wild species conservation, and forest ecology. The Forest Service may conduct suitable studies on mitigation strategies. The Forest Department should recommend financial support for these studies. As mentioned before in the proposals, the department may construct a few check dams within the forest areas or wherever possible.

Several tribal resettlements and most of the farming areas are situated along wildlife corridors. There is a need for barriers to protect such villages and farmers. It is recommended that the settlements mentioned above and those comparable to this situation should be safeguarded with necessary arrangements. Otherwise, the human-animal conflict may destroy the farm produce, and the farmer may be forced to restrict the entry of wild animals. It may create social-wild life issues.

Idukki is home to several reservoirs and other bodies of water. These reservoirs provide an

excellent chance for inland fishing to enhance fish output in the short term and provide jobs and money to local populations, especially tribals living along the border. With cooperation and coordination among the line departments like Forests, Irrigation, Fishery, and the participation of local communities, this has the potential to be a tremendously profitable endeavour.

The spice market is left unregulated. It will be difficult to establish a price stabilization system because a sustainable price stabilization system demands pay off from the government during price falls and reciprocation from farmers during price booms. Kerala being the major producer of spices, the State government may examine the pros and cons of bringing spices within the purview of the APMC Act and the feasibility of establishing a Spice Price Stabilization Fund (PPSF).

Even though Kerala has better rural road connectivity, the district's geography keeps many villages inaccessible.

This district continues to lag in terms of road connection and power availability. The lack of this critical communication infrastructure severely limits the access of agriculturists, many of whom are tribal, to technology, inputs, and agricultural loans. It also makes it difficult for them to market their agricultural produce and regularly exploit them by intermediaries and private moneylenders. For communities to claim a portion of the development programmes undertaken by the state and federal governments, road connection is a must. As a result, establishing motorable road access to all remote villages should be a top priority for alleviating the economic suffering of a segment of the farming population isolated in the district's remote area/peak. Because road construction in this region is exceedingly expensive, the financial help recommended is simply a token. The state and local governments must pay more attention to this issue urgently.

Water scarcity is worsening in many parts of the district, and the water table is dropping. This, together with dwindling rainfall, portends a major ecological disaster for the district. High importance must be given to recharging the water table and making water available for agricultural activities during the summer, in addition to soil and water conservation within each watershed of arable and forest areas. Multiple check dams are advised to be built at strategic sites inside cultivated and forest areas that border agricultural regions. This might be done cooperatively by the Departments of Soil Survey and Soil Conservation, Agriculture, and Forestry, with the ecological and agricultural interests at the forefront.

Cardamom productivity is low in many small and tribal farmers' gardens, making their economic status extremely vulnerable to debt traps. Garden senility, incapacity to perform replanting, and mismanagement are all factors contributing to decreased output. Replanting these gardens would increase their produce and profitability. As a result, financial assistance for replacing senile and unprofitable gardens owned by small and medium farmers, covering around 40% of the total area, is recommended.

The scarcity of high-quality planting materials and the need to employ them for new planting are highlighted. The replanting mentioned above must be accompanied by the production

and supply of high-quality planting material of farmer-favoured high-yielding varieties. To satisfy this need, progressive farmers and local leaders are encouraged to produce good quality planting materials of authorized high yielding cardamom cultivars themselves with financial assistance from the government.

When biotic stressors are high, and prices are low, input costs, particularly for plant protection chemicals, are a substantial component of the growing production cost and thus a critical factor impacting profitability. Copper sulphate and copper fungicides prices have climbed more than thrice in the last ten years. This has exacerbated the economic hardship caused by the cardamom market's unfavourable terms of trade. As a result, partial financial support to offset the high cost of copper sulphate or copper fungicides is suggested. This is supposed to revive small farmers' cardamom gardens, which have become sickly and low- yielding.

Cardamom cultivation is becoming increasingly unsustainable in terms of soil fertility and forest canopy due to the environmental impact of intensive production employing large chemical inputs. While an immediate switch to organic farming is not a financially viable option, a shift to "green farming" with less toxic pesticide use and a greater emphasis on IPM practises such as *Trichoderma*, *Metarhizium*, *Pseudomonas*, neem cake and oil, EPN, predators, and yellow sticky traps, as well as reduced chemical fertiliser use and increased vermicompost application is recommended for wider adoption.

Many small and medium-sized cardamom producers lack the capacity to process and grade the capsules before marketing. This prevents them from realising the current market price. Furthermore, many of these farmers' economic preferences limit their ability to store stock until favourable market values reappear. There is no infrastructure or support system to assist these farmers with value addition or short-term storage. As a result, a network of warehousing facilities and a common facility for value addition and grading cardamom are required to assist tribal, small, and medium-sized farmers in attaining their immediate goals.

The shocks from excessive volatility in pricing, which frequently dip down and stay below or around the cost of production, are a major source of anguish for farmers. Farmers in the CHR region who rely only on cardamom for their livelihood are particularly vulnerable to price changes, wreaking havoc on their weak economies, leading to loan defaults, debt buildup, and a slew of other issues. The National Commission on Farmers' advocated establishing a price fix to give enough price protection to farmers, particularly when international prices of a certain commodity fall or its import at rates lower than domestic producer prices.

Cardamom from Idukki has a long history of trade preference and a lower price. Throughout history, this cardamom in the trade industry has been said to have originated in Alleppy, earning it the moniker of 'Alleppy cardamom.' The effort to gain a geographical indication for this cardamom under the name 'Alleppy Green' would favour traders rather than Idukki farmers, who have been producing the reputed quality cardamom for generations. The name 'Alleppy cardamom' refers to cardamom from a commerce hub, not a production region,

where certain agro-ecological features and harvesting and processing methods contribute to the admirable quality. As a result, the GI title should be altered to 'Alleppy (Idukki CHR) Cardamom Green' with Idukki producing traceability. This GI title alone would enable Idukki cardamom producers to reap the economic benefits of this GI.

Support for various research infrastructures is recommended. A new laboratory block, a strengthened pesticide residue and agri-input quality analysis centre, a green/glasshouse for screening germplasm, advanced breeding lines for diseases and pests under artificial epiphytotic conditions, and farmers' training centre and hostel with facilities could all be part of the infrastructure. It may help develop and sustain a permanent institutional system for periodic monitoring of the entire production system, including toxic chemicals and contaminants so that long term development and sustainability can be ensured through innovations and responsible solutions for future problems.

CRS, Pampadumpara, is expected to lead location- specific technology servicing for all crop sectors in the Idukki area, particularly spices. The Center is said to have ten sanctioned scientific jobs, although only a few scientists and Center's director, is currently in place. The KAU authorities are required to fill all sanctioned scientific and technical positions immediately, retain this staff, and prioritise research on current major as well as future crops that have a significant impact on the livelihoods of local farmers, particularly small and tribal farmers, as a first step in enabling the Center to discharge its regional responsibilities. Further assistance is to be provided to establish a sub-campus under KAU for the needy students of the district and transmit educational facilities for the farmers considering the varied agroclimatology of the district.

MEASURES TO INCLUDE THE PROGRAMMES OF LSGI IN THE PACKAGE

The Central Government schemes, State Government projects and LSGI programmes are planning and implementing without proper co-ordination and synergy which resulted in between the line departments in duplication, partial implementation, abandoning etc of the projects. Lack of integration of various schemes meant for the same goal may impede the overall development of the district. Now, generally, each and every department is functioning as a separate entity under the District Administration. kept a few incidents. Therefore a mechanism to integrate the programmes of various departments through convergence of resource should be accepted as the 'Mantra' for holistic Development. Central Government and State Government programmes and schemes can be integrated with the LSGI projects through convergence of resources. The projects of the three tier LSGI can also be merged into one and integrated with the schemes provided under the Idukki package through convergence, if proper planning and strategy mechanism is in place.

FRAME WORK FOR THE REGULAR ASSESMENT OF PROGRESS & MONITORING OF SCHEMES UNDER THE PACKAGE

Administrative sanction up to Rs, 10 crores will be sanctioned by the District Collector and the amount above this will be sanctioned by the Govt. Secretary. The administrative cost may be fixed as 1 % of the project cost.

Policy Guidance, Co-ordination & Monitoring Chair – Chief Minister

Members: Minister for the District, MP, MLAs in the district, District Panchayat President, Chief Secretary and other Govt, Secretaries, District Collector and DDC

**Monitoring of PLANNING, PROJECT FORMULATION & APPROVAL**

Chair – Chief Secretary

Members – Secretaries of Line Departments

**DISTRICT LEVEL CO-ORDINATION & MONITORING**

Chair – Minister for the District
Convenor – District Collector

MP, MLAs in the district, District Block Panchayat Presidents, Municipal Chairmen and Working Group Members.

**CO-ORDINATION BETWEEN LINE DEPARTMENTS**

For integration of projects through convergence at the planning and formulation stage and Timely implementation

Chair – Development Commissioner/Spl Officer for Idukki Package Members - DPC

Chairman, District Planning Officer, District Officers of all line depts Invitees –

President & Secretaries of the concerned LSGI related to the Projects

**BLOCK LEVEL COMMITTEE**

Monitoring the progress of the project on weekly basis through random site inspection and report the same to the Special Officer enabling him to intervene or report to the concerned, if it is necessary.

HOW TO LINK AGRICULTURE WITH TOURISM INDUSTRY?

(a concept paper on how to integrate the projects through convergence)

Enhancing linkages between agriculture and tourism presents significant opportunities for stimulating local production, retaining tourism earnings in locale and improving the distribution of economic benefits of tourism to rural people. The two productive sectors i.e., agriculture and tourism, seem to offer the best opportunity for inclusive economic growth in several Countries. The promotion of linkages between tourism and agriculture should help to create economic opportunities, build resilience in rural communities and enhance sustainable developments in both sectors.

At present, as far as Idukki District is concerned there is no linkage between tourism and

local agriculture activities. This might be the situation throughout the State of Kerala except some isolated experiments. This is due to different factors such as the seasonality nature of tourism, low quality of local products, tourism industries dependence on imported suppliers, absence of direct linkage between agricultural enterprises and tourism industries, unavailability of a mechanism to bring the tourism potentials of the tropical crops grown in Idukki district to the fore and make use of the same for promoting agritourism.

The concepts of agritourism can be defined as a form of commercial enterprises that links agricultural production and/or processing with tourism in order to attract visitors on to a farm or other agricultural business for the purpose of entertaining and/or educating the visitors and generate income for the business owners. In this context, the unique agricultural operation and processing methods related to spices especially cardamom, tea, coffee, pepper etc can attract the people if enthusiasm can be created among the potential guest. For achieving this end, the tourism activities should be integrated with the agricultural operations in a professional and scientific way. The farmstay can also be made an attraction as part of agritourism by way of cabins, cottages, farm house guest rooms, platform tents, tent camps, yurts, converted barns/ out buildings. Eco tourism and Geo tourism can also be made part of agritourism through which the tourists can be familiarized with nature, environment and geographical and tropical peculiarities of the region.

At present, the cardamom industry has got a well- established agricultural practices and processing mechanism. The unique nature of the small Indian cardamom, 85% of which is being grown in the high ranges of Idukki district alone can attract domestic and International tourists. The tea plantation as well as small scale tea gardens can also attract tourist if we can establish a proper linkage with the tourism industry by providing facilities to experience the peculiarities of the cultivation and processing of tea apart from the picturesque natural beauty. So as in the case of pepper, coffee, nutmeg, coco etc. Apart from spices, the tropical fruits and other tropical crops which are being grown in the region can also be made as part of tourism attractions.

For establishing linkages between agriculture and tourism, both the sectors need to be re structured scientifically and professionally so as to provide rooms for integrating both. All other departments have well defined role in the development of agriculture and tourism and therefore a well- established mechanism should be in place to integrate various schemes and programme of the department aiming to promote the agritourism. Through the promotion of agritourism, the tourism footprint can be expanded to the villages and farm centers too. Special emphasis should be given to this aspect while planning the programme under the Idukki package. A separate mechanism should be provided for the purpose under the secretaries of Agriculture , Tourism and other line departments with the involvement of State Planning Board. (After having finalized the vision document, various projects and schemes will be proposed in due course.)

While translating the vision in to Mission, we can consider all the proposals included in the basic document prepared for the vision document and proposals submitted by the district level officer of all line departments after having consultation with the stake holders and

beneficiaries. All those proposals may be appended to the Vision document for apprising the planning board about the aspirations of the concerned.

Development of the district as the important plantation and spices hub of Kerala, is achieved by the hard working farmers who made settlement and started cultivation from the early days under conditions of untold hardships. While the district has many huge estate owners, the vast majority of farmers are small and marginal earning their livelihood exclusively from agriculture, which in major part of the district is based on one or very few plantation crops.

APPENDIX-1

PROCEEDINGS OF THE MEMBER SECRETARY STATE PLANNING BOARD

(Present: Sri. Teeka Ram Meena IAS)

Sub: - Formulation of Fourteenth Five Year Plan (2022-27) – Constitution of Working Group on Regional Packages– Revised Proceedings - reg.

Read: 1. Note No. 297/2021/PCD/SPB dated: 27/08/2021
2. Guidelines on Working Groups
3. This Office order of even number dated 08.09.2021

ORDER No. SPB/342/2021-Agri(6) Dated:14.09.2021

As part of the formulation of Fourteenth Five Year Plan, it has been decided to constitute various Working Groups under the priority sectors. Accordingly, the Working Group on **Regional Packages** is constituted. For the smooth functioning of the Sectoral Working Group (SWG), it is decided to split the Working Groups into Expert Sub Groups (ESG). Hence the Working Group is categorized into three Expert Sub Groups as indicated in the proceedings. The names of the members of the SWG are indicated under each ESG. The Working Group shall also take into consideration the guidelines read 2nd above in fulfilling the tasks outlined in the ToR for the Working Group

1. THE WAYANAD PACKAGE

Chairperson

- Ms A Geetha IAS, District Collector, Wayanad
- Dr Jose George, Professor (Retd), Mumbai University

Members

- Mr Samshad Marakkar, President; District Panchayat, Wayanad
- Ms. Priyanka G, IAS, District Development Commissioner & Special Officer, Wayanad Package
- Mr A. N. Prabhakaran, Member, District Planning Committee, Wayanad
- Mr Sreejith Sivaraman, Scientist & Activist
- Mr A. M. Prasad, Adivasi Kshema Samithi
- Dr Ambi Chirayil, Kasalakkad PO, Wayanad
- Dr K. Ajith Kumar, RARS, Ambalavayal, KAU
- Mr V. S. Biju, DPO, Wayanad

Terms of reference

- To assess the design and performance of the Wayanad Package of Government of Kerala.
- To identify the major issues in Wayanad's rural economy and suggest measures to incorporate them better in the Wayanad Package.
- To suggest measures to better target the delivery of services under the Wayanad Package.
- To suggest measures to include the programmes of LSGIs in the Wayanad Package.
- To suggest a framework for the regular assessment of progress under Wayanad Package.
- To suggest measures to improve the system of monitoring of schemes under Wayanad Package.

2. KASARGODE PACKAGE

Co-Chairpersons

- Dr D. Sajith Babu IAS, Director, Civil Supplies Department
- Ms Bhandari Swagat Ranveerchand IAS, District Collector, Kasargod

Members

- Mr U. Kunhiraman, ex-MLA, Uduma Constituency
- Ms Baby Balakrishnan, President; District Panchayat
- Mr Bankalam Kunjikrishnan, Kasargod
- Mr C. Ramachandran, Member, District Planning Committee
- Ms A. S. Maya, DPO, Kasargod
- Mr V V Remeshan, Ex. Chairman, Kanhangad Municipality
- Mr E P Rajamohan, Govt. Additional Secretary and Special Officer, Kasargod Development Package

Terms of reference

- To assess the design and performance of the present Kasargode Package.
- To identify the major issues in Kasargod's rural economy and suggest measures to incorporate them better in the Kasargod Package.
- To suggest measures to better target the delivery of services under the Kasargod Package.
- To suggest measures to include the programmes of LSGIs in the Kasargod Package.
- To suggest a framework for the regular assessment of progress under Kasargod Package.
- To suggest measures to improve the system of monitoring of schemes under Kasargod Package.

3. IDUKKI PACKAGE

Co-Chairpersons

- Mr Jeevan Babu IAS , Director General of Education, Kerala
- Ms Sheeba George IAS ,District Collector, Idukki

Member

- Ms Gigi K. Philip, President; District Panchayat
- Mr Arjun Pandyan IAS, District Development Commissioner & Special Officer, Idukki Package
- Mr T. C. Kurian, Thanuvelil , Kadamakkuzhi PO, Vallakkadavu, Idukki
- Mr Joyce George, ex-MP, Idukki
- Ms K. Jaya, Member, District Planning Committee
- Mr C. Rajendran, Member, District Panchayat
- Dr Muthuswamy Murugan, Head,*Cardamom Research Station, Pampadumpara
- Dr Sabu Varghese, DPO, Idukki

Terms of reference

- To assess the design and performance of the Idukki Package of Government of Kerala.
- To identify the major issues in Idukki's rural economy and suggest measures to incorporate them better in the Idukki Package.
- To suggest measures to better target the delivery of services under the Idukki Package.
- To suggest measures to include the programmes of LSGIs in the Idukki Package.
- To suggest a framework for the regular assessment of progress under Idukki Package.
- To suggest measures to improve the system of monitoring of schemes under Idukki Package.

Convener

Sri. S S Nagesh, Chief, Agriculture Division, State Planning Board

Terms of Reference (General)

1. The non-official members (and invitees) of the Working Group will be entitled to travelling allowances as per existing government norms. The Class I Officers of Go will be entitled to travelling allowances as per rules if reimbursement is not allowed from Departments.

2. The expenditure towards TA, DA and Honorarium will be met from the following Head of Account of the State Planning Board "3451-00-101-93"- Preparation of Plans and Conduct of Surveys and Studies.

The order read as reference 3 is modified to this extent.

(Sd/-)
Member Secretary

Forwarded By Order

Chief,
Agriculture Division

To

The Members concerned

Copy to

PS to Vice Chairperson
PA to Member Secretary
CA to Member (Dr.Ramakumar.R)
Economic Advisor to VC
Chief, PCD,SPB
Sr. A.O, SPB
The Accountant General, Kerala
Finance Officer, SPB
Publication Officer, SPB
Sub Treasury, Vellayambalam
Accounts Section
File/Stock File