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Rajesh Ravindran IFS

Principal Chief Conservator of Forests
&
Chief Executive Officer, CAMPA

O/o Chief Executive Officer,
State CAMPA, Kerala
Forest Head Quarters,
Thiruvananthapuram – 695 014.
Kerala, India.
Ph: 0471-2529150, 2529151
Mob: 9447979002
E-mail: ceostatecampa@gmail.com

Date: 24.03.2025

Certificate

It is certified that all the activities finding a mention in the Annual Plan of Operations 2025-26 have been prepared in accordance with the extant Rules & Guidelines and to the extent they are concerned with Forests and are in keeping with the provisions and requirements of approved Working Plans & Wildlife Management Plans specific to the respective areas.

Principal Chief Conservator of Forests &
Chief Executive Officer, State CAMPA, Kerala

Rajesh Ravindran IFS

Principal Chief Conservator of Forests
&
Chief Executive Officer, CAMPA

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E-mail: ceostatecampa@gmail.com

Date: 24.03.2025

Certificate

I confirm that the budgetary figures in this agenda are as per APO of the Kerala State. It is further confirmed that all budgetary demands of the State under various Heads are in compliance with the CAMPA Act-2016 and that extant policies of Government of India and CAMPA.

Principal Chief Conservator of Forests &
Chief Executive Officer, State CAMPA, Kerala

Rajesh Ravindran IFS

Principal Chief Conservator of Forests
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Chief Executive Officer, CAMPA

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Mob: 9447979002
E-mail: ceostatecampa@gmail.com

Date: 24.03.2025

Certificate

Certified that Compensatory Afforestation and its maintenance proposed in APO are to be carried out on the same Non Forest Land/Degraded Forest Land and within the estimated cost as per the approval of the corresponding project granted under the Van (Sanrakshan evam Samvardhan) Adhiniyam,1980.

Principal Chief Conservator of Forests &
Chief Executive Officer, State CAMPA, Kerala

Minutes of the 7th Meeting of the Steering Committee of Kerala State CAMPA held on 16th January 2025

The 7th Meeting of the Steering Committee of Kerala State Compensatory Afforestation Fund Management and Planning Authority(CAMPA) was held on 16.01.2025 through hybrid mode. Deliberations were done in the Committee room of the Chief Secretary and through online. The list of participants is appended herewith.

The meeting started at 3.00 PM. Chief Executive Officer (CEO), State CAMPA welcomed the participants and briefed the purpose of the meeting and gave a brief overview of the provisions of the Forest Conservation Act, 1980 including the creation of Compensatory Afforestation Fund (CA Fund Act, 2016 & CA Fund Rules, 2018) .

CEO, CAMPA mentioned that the 7th Executive Committee was held on 31.12.2024 in which the Annual Plan of Operations(APO) proposed for the year 2025-26 was approved. Then presented up the APO approved by the Executive Committee for consideration and approval by the Steering Committee. The APO of 2025-26 was presented before the Committee as detailed below.

CAMPA APO 2025-26 (Abstract)	
Components	**Amount (Rs. in Lakhs)**
I. Compensatory Afforestation Fund Part	274.19
II. Net Present Value Fund	
Part-A - Not less than 80% of the NPV fund category	342.99
Part- B -Not more than 20% of the NPV fund category	70.15
III. Interest Fund Part	
Part-A - Not less than 60% of the Interest fund category	123.70
Part-B - Not less than 40% of the Interest fund category	16.00
Total	**827.03**

The Abstract of Annual Plan of Operations attached as Annexure

I. Compensatory Afforestation Works (Creation & Maintenance) – Rs.274.19 Lakhs
(As per Sec 6(a) of Compensatory Afforestation Funds Act, 2016)

CEO CAMPA shared the site specific details and explained that the works proposed under this component pertain to Compensatory Afforestation in lieu of diversion of forest land permitted for non-forest purposes and which includes creation and maintenance of CA

plantations raised in the previous years. All proposals submitted under this category in the APO for 2025-26 by various sub offices was approved by the Steering Committee.

II. Net Present Value Fund Part

Items under the Net Present Value Fund Part, as detailed here under, were discussed in detail and were approved by the committee.

A. Works proposed under Not less than 80% of the NPV fund category – Rs.342.99Lakhs

Works proposed under the component are related to protection of plantations and forests, forest fire prevention and control, soil and moisture conservation works, establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals and management of biological diversity and biological resources. The break-up of works proposed under the category as per Sec 6(b) of CAF Act, 2016 are:

Sl.No	Name of Work	Amount (Rs. in Lakhs)
1	Purchase of equipment(s) relevant for patrolling	12.00
2	Forest fire prevention and control operation	222.04
3	Soil and moisture conservation works	66.00
4	Establishment, maintenance of animal rescue and veterinary treatment facilities for wild animals	32.95
5	Management of biological diversity and biological resource	10.00
	Total	**342.99**

B.Works Proposed under Not more than 20% of the NPV fund category Rs.70.15 Lakhs (as per Sec 6(b) of CAF Act, 2016)

Sl.No	Name of Work	Amount (Rs. in Lakh)
1	Establishment, maintenance of modern nurseries	37.20
2	Promoting conservation, sustainable use and documentation of biological diversity	5.73
3	Construction of residential and official buildings	3.80
4	Casual engagement of local people or labours to assist regular staff or state Forest Department	2.32
5	Production and distribution of quality planting material	21.10
	Total	**70.15**

III. Interest Fund Part

Works which are meant to meet the incremental expenses and the establishment cost of State authority.

A - Activities- Not less than 60% of the Interest Fund Category- Rs.123.70 Lakhs (As per Sec 6(c) of CAF Act, 2016)

Sl.No	Name of Work	Amount (Rs. In Lakhs)
1	To offset the incremental cost of CA, Penal CA, CAT plan, salary of CEO and staff etc	50.00
2	Independent concurrent monitoring and third Party monitoring and evaluation	30.00
3.	Purchase and maintenance of equipment of device for communication, information and technology	11.90
4	Publicity cum awareness programmes	31.80
	Total	**123.70**

CEO, CAMPA highlighted that action has been initiated to take up the remaining Third Party Monitoring activity through IFGTB, which is an autonomous institution under MoEF&CC. This was also agreed by the committee.

B - Activities - Not more than 40% of the Interest Fund Category - Rs.16.00 Lakhs (As per (Sec 6(c) of CAF Act, 2016)

Sl.No	Name of Work	Amount (Rs. in Lakhs)
1	Procurement of Office Stationery items	3.00
2	Procurement of desktop computers	5.00
3	Procurement of Printers/Photocopier/Scanners etc	4.00
4	Procurement of office furniture.	2.00
4	Hiring of staff car for the use of officers and staff of the State Authority	1.00
5	Field inspections & evaluation(internal)	1.00
	Total	**16.00**

Decisions

Additional Chief Secretary (Forests &Wildlife) suggested for conducting *Lidar* survey in the areas prone to landslides especially in Wayanad using CAMPA funds. Additional Chief Secretary also pointed out the need for additional allocation under APO for starting more hospice centers in the wake of increasing human wildlife conflicts in Kerala. With regards to this, CEO State CAMPA mentioned that efforts have already been initiated by Kerala Forest Department to look into the scope of providing reasonable amount in the APO for 2025-26.

DIGF, IRO, Bengaluru who participated online, suggested that Compensatory Afforestation works can be proposed only against those forest clearance proposals for which stage II approval is received

After detailed discussion, all the items proposed in the APO 2025-26 as above and amount to the tune of Rs.827.03 Lakhs were approved by the Committee.

The meeting concluded at 3.30 P.M.

CHIEF SECRETARY

List of Participants

1. Sri. K.R.Jyothilal IAS, Additional Chief Secretary, Forests &Wildlife Department-ex-officio
2. Sri. Puneetkumar IAS, Additional Chief Secretary, Scheduled Tribes Development Department- ex-officio
3. Sri. Ganga Singh IFS, PCCF & HoFF – ex-officio-online
4. Dr. Sanjayan Kumar IFS, CEO, State Authority CAMPA – Member Secretary
5. AnjanKumar IFS, DIGF, Regional Office, Bangalore, ex-officio-online
6. Sri. K.N.Syam Mohanlal IFS, Conservator of Forests, Special Afforestation and Representative of PCCF& Chief Wildlife Warden – ex-offico
7. Smt. Kala.S.V, Special Secretary, Finance Department-ex-officio
8. Dr. Dinesan Cheruvat, Director of Panchayath- ex-officio
9. Smt. Anupama T.V. IAS, Special Secretary,LSGD –ex-officio-online

Minutes of the 7th Meeting of the Executive Committee of Kerala State CAMPA held on 31st December, 2024 through Hybrid mode from Video Conference Room, Forest Head Quarters, Vazhuthacaud, Thiruvananthapuram.

The 7th Meeting of the Executive Committee of Kerala State CAMPA was held at 2.30 PM on 31.12.2024 through Hybrid Mode from Video Conference Hall, Forest Head Quarters, Thiruvananthapuram with the Principal Chief Conservator of Forests & Head of Forest Force in the Chair. The list of participants is enclosed as **Annexure -I**.

The Chief Executive Officer, State CAMPA welcomed the participants. After a brief introduction of CAMPA, its origin, operations history and elaborating about guidelines on rules of the fund, the CEO State CAMPA briefed on funds available with State CAMPA and works that can be proposed under Compensatory Afforestation, Net Present Value and Interest Fund part in Annual Plan of Operations for the financial year 2025-26.

Agenda Item No.1. Progress of works of current financial year 2024-25.

State CAMPA APO Kerala for 2024-25 was approved by 28 th and 30th Executive Committee of National CAMPAfor an amount of Rs.8.9308 Crore, out of the proposed amount of Rs.14.15 Crore (as recommended by the State Steering Committee) for carrying out the approved activities. An amount of Rs.8.9273Crores was released by State Government vide G.O (Rt.) No.6396/2024/Fin. dated 22.08.2024 including initial Budget provision and the same was distributed to the concerned Circles upto 30th December, 2024 expended an amount of Rs. 3.01 Cr.

Agenda Item No. 2 APO for 2025-26

The detailed APO 2025-26 was then placed before the Committee under the following classifications.

CAMPA APO 2025-26(In Short)	
Components	**Amount (Rs. in Lakh)**
I. Compensatory Afforestation Fund Part	274.19
II. Net Present Value Fund part	
Part-A - Not less than 80% of the NPV fund category	342.99
Part-B - Not more than 20% of the NPV fund category	70.15
III. Interest Fund Part	
Part-A - Not less than 60% of the NPV fund category	123.70
Part-B - Not more than 40% of the NPV fund category	16.00
Total	**827.03**

The Abstract of Annual Plan of Operations attached as **Annexure II**

I. Compensatory Afforestation works (Creation & Maintenance) – Rs. 274.19 Lakh
(As per Sec 6(a) of Compensatory Afforestation Funds Act, 2016)

The works proposed under this component pertain to Compensatory Afforestation in lieu of diversion of forest land permitted for non-forest purposes and includes creation & maintenance of CA plantations raised in the previous years.

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	New Plantation (Creation)	208.70 Ha + 1800 Nos	145.32
2.	Maintenance of existing/older plantations	145.75 Ha + 5000 Nos	128.87
	Total	**350.45 Ha + 6800 Nos**	**274.19**

II. Net Present Value Fund Part as per Sec 6(b) of Compensatory Afforestation Funds Act, 2016

Items under the Net Present Value Fund Part, as detailed hereunder were discussed in detail and approved by the committee.

A. Works proposed under "Not less than 80%" of the NPV fund category – Rs. 342.99 Lakh

Works proposed under the component are the works related to Protection of plantations and forests, Forest fire prevention and control operations, soil and moisture conservation works, Establishment, maintenance of animal rescue center and veterinary treatment facilities for wild animals and Management of biological diversity and biological resource .The break-up of works proposed under the category are:

1. Protection of plantations and forests

Sl. No.	Activities	Physical Target (in Unit)	Proposed outlay (in lakh)
1.	Purchase of equipments relevant for patrolling	120	12.00
	Total		**12.00**

2. Forest fire prevention and control operations

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)

1.	Fireline (Creation and Maintenance	371 Km	92.75
2.	Fire watchers	12750 MM	108.39
3.	Purchase of fire equipments	2700 Nos	13.50
4.	Fire Awareness Programme	74 Nos	7.40
	Total		**222.04**

3. Soil and moisture conservation works

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Ponds	54 Nos	27.00
2.	Check dams	34 Nos	17.00
3.	Gully Plugging	2200 M^3	22.00
	Total		**66.00**

4. Establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals	6 Divisions	14.95
	Total		**14.95**

5. Management of biological diversity and biological resource

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Creation of seed stock/orchards	0.1 Ha + 10000 Nos	5.00
2.	Others	15 Divisions	23.00
	Total		**28.00**

B. Works Proposed under "Not more than 20%" of the NPV fund category - Rs. 70.15 Lakh

Works under the item to be taken up in the year includes Establishment, maintenance of modern nurseries, Promoting conservation, sustainable use and documentation of biological diversity, Construction of residential and official buildings, Casual engagement of local people or labours to assist regular staff or State Forest Department and Production and distribution of quality planting material. The works

proposed under this category is:

1. Establishment, maintenance of modern nurseries

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Establishment, maintenance of modern nurseries	8 Divisions	37.20
	Total		**37.20**

2. Promoting conservation, sustainable use and documentation of biological diversity

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Documentation	6 Divisions	2.60
2.	Conference/Workshop	6 Divisions	3.13
	Total		**5.73**

3. Construction of residential and official buildings

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Construction of residential and official buildings	2 Division	3.80
	Total		**3.80**

4. Casual engagement of local people or labours to assist regular staff or State Forest Department

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Casual engagement of local people or labours to assist regular staff or State Forest Department	274 MM	2.32
	Total		**2.32**

5. **Production and distribution of quality planting material**

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Production and distribution of quality planting material	72000 Nos	21.10
	Total		**21.10**

III. Interest Fund Part as per Sec 6(c) of Compensatory Afforestation Funds Act, 2016

Works which are meant to meet the incremental expenses and the establishment cost of State authority.

A - Activities - Not less than 60% of the Interest Fund Category - Rs. 123.70 Lakh

Works under the item to be taken up in the year includes offset the incremental cost of CA, PCA, CAT & Salary of CEO Staff, Independent concurrent monitoring of third party monitoring and evaluation, Purchase and maintenance of equipment of devices for communication information and technology, Publicity cum awareness programme.

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	To offset the incremental cost of CA, PCA,CAT & Salary of CEO Staff	LS	50.00
2.	Independent concurrent monitoring of third party monitoring and evaluation	LS	**30.00**
3.	Purchase and maintenance of equipment of device for communication, information and technology	10 Divisions	**11.90**
4.	Publicity cum awareness programme	20 Divisions	**31.80**
	Total		**123.70**

B - Activities - Not more than 40% of the Interest Fund Category - Rs. 16.00 Lakh.

The break-up of works proposed under this category are:

Sl. No.	Activities	Physical Target	Proposed outlay (in lakh)
1.	Procurement of Office Stationary	LS	3.00
2.	Procurement of Desk top Computers	LS	**5.00**
3.	Procurement of Printers/Photocopier/Scanners etc.	LS	**4.00**

4.	Procurement of office furniture	LS	2.00
5.	Hiring of Staff Car for the use of officers and staff of State Authority	LS	1.00
6.	Field Inspection & Evaluation (internal)	LS	1.00
	Total		16.00

Decision

1. **Principal Chief Conservator of Forests & Head of Forest Forests inquired the amount that can be proposed under CA, NPV and Interest Fund Category each year. CEO, CAMPA explained the same with the amount proposed in the APO for 2025-26.**
2. **Principal Chief Conservator of Forests & Chief Wildlife Warden inquired whether any provision has made from CAMPA funds in the APO 2025-26 for the training purpose of Staff. It was clarified that as per the provisions of CAMPA Rules 2018 some amount has been set aside for training program mes.**
3. **APCCF (Finance, Budget &Audit), sought a clarification on fund outlay expected for the year 2025-26. CEO, CAMPA clarified that the release of funds is expected as per the approved APO each year but during 2023-24 there was only a limited release of Rs.5 crore against the approved APO of Rs.9.06 crore.**
4. **Director, KFRI, representing Science and Technology Department inquired about the scope of including works under Wildlife Management Plan in CAMPA Annual Plan of Operations for 2025-26. CEO, CAMPA clarified that there is already a Centrally Sponsored Schemes to manage Wildlife Management Plan and as per the guidelines issued by National CAMPA, a reasonable amount is provided under the NPV component.**
5. **CCF (Southern Circle) inquired that in addition to regular works like plantation maintenance, fire protection works in CAMPA Annual Plan of Operations, whether updated technology and purchase of new vehicles can be included. CEO CAMPA explained that as per the provisions of CAF Rules and guidelines only it can be considered and no such proposals received from field for the APO 2025-26.**

Hence APO for State CAMPA proposed & prepared for an amount of Rs. 8.27 Crore has been agreed to be placed before Steering Committee.

Agenda 3 - Wildlife Mitigation Plan (APO 2025-26)

The Chief Executive Office, has presented an additional agenda, for the following amount which has been deposited by User Agencies for Wildlife Mitigation Plan in the accounts of the State CAMPA against of the Forest Clearance.

Sl. No.	User Agency	Division	Amount (in Crore)	APO 2025-26 (Phase I) (in Crore)
1	Power Grid Corporation	Peechi Wildlife/Thrissur	4.00	4.00
2.	NHAI	Munnar Wildlife	4.63	2.76
	Total		**8.63**	**6.76**

The Wildlife Mitigation Plan for above works has been prepared and submitted by concerned Divisional Forest Officers/Wildlife Warden and have been approved by Chief Wildlife Warden. The Wildlife Mitigation Plan as approved by Chief Wildlife Warden was placed before the Executive Committee for consideration. It is also appraised by CEO that the amount has not yet been reconciled by the National CAMPA though a request for the same has been sent to National CAMPA and the reconciled amount is expected from National CAMPA office soon.

Decision

Chair has opined that Wildlife Mitigation Plan and fund so received may not be qualified for the centralized CAMPA fund. Therefore the APO for this fund under CAMPA is not justified. A separate account may be opened in state for such fund which is not part of NPV and such funds may be deposited into the above account as per the further clarifications under the rule provisions. The area specific APOs for Wildlife Mitigation Plan (as per the approved Wildlife Management plan /Scheme) can be prepared for utilization of same after due approval of plan from the SLCC and the approval of activities under plan from Chief Wildlife Warden. Therefore Executive Committee has not approved this agenda in view of above and on further clarification under/as per the rule provisions.

The meeting came to an end at 3.15 PM.

PRINCIPAL CHIEF CONSERVATOR OF FORESTS & HOFF

Chairman
Executive Committee
State CAMPA, Kerala

Signed by
Ganga Singh
Date: 15-01-2025 16:05:50

Annexure – I

List of Participants

1. Sri. Ganga Singh IFS, PCCF & HoFF – Chairman
2. Sri.Preethi G Thomas, Under Secretary,Finance Department-Member
3. Dr.Sanjayan Kumar IFS, CEO, CAMPA – Member Secretary
4. Sri. P. Pugazhendi IFS, APCCF (Finance, Budget &Audit) – Member(online)
5. Sri. Pramod G. Krishnan IFS, PCCF& Chief Wildlife Warden – Member (Online)
6. Smt. Bindhu Viveka Devi, Joint Director(FARMS) ,Department of Agriculture, – Member (Online)
7. Sri.Shumin S Babu, Deputy director ,ST Development Department– Member (Online)
8. Sri. Kannan warrier,Director,KFRI representing Science &Technology Department - Member (Online)
9. Smt. Sambashiva, Representative Department of LSGD – Member (Online)
10. Sri.Unnikkuttan, Under Secretary, Environment Department- Member (Online)
11. Sri. Smitha, Under Secretary, Planning Department – Member(online)
12. Kamalahar IFS,CCF(Southern Circle),kollam
13. Dr.R.Adalarasan IFS, Chief Conservator of Forests, Central Circle, Thrissur
14. K.Vijayananthan IFS, Chief Conservator of Forests, Eastern Circle, Palakkad & Wildlife, Palakkad.
15. Jayachandran, TA to Chief Conservator of Forests, High Range Circle, Kottayam.
16. K.S.Deepa IFS, Chief Conservator of Forests, Northern Circle, Kannur.
17. P.P.Pramod IFS, Chief Conservator of Forests (Wildlife)& FD (PT), Kottayam.

ANNEXURE I

Form – XII

[See Rule 39]

Annual Plan of Operation for the year 2025-26 for the State of Kerala

Part-I: Brief History & Past Performance

a) Brief Description of Forests in the State

The forest area under the administrative charge of Kerala Forest Department is 11531.908 km^2at the close of the year 2022-23 and forms 29.67% of the total geographical area of the State (38863km^2). The per capita forest land of the State as per 2011 Census is 0.035 Ha. The total plantation area is 1571.42 km^2 which accounts 13.63% of the total forest area.

The distribution of forest area according to legal status is given below

Reserve Forest	:	6442.771 Sq.km
Proposed Reserve	:	302.379 Sq.km
Vested Forest	:	1583.584 Sq.km
Ecologically Fragile Land	:	136.990 Sq.km
Protected Areas	:	3066.184 Sq.km
Total Forest Area	:	11531.908 Sq.km

b) Forestry & Other Activities carried out in the State in last five years by utilising the funds received under CAMPA & CAF -**Attachment 1**

c) Forestry and other activities carried out in the state in last three years by utilising the fund received under other schemes -**Attachment 2**

d) Year wise details of forest area diverted in the various districts/forest divisions of the state since 1980 -**Attachment 3**

e) Compensatory Afforestation carried out in the State since 1980 -
Attachment 4

f) IFGTB, Coimbatore was selected as the external agency to undertake Monitoring & Evaluation works under Ad-hoc CAMPA & State CAMPA Kerala for the period 2009-2021. As per the suggestion in the APO, third party evaluation is mandatory to assess the CAMPA works carried out by the SFDs. The technical evaluation would give baseline data, after-effects, and a strategy for moving forward. During the third party

evaluation, the works carried out will be assessed for choice of species, seed/propagule sources, site suitability, planting density etc. It has become imperative that projects implemented so far, are assessed for outcomes and impacts. This would not only help in highlighting positive achievements but more importantly, aid in addressing areas of concern. There is a pressing need to evaluate these plantations on three aspects namely area coverage, survival percentage and growth parameters by using qualitative and quantitative approaches. These evaluations need to go beyond status assessments and develop deeper to ascertain the causes behind the success or failure to enable better planning and design of the future plantation projects.

Aforesaid monitoring & evaluation works has been completed and reports pertaining to the APOs were received for the period 2009-2021. For taking up the works for 2021-22 and 2022-23 proposal has been received and approved by the 5th Steering committee - **Attachment 5**

Part-II: APO 2025-26

Activities under Compensatory Afforestation

Part III: APO 2025-26 (NPV & Interest Funds Part)

Activities under NPV Funds - Not less than 80% Category (including those related to Protection of Plantations and Forests, Forest Fire Prevention and Control, Soil and moisture conservation works, Establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals & Management of biological diversity and biological resource)

Activities under NPV Funds - Not More than 20% Category (including Establishment, Maintenance of modern nurseries, Promoting conservation, sustainable use and documentation of biological diversity, Construction of residential and official buildings, Casual engagement of local people or labours and Production & distribution of quality planting material)

Activities under Interest Funds Part – Not less than 60% Part covering incremental cost and expenses to meet the establishment cost of State Authority & not more than 40% part covering office stationery & Computers / Peripherals requirements

Chief Executive Officer
State CAMPA, Kerala

PART II

Compensatory Afforestation Works (New Plantation)							
Sl. No.	**Component/Particulars of Work**	**GPS Reading**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
						Physical	**Financial**
	Compensatory Afforestation Works (New Plantation)						
	Southern Circle, Kollam						
	Konni Division						
1	Compensatory Afforestation works Near Achankovil river		Konni range	Ha	2	0.5	1.00
			Subtotal			**0.50**	**1.00**
	High Range Circle, Kottayam						
	Munnar Division						
2	Compensatory Afforestation works		Adimaly Range	Ha	5	1.2	6.00
	Marayoor Division						
3	Compensatory Afforestation works		Pothady	Ha	1	30	30.00
	Kothamangalam Division						
4	Compensatory Afforestation works		Kothamangalam	Ha	0.6	15	9.00
			Subtotal			**46.20**	**45.00**
	Central Circle, Thrissur						
	Malayattoor Division						
5	Compensatory Afforestation works in lieu of JJM-WSS to Malayattoor - Neeleswaram Panchayaths- providing distribution system & FHTCs		1951 TP Kannimangalam in Kalady Range			100 Nos	10.81
6	Compensatory Afforestation works in lieu of JJM WSS to Kuttampuzha Panchayath		1951 TP Kannimangalam in Kalady Range			100 Nos	0.88

Compensatory Afforestation Works (New Plantation)							
Sl. No.	**Component/Particulars of Work**	**GPS Reading**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
						Physical	**Financial**
7	Compensatory Afforestation works in lieu of JJM - WSS to Vengoor, Asamannoor & Mudakkuzha panchayaths		1997 TP (Bit C) under Evergraan FS			100 Nos	1.75
8	Compensatory Afforestation works in lieu of Constructing HT UG Cable from Vadattupara Palavanpady to Anakkayam for uninterrupted power supply to Tribal settlement colonies in Kuttampuzha		1997 TP (Bit C) under Evergraan FS			100 Nos	1.75
9	Compensatory Afforestation works in lieu of CONSTRUCTING 11KV UG CABLE FROM KADUKULANGARA TO PATTIPPARA		1997 TP (Bit C) under Evergraan FS			100 Nos	1.75
10	Compensatory Afforestation works in lieu of Mission 500_Category 1_Kallala		1997 TP(Bit C) under Evergraan FS in Kalady Range			100 Nos	0.88
			Subtotal			**600 Nos**	**17.82**
	Eastern Circle, Palakkad						
	Nilambur North Division						
11	Compensatory Afforestation works		Neduncheri VFC	Ha	2.75	2	5.50
	Nenmara Division						

Compensatory Afforestation Works (New Plantation)							
Sl. No.	**Component/Particulars of Work**	**GPS Reading**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
						Physical	**Financial**
12	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 6-meeraflorous of Nelliyampathy Grama Panchayath		Thiruvazhiyad	Ha		100 Nos	0.50
13	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 4(kottayangadi)of Nelliyampathy Grama Panchayath		Thiruvazhiyad	Ha		100 Nos	0.50
14	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 5(Chandramala)of Nelliyampathy Grama Panchayath		Thiruvazhiyad	Ha		100 Nos	0.50
15	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 12(Melpadi-koonampalam))of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
16	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 10(Lilly)of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50

Compensatory Afforestation Works (New Plantation)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
17	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 8(oriental2)of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
18	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 9 (Kardi)Of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
19	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 8 (Rajakkadu)of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
20	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 11(Padagiri)of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
21	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 8 (pothumala)Of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
22	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 11(Nooradi)Of Nelliyampathy Grama Panchayath		Thiruvazhiyad	Ha		100 Nos	0.50

Compensatory Afforestation Works (New Plantation)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
23	Compensatory Afforestation works in lieu of Jal Jeevan Mission - Providing Water Supply Schemes And Fhtcs In Ward Nos 1 To 13 Of Nelliyampathy Grama Panchayath		Myladumpparutha	Ha		100 Nos	0.50
			Subtotal			**2 + 1200 Nos**	**11.50**
	Northern Circle, Kannur						
	Wayanad South Division						
24	Compensatory Afforestation works		Kurichippatta	Ha	1	10	10.00
			Subtotal			**10.00**	**10.00**
	FDPT, Kottayam						
	Munnar Wildlife						
25	Compensatory Afforestation works		Thampuran shola in KMS.	Ha	0.4	150	60.00
			Subtotal			**150.00**	**60.00**
			Total			**208.7 + 1800 Nos**	**145.32**

Compensatory Afforestation Works (Maintenance of existing plantation)							
Sl. No.	**Component/Particulars of Work**	**GPS Reading**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
						Physical	**Financial**
	Compensatory Afforestation Works (Maintenance of existing plantation)						
	Southern Circle, Kollam						
	Punalur Division						
1	Compensatory Afforestation maintenance works		Mambazhathara	Ha	3.50	2	6.99
2	Compensatory Afforestation maintenance works		Veppinkulam	Ha	3.50	2	6.99
3	Compensatory Afforestation maintenance works		Kulatharapacha	Ha	0.10	28.32	2.80
4	Compensatory Afforestation maintenance works		Chudalakunnnu	Ha	0.1	10	1.00
			Subtotal			**42.32**	**17.78**
	High Range Circle, Kottayam						
	Kottayam Division						
5	Maintenance of Compensatory Afforestation works		Plachery FS	Ha	1.25	0.8	1.00
6	Maintenance of Compensatory Afforestation works		Vandanpathal FS	Ha	1.18	0.22	0.26
7	Maintenance of Compensatory Afforestation works		Pulikkunnu	Ha	1.2	1.5	1.80
8	Maintenance of Compensatory Afforestation works		kulamavu	Ha	50	0.04	2.00
9	Maintenance of Compensatory Afforestation works		Urumbikkara	Ha	1.21	0.19	0.23
10	Maintenance of Compensatory Afforestation works		Nagarampara	Ha	1.2	6	7.20

Compensatory Afforestation Works (Maintenance of existing plantation)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
11	Maintenance of Compensatory Afforestation works		Vairamony	Ha	2.5	2.22	5.55
	Munnar Division						
12	Maintenance of Compensatory Afforestation works		Kottapara, Ozuvathadam	Ha	0.71	3.5	2.50
	Marayoor Division						
13	Maintenance of Compensatory Afforestation works		Pothady	Ha	0.97	30	29.00
	Kothamangalam Division						
14	Maintenance of Compensatory Afforestation works		Kothamangalam	Ha	1.02	3	3.05
			Subtotal			**47.47**	**52.59**
	Eastern Circle, Palakkad						
	Palakkad Division						
15	Maintenance of Compensatory Afforestation works		Mundur	Ha	1.15	10	11.50
	Nilambur North Division						
16	Maintenance of Compensatory Afforestation works		Arimbrakuth RF ,Edavanna range	Ha	2.00	5	10.00
	Nilambur South Division						
17	Maintenance of Compensatory Afforestation works		Churulipotty	Ha	0.27	15	4.00
	Nenmara Division						
18	Maintenance of Compensatory Afforestation works		Muringamala	Ha	3.00	1	3.00

Compensatory Afforestation Works (Maintenance of existing plantation)							
Sl. No.	**Component/Particulars of Work**	**GPS Reading**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
						Physical	**Financial**
19	Maintenance of Compensatory Afforestation works		Kavussery	Ha	3.00	1	3.00
			Subtotal			**32.00**	**31.50**
	Northern Circle, Kannur						
	Wayanad North Division						
20	Maintenance of Compensatory Afforestation works		North Wayanad	Ha	1.00	10	10.00
21	Maintenance of Compensatory Afforestation works		Thirunelly	Ha	1.70	10	17.00
			Subtotal			**20.00**	**27.00**
			Total			**141.79**	**128.87**

Protection of Plantations and forests							
Purchase of equipments relevant for patrolling							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
	Southern Circle, Kollam						
	Thiruvananthapuram Division						
1	Purchase of equipments relevant for patrolling		Range Office		0.10	5	0.50
	Thenmala Division						
2	Purchase of equipments relevant for patrolling		All ranges		0.10	5	0.50
	Punalur Division						
3	Purchase of equipments relevant for patrolling		Pathanapuram		0.10	5	0.50
	Ranni Division						
4	Purchase of equipments relevant for patrolling		Ranni,Vadasserikkara,Goodrickal		0.10	5	0.50
	Achenkovil Division						
5	Purchase of equipments relevant for patrolling		Achenkovil		0.10	5	0.50
	Konni Division						
6	Purchase of equipments relevant for patrolling		Konni		0.10	5	0.50
			Subtotal			**LS**	**3.00**
	High Range Circle, Kottayam						
	Kottayam Division						
6	Purchase of equipments relevant for patrolling		Murinjapuzha and Vandanpathal FS		0.10	5	0.50

Protection of Plantations and forests							
Purchase of equipments relevant for patrolling							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
	Munnar Division						
7	Purchase of equipments relevant for patrolling		Devikulam		0.10	5	0.50
	Kothamangalam Division						
8	Purchase of equipments relevant for patrolling		Kothamangalam		0.10	5	0.50
			Subtotal				**1.50**
	Central Circle, Thrissur						
	Thrissur Division						
9	Purchase of equipments relevant for patrolling		Elanad Forest Station		0.10	5	0.50
	Chalakudy Division						
10	Purchase of equipments relevant for patrolling		Chalakudy		0.10	5	0.50
	Vazhachal Division						
11	Purchase of equipments relevant for patrolling		Kollathirumedu		0.10	5	0.50
	Malayattoor Division						
12	Purchase of equipments relevant for patrolling		Kalady, Kodanad, Idamalayar, Thundathil and Kuttampuzha Range		0.10	5	0.50
			Subtotal				**2.00**

Protection of Plantations and forests							
Purchase of equipments relevant for patrolling							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
	Eastern Circle, Palakkad						
	Nilambur South Division						
13	Purchase of equipments relevant for patrolling		Nedumgayam, Padukka Forest Station		0.10	5	0.50
	Nenmara Division						
14	Purchase of equipments relevant for patrolling		Kollengode and Alathur		0.10	5	0.50
	Mannarkad Division						
15	Purchase of equipments relevant for patrolling		Agali, Attappady, Mannarkkad		0.10	5	0.50
			Subtotal				**1.50**
	Northern Circle, Kannur						
	Kozhikode Division						
16	Purchase of equipments relevant for patrolling		Thamarassery, Peruvannamuzhy, Kuttiady		0.10	5	0.50
	Wayanad South Division						
17	Purchase of equipments relevant for patrolling		Irulam and Pulpally		0.10	5	0.50

Protection of Plantations and forests							
Purchase of equipments relevant for patrolling							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
	Kannur Division						
18	Purchase of equipments relevant for patrolling		Kannavam		0.10	5	0.50
	Kasargod Division						
19	Purchase of equipments relevant for patrolling		Kasargode		0.10	5	0.50
			Subtotal				**2.00**
	ABP Circle, Thiruvananthapuram						
	Shendurney Wildlife						
20	Purchase of equipments relevant for patrolling		Shendurney		0.10	5	0.50
			Subtotal				**0.50**
	Wildlife, Palakkad						
	Wayanad Division						
21	Purchase of equipments relevant for patrolling		Muthanga, Sulthan Bathery, Kurichiat and Tholpetty		0.10	10	1.00
	Parambikulam Division						

Protection of Plantations and forests							
Purchase of equipments relevant for patrolling							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
22	Purchase of equipments relevant for patrolling		Sungam, Parambikulam, Karimala and Orukomban		0.10	5	0.50
			Subtotal				**1.50**
			Total				**12.00**

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
	Southern Circle, Kollam						
	Thiruvananthapuram Division						
1	Fire line (Creation & Maintenance)		Mylamoodu Sankily Ponmudi Chittar North		0.25	5	1.25
	Punalur Division						
2	Fire line (Creation & Maintenance)		Anchal/ Pathanapuram		0.25	10	2.50
	Ranni Division						
3	Fire line (Creation & Maintenance)		Ranni		0.25	10	2.50
	Achenkovil Division						
4	Fire line (Creation & Maintenance)		Kallar		0.25	4	1.00
	Konni Division						
5	Fire line (Creation & Maintenance)		Konni		0.25	10	2.50
			Subtotal			**39.00**	**9.75**
	High Range Circle, Kottayam						
	Kottayam Division						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
6	Fire line (Creation & Maintenance)		Erumely		0.25	10	2.50
	Munnar Division						
7	Fire line (Creation & Maintenance)		Devikulam, Munnar		0.25	20	5.00
	Marayoor Division						
8	Fire line (Creation & Maintenance)		Marayoor Kanthalloor		0.25	20	5.00
	Mankulam Division						
9	Fire line (Creation & Maintenance)		Mankulam Range (Kallar & Mankulam Section)		0.25	10	2.50
	Kothamangalam Division						
10	Fire line (Creation & Maintenance)		Mullaringadu Range, avolichal-irumalakappu-Kothamangalam section		0.25	10	2.50
			Subtotal			**70.00**	**17.50**
	Central Circle, Thrissur						
	Thrissur Division						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
11	Fire line (Creation & Maintenance)		Mayannur Forest Station		0.25	10	2.50
	Chalakudy Division						
12	Fire line (Creation & Maintenance)		Vellikulangara and Pariyaram Ranges		0.25	20	5.00
	Vazhachal Division						
13	Fire line (Creation & Maintenance)		Charpa, Vazhachal, Kollathirumedu, Sholayar, Athirapilly Range		0.25	20	5.00
	Malayattoor Division						
14	Fire line (Creation & Maintenance)		Kolppara to Evergreen OP, Kalady Range, Kuttampuzha Range, Edamalayar Range, Thundathil Range, Kodanad Range		0.25	5	1.25
	Subtotal					**55.00**	**13.75**
	Eastern Circle, Palakkad						
	Palakkad Division						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
15	Fire line (Creation & Maintenance)		Palakkad		0.25	20	5.00
	Nilambur North Division						
16	Fire line (Creation & Maintenance)		Nilambur Vazhikkadavu		0.25	10	2.50
	Nilambur South Division						
17	Fire line (Creation & Maintenance)		Mulavettichal to Pulikkakakai		0.25	20	5.00
	Nenmara Division						
18	Fire line (Creation & Maintenance)		Karimkayam health centre to Choorupara of Mangalamdam Forest Station in Alathur Range , Muringamala area, Nerchapara to Kalchady under Thiruvazhiyad Section		0.25	5	1.25
			Subtotal			**55.00**	**13.75**
	Northern Circle, Kannur						
	Wayanad South Division						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
19	Fire line (Creation & Maintenance)		Irulam and Pulpally Stations		0.25	5	1.25
	Wayanad North Division						
20	Fire line (Creation & Maintenance)		Illathumala Estate, Ambalappara to Mallikappara at Pakshipathalam, Perincherimala		0.25	20	5.00
	Kannur Division						
21	Fire line (Creation & Maintenance)		Kannavam & Kottiyur		0.25	10	2.50
	Kasaragod Division						
22	Fire line (Creation & Maintenance)		Kasaragod & Kanhangad Ranges		0.25	10	2.50
			Subtotal			**45.00**	**11.25**
	ABP Circle, Thiruvananthapuram						
	Thiruvanathapuram Wildlife						
23	Fire line (Creation & Maintenance)		Neyyar, Peppara and ABP		0.25	5	1.25
			Subtotal			**5**	**1.25**
	FDPT, Kottayam						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
	Periyar East Division						
24	Fire line (Creation & Maintenance)		Mangaladevi top to Mavady in Thekkady Range		0.25	10	2.50
	Periyar West Division						
25	Fire line (Creation & Maintenance)		Azhutha range		0.25	10	2.50
	Munnar Wildlife Division						
26	Fire line (Creation & Maintenance)		Chinnar Wildlife Sanctuary under Munnar Wildlife Division		0.25	10	2.50
	Idukki Wildlife Division						
27	Fire line (Creation & Maintenance)		Idukki WLS		0.25	10	2.50
			Subtotal			**40.00**	**10.00**
	Wildlife, Palakkad						
	Peechi Division						
28	Fire line (Creation & Maintenance)		Chimmony		0.25	10	2.50
	Silent Valley Division						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
29	Fire line (Creation & Maintenance)		Silent Valley National Park		0.25	10	2.50
	Parambikulam Division						
30	Fire line (Creation & Maintenance)		Sungam, Parambikulam, karimala & Orukomban Ranges		0.25	15	3.75
	Aralam Division						
31	Fire line (Creation & Maintenance)		Aralam		0.25	5	1.25
			Subtotal			**40.00**	**10.00**
	Working Plan & Research						
	Research (North)						
32	Fire line (Creation & Maintenance)		Research Range Nilambur and Research Range Mananthavady		0.25	10	2.50
	Research (South)						

Forest fire prevention and control operations							
Fire line (creation & maintenance)							
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
33	Fire line (Creation & Maintenance)		Anchal, vadaseikara, kulathupuzha, thenmala		0.25	10	2.50
			Subtotal			**20.00**	**5.00**
	Social Forestry, Ernakulam						
	NSC Kalady Division						
34	Fire line (Creation & Maintenance)		Kaprikkad Reserve, Kurichimala Reserve and Aarattukadavu Reserve		0.25	2	0.50
			Subtotal			**2**	**0.50**
			Total			**371 Km**	**92.75**

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical (In Mandays)	Financial
	Southern Circle, Kollam					
	Thiruvananthapuram Division					
1	Fire watchers	Peringamala Bharathanoor Kallar		0.00850	300	2.55
	Punalur Division					
2	Fire watchers	Kalamkunnu,, Ayiranalloor, Karavaloor, Ambanar & Punnala Forest Station		0.00850	300	2.55
	Ranni Division					
3	Fire watchers	Goodrikkai/Vadasserikkara/Ranni Ranges		0.00850	300	2.55
	Achenkovil Division					
4	Fire watchers	Achenkovil, Kallar		0.00850	300	2.55
	Konni Division					
5	Fire watchers	Konni		0.00850	300	2.55
		Subtotal			**1500**	**12.75**
	High Range Circle, Kottayam					
	Kottayam Division					
6	Fire watchers	Erumely		0.00850	300	2.55
	Munnar Division					
7	Fire watchers	Machiplvy FS, Chinnakkanal Section		0.00850	500	4.25

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical (In Mandays)	Financial
	Marayoor Division					
8	Fire watchers	Marayoor Kanthalloor		0.00850	500	4.25
	Mankulam Division					
9	Fire watchers	Mankulam Range (Kallar & Mankulam Section)		0.00850	300	2.55
	Kothamangalam Division					
10	Fire watchers	Kothamanagalam Range - Thattekkad & Kothamangalam Section,Mullaringad Range - Chullikkandam Section & Mullaringad Section,Thodupuzha Range Arakkulam, Peringassery, Kulamvu Sections and VFS		0.00850	300	2.55
		Subtotal			**1900**	**16.15**
	Central Circle, Thrissur					
	Thrissur Division					
11	Fire watchers	Poongode FS Pattikkad FS Vazhani FS		0.00850	300	2.55
	Chalakudy Division					
12	Fire watchers	All ranges		0.00850	300	2.55
	Vazhachal Division					

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	**Component/Particulars of Work**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
					Physical (In Mandays)	**Financial**
13	Fire watchers	Athirapilly Range, Charpa, Vazhachal, Kollathirumedu, Sholayar		0.00850	500	4.25
	Malayattoor Division					
14	Fire watchers	Anakkulam FS, Kuttampuzha Range, Koadanad Range, Thundathil Range,Kalady Range		0.00850	300	2.55
		Subtotal			**1400**	**11.90**
	Eastern Circle, Palakkad					
	Palakkad Division					
15	Fire watchers	Palakkad		0.00853	150	1.28
	Nilambur North Division					
16	Fire watchers	Edavanna Nilambur Vazhikkadavu		0.00850	300	2.55
	Nilambur South Division					
17	Fire watchers	Karulai Kalikavu		0.00850	300	2.55
	Nenmara Division					

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	**Component/Particulars of Work**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
					Physical (In Mandays)	**Financial**
18	Fire watchers	Karimkayam health centre to Choorupara of Mangalamdam Forest Station in Alathur Range , Muringamala area, Nerchapara to Kalchady under Thiruvazhiyad Section		0.00850	300	2.55
	Mannarkad Division					
19	Fire watchers	Mannarkkad (Mannarkkad , Palakkayam, Thiruvizhamkunnu forest station), Attapady(Pudur, Mukkali Forest Station) , Agali(Sholayur.Ommala,Singapara Ranges		0.00850	500	4.25
		Subtotal			**1550**	**13.18**
	Northern Circle, Kannur					
	Kozhikode Division					
20	Fire watchers	Thamarassery,Peruvannamuzhy,Kuttiady		0.00850	500	4.25
	Wayanad South Division					
21	Fire watchers	Kalpetta and Chedleth		0.00850	500	4.25

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical (In Mandays)	Financial
	Kannur Division					
22	Fire watchers	Kannavam & Kottiyur Range		0.00850	500	4.25
	Kasaragod Division					
23	Fire watchers	Kasaragod & Kanhangad Ranges		0.00850	300	2.55
		Subtotal			**1800**	**15.30**
	ABP Circle, Thiruvananthapuram					
	Thiruvanathapuram Wildlife					
24	Fire watchers	Neyyar, Peppara and ABP		0.00850	300	2.55
	Shendurney Division					
25	Fire watchers	Kalamkunnu Kalluvarambu Ettappadappu		0.00850	300	2.55
		Subtotal			**600**	**5.10**
	FDPT, Kottayam					
	Periyar East Division					
26	Fire watchers	Thondiyar Section		0.00850	500	4.25
	Periyar West Division					

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical (In Mandays)	Financial
27	Fire watchers	Uppupara Sathram Moozhikkal Choozhi,Pachakkanam, Mukkuzhy		0.00850	300	2.55
	Munnar Wildlife Division					
28	Fire watchers	Echampetty		0.00850	500	4.25
	Idukki Wildlife Division					
29	Fire watchers	Thattekkad		0.00850	500	4.25
		Subtotal			**1800**	**15.30**
	Wildlife, Palakkad					
	Peechi Division					
30	Fire watchers	Peechi, Chimmony		0.00850	300	2.55
	Silent Valley Division					
31	Fire watchers	Silent Valley National Park		0.00850	500	4.25
	Parambikulam Division					
32	Fire watchers	Sungam, Parambikulam Ranges		0.00850	300	2.55
	Aralam Division					
33	Fire watchers	Aralam		0.00850	300	2.55
		Subtotal			**1400**	**11.90**
	Working Plan & Research					

Forest Fire Prevention and Control Operations						
Fire watchers						
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical (In Mandays)	Financial
	Research (North)					
34	Fire watchers	Research Range Nilambur and Research Range Mananthavady		0.00853	150	1.28
	Research (South)					
35	Fire watchers	Anchal, vadaseikara, kulathupuzha, thenmala, Kodanad		0.00853	150	1.28
		Subtotal			**300**	**2.56**
	Social Forestry, Ernakulam					
	NSC Kalady Division					
36	Fire watchers	Kaprikkad Reserve, Kurichimala Reserve and Aarattukadavu Reserve		0.00850	500	4.25
		Subtotal			**500**	**4.25**
		Total			**12750 MM**	**108.39**

	Forest Fire Prevention and Control Operations					
	Purchase of Fire equipment					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Southern Circle, Kollam					
	Thiruvananthapuram Division					
1	Purchase of Fire equipment	Range Office		0.05000	10	0.50
	Punalur Division					
2	Purchase of Fire equipment	Pathanapuram		0.05000	10	0.50
	Ranni Division					
3	Purchase of Fire equipment	Goodrikkai/Vadasserikkara/Ranni Ranges		0.05000	10	0.50
	Achenkovil Division					
4	Purchase of Fire equipment	Achenkovil, Kallar		0.05000	10	0.50
	Konni Division					
5	Purchase of Fire equipment	Konni		0.05000	10	0.50
		Subtotal			**50.00**	**2.50**
	High Range Circle, Kottayam					
	Kottayam Division					
6	Purchase of Fire equipment	Placherry, Vandanpathal and Murinjapuzha FS		0.05000	10	0.50
	Munnar Division					
7	Purchase of Fire equipment	Devikulam		0.05000	10	0.50

	Forest Fire Prevention and Control Operations					
	Purchase of Fire equipment					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Marayoor Division					
8	Purchase of Fire equipment	Marayoor Kanthalloor		0.05000	10	0.50
	Mankulam Division					
9	Purchase of Fire equipment	Mankulam Range, Anakulam Range		0.05000	10	0.50
	Kothamangalam Division					
10	Purchase of Fire equipment	All ranges		0.05000	10	0.50
		Subtotal			**50.00**	**2.50**
	Central Circle, Thrissur					
	Thrissur Division					
11	Purchase of Fire equipment	Pattikkad		0.05000	10	0.50
	Chalakudy Division					
12	Purchase of Fire equipment	Vellikulangara and Pariyaram Ranges		0.05000	10	0.50
	Malayattoor Division					
13	Purchase of Fire equipment	kodanad,Kuttampuzha,Thundathil, Edamalayar		0.05000	10	0.50
		Subtotal			**30.00**	**1.50**

	Forest Fire Prevention and Control Operations					
	Purchase of Fire equipment					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Eastern Circle, Palakkad					
	Palakkad Division					
14	Purchase of Fire equipment	Palakkad		0.05000	10	0.50
	Nilambur North Division					
15	Purchase of Fire equipment	Nilambur Range, Edavanna Range, Vazhikkadavu Range		0.05000	10	0.50
	Nilambur South Division					
16	Purchase of Fire equipment	Karulai, Kalikavu		0.05000	10	0.50
	Nenmara Division					
17	Purchase of Fire equipment	Karimkayam health centre to Choorupara of Mangalamdam Forest Station in Alathur Range , Muringamala area, Nerchapara to Kalchady under Thiruvazhiyad Section		0.05000	10	0.50
	Mannarkad Division					
18	Purchase of Fire equipment	Mannarkkad (Mannarkkad , Palakkayam,Thiruvizhamkunnu forest station), Attapady(Pudur, Mukkali Forest Station) Agali(Sholayur.Ommala, Singapara Ranges		0.05000	10	0.50
		Subtotal			**50.00**	**2.50**

	Forest Fire Prevention and Control Operations					
	Purchase of Fire equipment					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Northern Circle, Kannur					
	Kozhikode Division					
19	Purchase of Fire equipment	Thamarassery,Peruvannamuzhy,Kuttiady		0.05000	10	0.50
	Wayanad South Division					
20	Purchase of Fire equipment	Kalpetta		0.05000	10	0.50
	Wayanad North Division					
21	Purchase of Fire equipment	Begur Forest Range Thalappuzha and Thirunelly Forest Station		0.05000	10	0.50
	Kasaragod Division					
22	Purchase of Fire equipment	Kasaragod & Kanhangad Ranges		0.05000	10	0.50
		Subtotal			**40.00**	**2.00**
	ABP Circle, Thiruvananthapuram					
	Thiruvanathapuram Wildlife					
23	Purchase of Fire equipment	Athirumala, Thodayar,Klamala-1, Klamala-2, Kottoor, Kottoor(ABP)		0.05000	10	0.50
	Shendurney Division					
24	Purchase of Fire equipment	Thenmala		0.05000	10	0.50

	Forest Fire Prevention and Control Operations					
	Purchase of Fire equipment					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Subtotal				**20.00**	**1.00**
	Wildlife, Palakkad					
	Parambikulam Division					
25	Purchase of Fire equipment	Sungam, Parambikulam, karimala & Orukomban Ranges		0.05000	10	0.50
	Subtotal				**10.00**	**0.50**
	Social Forestry, Ernakulam					
	NSC Kalady Division					
26	Purchase of Fire equipment	Kaprikkad Reserve, Kurichimala Reserve and Aarattukadavu Reserve		0.05000	20	1.00
	Subtotal				**20.00**	**1.00**
	Total				**270.00**	**13.50**

	Forest Fire Prevention and Control Operations					
	Fire awareness programmes					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Southern Circle, Kollam					
	Thiruvananthapuram Division					
1	Fire awareness programmes	Kulathupuzha Palode Paruthipally		0.10000	3	0.30
	Thenmala Division					
2	Fire awareness programmes	Thenmala & Aryankavu		0.10000	3	0.30
	Punalur Division					
3	Fire awareness programmes	Anchal/Pathanapuram		0.10000	3	0.30
	Ranni Division					
4	Fire awareness programmes	Thannithodu,Kanamala,Plappally		0.10000	3	0.30
	Achenkovil Division					
5	Fire awareness programmes	Achenkovil		0.10000	3	0.30
	Konni Division					
6	Fire awareness programmes	Konni		0.10000	3	0.30
		Subtotal			**18.00**	**1.80**
	High Range Circle, Kottayam					
	Kottayam Division					
7	Fire awareness programmes	Ayyappancoil and Nagarampara		0.10000	3	0.30
	Munnar Division					
8	Fire awareness programmes	Adimaly, Munnar		0.10000	3	0.30

	Forest Fire Prevention and Control Operations					
	Fire awareness programmes					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Marayoor Division					
9	Purchase of Fire equipment	Marayoor Kanthalloor		0.10000	3	0.30
	Mankulam Division					
10	Fire awareness programmes	Mankulam Range, Anakulam Range		0.10000	3	0.30
	Kothamangalam Division					
11	Fire awareness programmes	All ranges		0.10000	3	0.30
		Subtotal			**15.00**	**1.50**
	Central Circle, Thrissur					
	Thrissur Division					
12	Fire awareness programmes	Pattikkad FS Elanad FS Poongode FS		0.10000	3	0.30
	Chalakudy Division					
13	Fire awareness programmes	Vellikulangara and Pariyaram Ranges		0.10000	3	0.30
	Vazhachal Division					
14	Fire awareness programmes	Athirapilly Range		0.10000	3	0.30
		Subtotal			**9.00**	**0.90**
	Eastern Circle, Palakkad					

	Forest Fire Prevention and Control Operations					
	Fire awareness programmes					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Nilambur North Division					
15	Fire awareness programmes	Nilambur Range, Edavanna Range, Vazhikkadavu Range		0.10000	3	0.30
	Nilambur South Division					
16	Fire awareness programmes	Karulai Kalikavu		0.10000	3	0.30
		Subtotal			**6.00**	**0.60**
	Northern Circle, Kannur					
	Kozhikode Division					
17	Fire awareness programmes	Thamarassery,Peruvannamuzhy,Kuttiady		0.10000	3	0.30
	Wayanad North Division					
18	Fire awareness programmes	Peria Range Varayal Forest station Begur Range Thirunelly Forest Station		0.10000	3	0.30
	Kasaragod Division					
19	Fire awareness programmes	Kasaragod & Kanhangad Ranges		0.10000	3	0.30
		Subtotal			**9.00**	**0.90**
	ABP Circle, Thiruvananthapuram					
	Thiruvanathapuram Wildlife					
20	Fire awareness programmes	Athirumala, Klamala-2 and Kottoor(ABP)		0.10000	3	0.30

	Forest Fire Prevention and Control Operations					
	Fire awareness programmes					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Shendurney Division					
21	Fire awareness programmes	Thenmala		0.10000	3	0.30
		Subtotal			**6.00**	**0.60**
	Wildlife, Palakkad					
	Parambikulam Division					
22	Fire awareness programmes	Sungam, Parambikulam, karimala & Orukomban Ranges		0.10000	3	0.30
		Subtotal			**3.00**	**0.30**
	Social Forestry, Ernakulam					
	NSC Kalady Division					
23	Fire awareness programmes	Kaprikkad Reserve, Kurichimala Reserve and Aarattukadavu Reserve		0.10000	1	0.10
		Subtotal			**1.00**	**0.10**
	Social Forestry, Kozhikode					
	Wayanad Division					
24	Fire awareness programmes	Kalpetta, Mananthavady		0.10000	7	0.70
		Subtotal			**7.00**	**0.70**
		Total			**74.00**	**7.40**

	Soil & Moisture conservation works					
	Ponds					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Southern Circle, Kollam					
	Thiruvananthapuram Division					
1	Ponds	Vattapara (Nettayamkunnu), Mylamood			2	1.00
	Thenmala Division					
2	Ponds	Kadamanpara, Rollerkallu, Planepara, Uppukuzhi			4	2.00
	Ranni Division					
3	Ponds	Ranni			2	1.00
	Achenkovil Division					
4	Ponds	Achenkovil, Kallar			3	1.50
		Subtotal			**11.00**	**5.50**
	Central Circle, Thrissur					
	Chalakudy Division					
5	Ponds	Mukkanamkuth,Karavikuzhy, Pathukulangara			1	0.50
	Vazhachal Division					
6	Ponds	Athirapilly Range, Kollathirumedu Range			4	2.00

	Soil & Moisture conservation works					
	Ponds					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Malayattoor Division					
7	Ponds	Kalady, Kodanad, Idamalayar,Thundathil and Kuttampuzha Range			3	1.50
	Subtotal				**8.00**	**4.00**
	Northern Circle, Kannur					
	Kozhikode Division					
8	Ponds	Pannikkottur,,Polinjapalam , Kulathumthara,Thanalthattu			4	2.00
	Kasaragod Division					
9	Ponds	Parappa section, Karadukka section, Bandedukka section, Panathady section, Maruthome section, Bheemanady section			3	1.50
	Subtotal				**7.00**	**3.50**
	ABP Circle, Thiruvananthapuram					
	Thiruvanathapuram Wildlife					
10	Ponds	Neyyar and Peppara			4	2.00
	Subtotal				**4.00**	**2.00**

	Soil & Moisture conservation works					
	Ponds					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	FDPT, Kottayam					
	Periyar East Division					
11	Ponds	Vallakkadavu,			2	1.00
	Periyar West Division					
12	Ponds	Uppupara Section of Azhutha Range, Mukkuzhy FS of Pampa Range, Pachakkanam FS of Pampa Range			8	4.00
	Munnar Wildlife Division					
13	Ponds	Shola national parks range			5	2.50
	Idukki Wildlife Division					
14	Ponds	Vagavanam and Anjilithandu, Thattekkad			4	2.00
		Subtotal			**19.00**	**9.50**
	Wildlife, Palakkad					
	Peechi Division					
15	Ponds	Peechi			5	2.50
		Subtotal			**5.00**	**2.50**
		Total			**54.00**	**27.00**

	Soil & Moisture conservation works					
	Checkdams					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Southern Circle, Kollam					
	Thiruvananthapuram Division					
1	Checkdams	Oottukana, Ponmudi			2	1.00
		Subtotal			**2.00**	**1.00**
	High Range Circle, Kottayam					
	Kottayam Division					
2	Checkdams	Vairamony, Vazhathoppu and Kanchiyar FS			2	1.00
	Marayoor Division					
3	Checkdams	Marayoor and Kanthalloor			4	2.00
	Mankulam Division					
4	Checkdams	Mankulam			3	1.50
	Kothamangalam Division					
5	Checkdams	Kaliyar range			4	2.00
		Subtotal			**13.00**	**6.50**
	Central Circle, Thrissur					
	Chalakudy Division					

	Soil & Moisture conservation works					
	Checkdams					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
6	Checkdams	Mukkanamkuth,Karavikuzhy, Pathukulangara			4	2.00
	Subtotal				**4.00**	**2.00**
	Northern Circle, Kannur					
	Kozhikode Division					
7	Checkdams	Chenkottakolly,Puthiyeri,Chembothumpoyi			2	1.00
	Kannur Division					
8	Checkdams	Kannavam			2	1.00
	Kasaragod Division					
9	Checkdams	Parappa section, Karadukka section, Bandedukka section, Panathady section, Maruthome section, Bheemanady section			3	1.50
	Subtotal				**7.00**	**3.50**
	FDPT, Kottayam					
	Periyar East Division					
10	Checkdams	Vallakkadavu, Kunthirikkapalam			2	1.00
	Munnar Wildlife Division					
11	Checkdams	Churulipetty, Mangayoda			2	1.00

	Soil & Moisture conservation works					
	Checkdams					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Idukki Wildlife Division					
12	Checkdams	Chettippally, Thengathatty			2	1.00
		Subtotal			**6.00**	**3.00**
	Wildlife, Palakkad					
	Peechi Division					
13	Checkdams	Peechi			2	1.00
		Subtotal			**2.00**	**1.00**
		Total			**34.00**	**17.00**

	Soil & Moisture conservation works					
	Gully Plugging					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
	Southern Circle, Kollam					
	Thenmala Division					
1	Gully Plugging	Mottalummood, Rajacoupe			400	4.00
	Konni Division					
2	Gully Plugging	Konni			300	3.00
		Subtotal			**700.00**	**7.00**
	High Range Circle, Kottayam					
	Kothamangalam Division					
3	Gully Plugging	perakuthu-kothamangalam section			200	2.00
		Subtotal			**200.00**	**2.00**
	Central Circle, Thrissur					
	Vazhachal Division					
4	Gully Plugging	Athirapilly Range			300	3.00
		Subtotal			**300.00**	**3.00**
	ABP Circle, Thiruvananthapuram					
	Thiruvanathapuram Wildlife					

	Soil & Moisture conservation works					
	Gully Plugging					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical	Financial
5	Gully Plugging	Neyyar and Peppara			400	4.00
	Subtotal				**400.00**	**4.00**
	FDPT, Kottayam					
	Periyar East Division					
6	Gully Plugging	Aruviyoda in Vallakkadavu Range			400	4.00
	Munnar Wildlife Division					
7	Gully Plugging	Kosavan chola and Pazhathottam			200	2.00
	Subtotal				**600.00**	**6.00**
	Total				**2200.00**	**22.00**

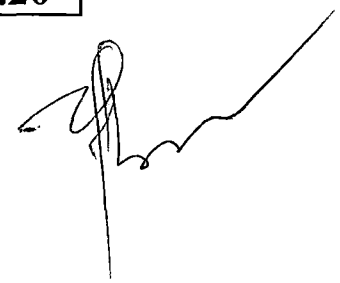
	Establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals					
	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance					
Sl. No.	**Component/Particulars of Work**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
					Physical (In units)	**Financial**
	Wildlife, Palakkad					
	Wayanad Division					
1	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance	Kurichiat Range			1	5.95
		Subtotal			**1**	**5.95**
	Social Forestry, Ernakulam					
	Ernakulam SF Division					
2	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance	Ernakulam			5	5.00
	Idukki SF Division					
3	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance	Vellappara			2	8.00
	Thrissur SF Division					
4	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance	Chavakkad			7	4.00
		Subtotal			**14**	**17.00**
	Social Forestry, Kozhikode					

	Establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals					
Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance						
Sl. No.	**Component/Particulars of Work**	**Location**	**Unit**	**Rate/ unit (in lakh)**	**Target**	
					Physical (In units)	**Financial**
	Kannur Division					
5	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance	Chal Beach			2	6.00
	Kasaragod Division					
6	Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance	Udayagiri			2	4.00
	Subtotal				**4**	**10.00**
	Total					**32.95**

	Management of biological diversity and biological resource					
	Management of biological diversity and biological resource					
Sl. No.	Component/Particulars of Work	Location	Unit	Rate/ unit (in lakh)	Target	
					Physical (In units)	Financial
	Social Forestry, Kollam					
	Thiruvananthapuram SF Division					
1	Creation of seedstock/ orchards	Attingal Thiruvananthapuram and Neyyattinkara			1	3.00
2	Others	Attingal Thiruvananthapuram and Neyyattinkara			1	3.00
	Subtotal				**2**	**6.00**
	Social Forestry, Kozhikode					
	Kasaragod Division					
3	Creation of seedstock/ orchards	District Permanent Nursery Bela			1	4.00
	Subtotal				**1**	**4.00**
	Total					**10.00**

	Establishment, Maintenance of modern nurseries						
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (In	Financial
	Social Forestry, Kollam						
	Kollam Division						
1	Modern Nurseries / Improvement of Nurseries		Punalur			1	3.00
	Pathanamthitta Division						
2	Modern Nurseries / Improvement of Nurseries		Vazhappara			1	0.75
	Alappuzha Division						
3	Modern Nurseries / Improvement of Nurseries		Gandhivanam Purakkad			1	2.90
			Subtotal			**3.00**	**6.65**
	Social Forestry, Ernakulam						
	Palakkad Division						
4	Modern Nurseries / Improvement of Nurseries		Muttikkulangara			1	6.05
			Subtotal			**5.00**	**6.05**
	Social Forestry, Kozhikode						
	Malappuram Division						

5	Modern Nurseries / Improvement of Nurseries		Valluvasseri Section (Near Central Nursery)			1	7.50
	Kozhikode Division						
6	Modern Nurseries / Improvement of Nurseries		Vanasree Forest Comples, Mathottam			1	6.00
	Wayanad Division						
7	Modern Nurseries / Improvement of Nurseries		District Permanent Nursery Chuzhali			3	9.00
	Kasargod Division						
8	Modern Nurseries / Improvement of Nurseries		District Permanent Nursery Bela			1	2.00
			Subtotal			**7.00**	**24.50**
			Total				**37.20**



	Promoting conservation, sustainable use and documentation of biological diversity						
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
	Social Forestry, Kollam						
	Thiruvananthapuram Division						
1	Documentation & Conference/ workshop		Attingal, Neyyattinkara and Thiruvananthapuram			1	2.00
	Pathanamthitta Division						
2	Documentation & Conference/ workshop		Pathanamthitta District			1	0.60
	Alappuzha Division						
3	Documentation & Conference/ workshop		Alappuzha & Chengannur			1	1.55
			Subtotal			**3**	**4.15**
	Social Forestry, Ernakulam						
	Ernakulam Division						
4	Documentation & Conference/ workshop		Edappally			1	0.50

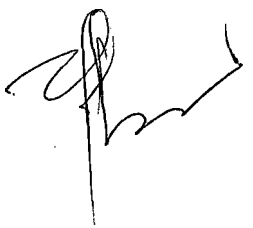
	Palakkad Division						
5	Documentation & Conference/ workshop		Aranya Bhavan Complex, Palakkad			1	0.73
			Subtotal			**2**	**1.23**
	Social Forestry, Kozhikode						
	Malappuram Division						
6	Documentation & Conference/ workshop		Malappuram			1	0.35
			Subtotal			**1**	**0.35**
			Total				**5.73**

	Construction of residential and official buildings for front line staff						
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in units)	Financial
	Social Forestry, Kollam						
	Pathanamthitta SF Division						
1	Maintenance of building		Eliyarackal			1	3.00
			Subtotal			**1**	**3.00**
	Social Forestry, Ernakulam						
	Idukki SF Division						
2	Maintenance of building		Vellappara			1	0.80
			Subtotal			**1**	**0.80**
			Total				**3.80**

	Casual engagement of local people or labours to assist regular staff or State Forest Department						
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical (in mandays)	Financial
	Social Forestry, Kollam						
	Pathanamthitta SF Division						
1	Casual engagement of local people or labours		Vellappara			60	0.50
			Subtotal			**60**	**0.50**
	Social Forestry, Ernakulam						
	Thrissur SF Division						
2	Casual engagement of local people or labours		Chavakkad			214	1.82
			Subtotal			**214**	**1.82**
			Total				**2.32**

	Production and distribution of quality planting material						
Sl. No.	Component/Particulars of Work	GPS Reading	Location	Unit	Rate/ unit (in lakh)	Target	
						Physical	Financial
	Social Forestry, Kollam						
	Kollam Division						
1	Production and distribution of quality planting material		Kollam	Nos	0.00029	15000	4.35
	Pathanamthitta Division						
2	Production and distribution of quality planting material		Vazhappara	Nos	0.00060	2000	1.20
	Alappuzha Division						
3	Production and distribution of quality planting material		DPN Purakkad	Nos	0.00029	5000	1.45
	Kottayam Division						
4	Production and distribution of quality planting material		Kottayam	Nos	0.00025	25000	6.25
			Subtotal			**47000.00**	**13.25**
	Social Forestry, Kozhikode						
	Kozhikode Division						
5	Production and distribution of quality planting material		Kozhikode	Nos	0.00025	5000	1.25
	Kannur Division						

6	Production and distribution of quality planting material		Cheruvanchery	Nos	0.00033	20000	6.60
			Subtotal			**0.00**	**7.85**
			Total				**21.10**



Annexure

PART IV

APO ABSTRACT 2025-26					
Sl No	**Activity**	**Physical Target**	**Proposed outlay (in Rs. lakhs)**	**CAF Rules**	**Remarks**
I	**Compensatory Afforestation Fund Part**				
1	New plantation	208.70 Ha + 1800 Nos	145.32	Mandatory activity	Site-specific activities as per Section 6(a) of the CAF Act, 2016
2	Maintenance of existing /older plantation	141.75 Ha + 5000 Nos	128.87	Mandatory activity	Site-specific activities as per Section 6(a) of the CAF Act, 2016
	Total Compensatory Afforestation Fund Part	**350.45 Ha + 6800 Nos**	**274.19**		
II	**Net Present Value of Forest Land Fund Part**				
A	**(Part-A - Activities under "Not less than 80%" of the NPV fund category)**				
1	Protection of Plantations and forests			5(2)d	Activity as per Rule 5(2) of CAF Rules, 2018
	i. Purchase of equipments relevant for patrolling	120	12		
	Sub Total		**12**		
2	Forest fire prevention and control operations			5(2)f	Activity as per Rule 5(2) of CAF Rules, 2018
	i. Fire line (creation & maintenance)	371 Km	92.75		
	ii. Fire watchers	12750 MM	108.39		
	iii. Purchase of fire equipment	2700 Nos	13.50		
	iv. Fire awareness programmes	74 Nos	7.40		
	Sub Total		**222.04**		
3	Soil and moisture conservation works			5(2)(g)	Activity as per Rule 5(2) of CAF Rules, 2018
	i. Ponds	54 Nos	27		
	ii. Checkdams	34 Nos	17		
	iii. Gully plugging	2200 M^3	22		
	Sub Total		**66.00**		
4	Establishment, maintenance of animal rescue centre and veterinary treatment facilities for wild animals	6 Divisions	32.95	5(2)k	Activity as per Rule 5(2) of CAF Rules, 2018
	Sub Total		**32.95**		
5	Management of biological diversity and biological resource			5(2)m	Activity as per Rule 5(2) of CAF Rules, 2018
	i. Creation of seedstock/orchards		5		
	ii. Others		5		
	Sub Total		**10.00**		
	Total: Part-A - Activities under "Not less than 80%" of the NPV fund category		**342.99**		

B	**(Part-B - Activities under "Not more than 20%" of the NPV fund category)**				
6	Establishment, Maintenance of modern nurseries	8 Divisions	37.20	5(3)a	Activities as per Rule 5(3) of the CAF Rule, 2018
	Sub Total		**37.20**		
7	Promoting conservation, sustainable use and documentation of biological diversity			5(3)b	Activities as per Rule 5(3) of the CAF Rule, 2018
	i. Documentation	6 Divisions	2.60		
	ii.Conference/ workshop	6 Divisions	3.13		
	Sub Total		**5.73**		
8	Construction of Residential or office buildings	2 Divisions	3.8	5(3)e	Activities as per Rule 5(3) of the CAF Rule, 2018
	Sub Total		**3.8**		
9	Casual engagement of local people or labours to assist regular staff or State Forest Department	274 MM	2.32	5(3)f	Activities as per Rule 5(3) of the CAF Rule, 2018
	Sub Total		**2.32**		
10	Production and distribution of quality planting material	72000 Nos	21.10	5(3)j	Activities as per Rule 5(3) of the CAF Rule, 2018
	Sub Total		**21.10**		
	Total: Part-B - Activities under "Not more than 20%" of the NPV fund category		**70.15**		
	Total Net Present Value of Forest Land Fund Part		**413.14**		
IV	**Interest - Fund Part**				
A	**Part-A - Activities under "Not less than 60%" of the fund category**				
1	To offset the incremental cost of CA, penal CA, CAT plan, salary of CEO and staff etc.	LS	50	6(a)i, 6(a)ii, 6(a)iii, 6(a)iv, 6(a)v	Activities as per Rule 6(a) of CAF Rules, 2018
2	Independent concurrent monitoring and Third party monitoring and evaluation	LS	30	6(a)vi	Activities referred to in sub rule-(2) and (3) of Rule 5
3	Purchase and maintenance of equipment of devices for communication, information and technology	10 Division	11.90	5(3)c	Activities referred to in sub rule-(2) and (3) of Rule 5
4	Publicity cum awareness programme	20 Division	31.80	5(3)i	Activities referred to in sub rule-(2) and (3) of Rule 5
	Sub Total		**123.70**		
	Total: (Part-A - Activities under "Not less than 60%" of the fund category)		**123.70**		
B	**Part B – Activities under "Not more than 40% of the fund category**			6(b)	Activities as per Rule 6(b) of CAF Rules, 2018
5	Procurement of Office stationary items		3		
6	Procurement of Desktop Computers & Peripherals		5		
7	Procurement of Printers/ photocopier/Scanners etc		4		
8	Procurement of Office Furniture		2		
9	Hiring of staff car for the use of officers and staff of the State Authority		1		
10	Field inspections		1		
	Sub Total		**16.00**		
	Total: (Part-B - Activities under "Not more than 40%" of the fund category)		**16.00**		
	Total Interest Fund Part		**139.70**		
	GRAND TOTAL		**827.03**		

Annexure II

Format for Annual Plan of Operation Summary Submission 2025-26

Annual Plan of Operation (APO) for the financial year 2025-26 of Kerala State CAMPA

1. Date of Receipt:
2. Date of approval of EC of State/UT: 31st December 2024
3. Date of approval of the Steering Committee: 16th January 2025
4. Total Amount/Outlay: 8.2703 Crore
5. Funds status with the State/UT along with the Outlay proposed

(Amount in Rs. Crores)

S No	CAMPA Activity	Fund available with the State/UT	Outlay proposed
1	**Mandatory Activity**	**13.4825**	**2.7419**
	CA/PCA/Additional PCA	13.48	2.7419
	CAT Plan	0.0025	0
	IWMP	0	0
	Others	0	0
2	**Net Present Value**	**20.86**	**4.1314**
3	**Interest**	**14.04**	**1.397**
4	**Other Components**	**7.57**	0

6. Funds released by State Government during the FY

(Amount In Rs. Crores)

Year	APO approved by National Authority during current financial year	Fund Released by State Government	Fund Utilized by State Authority	Total Outlay for the Year
2018-19	7.96	7.96	7.84	7.96
2019-20	0	0	0	0
2020-21	15.79	15.79	10.88	16.06
2021-22	25.13	16.08	16.03	27.19
2022-23	17.26	8.5	8.24	22
2023-24	9.06	5	4.72	13.65
2024-25	8.93	8.92	6.17*	14.15

7. **Financial outlays/Budgetary support under various schemes**

(Rs. In Crores)

Year	CSS		CAMPA	State plan/ Scheme Fund
	Name of the scheme	**Expenditure/ provisions**		
2022-23	Forest Fire Prevention & Management Scheme	8.02	**CAMPA APO Amount – 17.26**	**STATE PLAN Amount - Rs. 179.33**
	Integrated Wildlife Management	37.7		
	Project Tiger	16.75		
	Project Elephant	13		
	Total	**75.47**	**25.18**	**179.33**
2023-24	Forest Fire Prevention & Management Scheme	6	**CAMPA APO Amount – 9.06**	**STATE PLAN Amount - Rs. 200.06**
	Integrated Wildlife Management	38.68		
	Project Tiger	16.75		
	Project Elephant	13		
	Total	**74.43**	**9.06**	**200.06**
2024-25	Forest Fire Prevention & Management Scheme	12.7	**CAMPA APO Amount – 8.93**	**STATE PLAN Amount - Rs. 201.98**
	Integrated Wildlife Management	28.95		
	Project Tiger	19		
	Project Elephant	14		
	Total	**74.65**	**8.93**	**201.98**
2025-26	Forest Fire Prevention & Management Scheme	6	**CAMPA APO Amount – 8.2703**	**STATE PLAN Amount - Rs. 224.83**
	Integrated Wildlife Management	19		
	Project Tiger	15		
	Project Elephant	8.75		
	Total	**48.75**	**8.2703**	**224.83**

8. Status of Compensatory Afforestation

(Area in Ha.)

Afforestation required as per site specific scheme submitted along with approved proposal for diversion of forest land under FC Act, 1980 till 31.03.2024			Afforestation carried out in the State as per site specific scheme till 2023-24			Afforestation to be carried out 2025-26	Afforestation carried out percentage	Total Balance upto 2026-27
(CA)	(PCA)	(CA-PCA)	(CA)	(PCA)	(CA-PCA)	(CA-PCA)	(CA-PCA)	(CA+PCA)
60783.43	27.5	60755.93	60406.128	18	60388.128	208.7	99.39	159.102 Ha (208.7 Ha is proposed to be taken under CA during the FY 2024-25 from the total balance of 368.802 Ha)

9. Balance Afforestation Status

(Area in Ha.)

Balance Afforestation required as per FC Act (in ha.)	Balance Afforestation to be completed in Financial Year (in Ha)		
	2025-26	2026-27	2027-28
368.802	208.7	107.2	51.902

10. Details of APO are as under

(Amount In Rs. Lakhs)

Sr.	Activities	Financial Target	Physical Target	Unit
Site-specific activities as per Section 6(a) of CAF Act, 2016				
1	Compensatory Afforestation			
	Plantation activities	145.32	208.7	Block (ha.)
			1800	Number
	Post Plantation activities	128.87	141.79	Block (ha.)
Activities as per Rule 5(2) of CAF Rules, 2018				
2	Protection of Plantations and Forests			
	Purchase of equipments relevant to patrolling	12	LS	Number
3	Forest Fire Prevention and Control Operations			
	Fire lines(Fire line creation, Fire line maintenance)	92.75	371	Linear (k.m.)
	Hiring of fire watchers	108.39	12750	Man days
	Purchase of fire prevention/ fighting equipment(s)	13.5	2700	Number
	Awareness campaign for fire prevention	7.4	74	Number
4	Soil and Moisture Conservation Works			
	SMC structures(Ponds, Trenches, Check Dams, Spur, Retaining walls/ Breast wall, Others)	44	88	Number
	SMC structures(Ponds, Trenches, Check Dams, Spur, Retaining walls/ Breast wall, Others)	22	2200	
5	Details of Rescue Center/Veterinary treatment facility for wildlife animals, Maintenance			
	Details of rescue centre/veterinary treatment facility	32.95	LS	Number
6	Management of Biological Diversity and Biological Resource			
	Creation of seedstock/ orchards	3	0.1	Block (ha.)
	Others	7	LS	Number
Activities as per Rule 5(3) of CAF Rules, 2018				
7	Modern Nurseries / Improvement of Nurseries			
	Detail estimate of nursery	7	LS	Number
	Others	30.2	LS	Number
8	Promoting conservation, sustainable use and documentation of biological diversity			
	Documentation	2.6	LS	Number
	Conference/ workshop	3.13	LS	Number
9	Construction of residential and official buildings for front line staff			
	Quarters/offices for forest guards/range officers	3.8	LS	Number
10	Casual engagement of local people or labours to assist regular staff or State Forest			
	Casual engagement of local people or labours	2.32	274	Man days
11	Production and distribution of quality planting material for Govt. land other than forest area			
	Production and distribution of quality planting material	21.1	72000	Number

Activities as per Rule 6(a) of CAF Rules, 2018				
12	To offset incremental cost of CA/PCA at increased wage rate	2	LS	
13	For disbursement of salary and allowances State CAMPA Authority and staff	47	LS	
14	For disbursement of sitting fees and allowances to nominated list of members	1	LS	
15	Activities referred to in sub Rule (2) and (3) of Rule 5			
	a. Independent concurrent monitoring and Third party monitoring and evaluation	30	LS	
	b. Purchase and maintenance of equipment of devices for communication, information and technology	11.9	LS	
	c. Publicity cum awareness programme	31.8	LS	
Activities as per Rule 6(b) of CAF Rules, 2018				
16	Management of office establishment State CAMPA CEO	5	LS	
17	Office equipment including computers and peripherals and its maintenance	9	LS	
18	Hiring of staff cars for use only for CEO office	1	LS	
19	Other Contingencies for management of State Authority	1	LS	

Annexure III

1. TABLE 1: Mandatory Activities-Compensatory Afforestation (CA)/ Penal Compensatory Afforestation (PCA)										
FC Proposal Details	CA Area as per FC proposal			CA Executed		CA Proposed for current Financial Year		Remaining CA		Interest Amount to offset incremental cost of CA/PCA
Project Name/Details	Area	Location	Financial	Physical	Financial	Physical	Financial	Physical	Financial	
	(in Ha.)		(in lakhs)	(in Ha.)	(in lakhs)	(in Ha.)	(in lakhs)	(in Ha.)	(in lakhs)	(in lakhs)
Project name and details is given in Attachment 4	60755.93	Location of the projects is given in Attachment 4		60388.128		208.7	145.32	159.102		2

7. TABLE 7: Net Present Value and Interest : Soil and Moisture Conservation works

Soil Conservation Target as per ICFRE DPR for Current Year	Soil conservation structures under NPV			Others Schemes		Interest Amount to offset incremental cost of NPV	Remarks
Project Name/Details	Physical	Location	Financial	Physical	Financial		
	(in Ha.)	(KML file)	(in lakhs)	(in Ha.)	(in lakhs)	(in lakhs)	
Project name and details is given in Part III	2200 M3 + 88 Nos	Location of the projects is given in Part III	66	1802 M3 + 62 Nos	91.7		

9. TABLE 9: Net Present Value and Interest : Fire Management							
Target activities as per Integrated Fire Management Plan for Current Year	**Fire Management Activities under NPV**			**Others Schemes**		**Interest Amount to offset incremental cost of Wildlife Fire Management**	**Remarks**
Project Name/Details	**Physical**	**Location**	**Financial**	**Physical**	**Financial**		
	(in Ha.)	(KML file)	(in lakhs)	(in Ha.)	(in lakhs)	(in lakhs)	
Engaging Fire Gangs	12750 MM	Location of the proposed activities under 'Creation of Fire break' is given in Part III	108.39	1266 MM	12.5		
Fire Awareness Campaigns	74 Nos		7.4	LS	5.54		
Fire Fighting Equipments	2700 units		13.5	LS	1.31		
Creation of fire - break	371 km		92.75	451 km	126.05		

ANNEXURE IV

DETAILS OF FINANCIAL OUTLAY FOR INTEGRATED APOs

Physical Activities and Financial Targets under APOs of CSS, State Plan, CAMPA & any other scheme

2024-25

S No	Activities	CAMPA		CSS (Centrally sponsored Schemes)		State Plan	
		Physical	*Financial*	*Physical*	*Financial*	*Physical*	*Financial*
		Units	*Rs.in crores*	*Units*	*Rs.in crores*	*Units*	*Rs.in crores*
1	**Fire Prevention and control operations**		**1.93**		**4.49**		**18.28**
	Engaging fire gangs through participatory forest management	11850 MM	0.92	3000 MM	1.8	127500 MM	10.03
	Fire awareness campaigns	63 Nos	0.03	54 Nos	0.395	1250 Nos	2.25
	Fire fighting equipments	Ls	0.42	75 Nos	0.3	Ls	0.5
	Creation of fire - break	187 km	0.56	800 km	2	1550 km	5.5
2	**Wildlife Management**				**17.56**		**26.2**
	Maintenance of Vayal			706 Ha	0.64	100 Ha	12
	Removal of exotic weeds			562 Ha + 1110 MM	0.29	300 Ha + 50 Ls	0.4
	Habitat enrichment in degraded areas(Food)			230 Ha + 82 Nos	3.8	1500 Ha	3

	Establishment, operation and maintenance of animal rescue centre and veterinary treatment facilities for wild animals			95	1.22	50	2
	Maintenance of RRT vehicles			LS	2.25	Ls	4
	Engaging watchers to mitigate human animal conflict	10300 MM		135500 MM + 2 Lumpsum	9.36	60000 MM	4.8
3	**Forest Protection**	**3600 M^3**	**0.90**	**8760 M^3 + 71690 MM + 227 Nos**	**6.1**	**2500 M^3 + 60 Nos**	**2.5**
	Soil and Moisture Conservation, Digging/Desiltation of water holes & cleaning	3600 M^3	0.38	8760 M^3 + 41 Nos	2.57	2500 M^3 + 60 Nos	2.5
	Organising joint patrolling and raids along inter divisional and interstate forest boundaries	10 Nos	0.52	71690 MM + 186 Nos	3.52	300 Nos	0.5
4	Project Tiger				19		
5	Project Elephant				14		
6	Green India Mission				10		
7	Forest Infrastructure						
8	Vehicles						
9	Office Establishment						
10	Hiring of buildings						
11	Any other item Specify:						

DETAILS OF FINANCIAL OUTLAY FOR INTEGRATED APOs

Physical Activities and Financial Targets under APOs of CSS, State Plan, CAMPA & any other scheme

2025-26 expected*

S No	Activities	CAMPA		CSS (Centrally sponsored Schemes)		State Plan	
		Physical	*Financial*	*Physical*	*Financial*	*Physical*	*Financial*
		Units	*Rs.in crores*	*Units*	*Rs.in crores*	*Units*	*Rs.in crores*
1	**Fire Prevention and control operations**		**2.2204**		**0.167**		**1.287**
	Engaging fire gangs through participatory forest management	12750 MM	1.0839	171 MM	0.038	1095 MM	0.087
	Fire awareness campaigns	74 Nos	0.074	LS	0.0554	0	0
	Fire fighting equipments	2700 Units	0.135	LS	0.0131	0	0
	Creation of fire - break	371 Km	0.9275	49 Km	0.0605	402 Km	1.20
2	**Wildlife Management**		**0.3295**		**0.066**		**0.61**
	Establishment, operation and maintenance of animal rescue centre and veterinary treatment facilities for wild animals	LS	0.3295	7	0.066	23	0.61

S No	Activities	CAMPA		CSS (Centrally sponsored Schemes)		State Plan	
		Physical	*Financial*	*Physical*	*Financial*	*Physical*	*Financial*
		Units	*Rs.in crores*	*Units*	*Rs.in crores*	*Units*	*Rs.in crores*
3	**Forest Protection**	**88 Nos + 2200 M3**	**0.78**		**0.939**		**0.03**
	Soil and Moisture Conservation, Digging/Desiltation of water holes & cleaning	88 Nos +2200 M3	0.66	62 Nos + 1802 M3	0.917		
	Organising joint patrolling and raids along inter divisional and interstate forest boundaries	LS	0.12	20	0.022	33	0.03
4	Project Tiger				**15**		
5	Project Elephant				**8.75**		
6	Green India Mission				**10**		
7	Forest Infrastructure						
8	Vehicles						
9	Office Establishment						
10	Hiring of buildings						
11	Any other item Specify:						

Attachment 1

Last 5 Years CAMPA Expenditure Status
(APO - Wise & Circle - Wise)
[2018-19 to 2023-24]
(Progress Report for the Financial Year Ending is Under Preparation)

Circle		APO 2018-19	APO 2020-21	APO 2021-22	APO 2022-23	APO 2023-24
Southern Circle, Kollam	Allot	91.65	280.14	201.01	99.96	71.60
	Exp.	78.65	183.80	200.93	99.34	67.81
High Range Circle, Kottayam	Allot	66.35	247.00	181.83	145.00	63.18
	Exp.	66.85	235.34	181.09	142.14	62.94
Central Circle, Thrissur	Allot	77.07	261.58	171.75	68.00	67.87
	Exp.	76.57	171.01	170.73	67.99	63.05
Eastern Circle, Palakkad	Allot	52.5	174.17	243.41	139.00	35.05
	Exp.	53.5	174.12	243.41	137.96	35.02
Northern Circle, Kannur	Allot	54.3	117.75	193.53	121.71	37.02
	Exp.	53.3	108.41	193.51	103.31	35.31
ABP, WL Circle Thiruvananthapuram	Allot	56.24	20.40	46.30	16.00	10.92
	Exp.	50.3	20.40	46.28	16.00	10.86
Field Director, Kottayam	Allot	73.1	37.30	162.44	104.27	137.84
	Exp.	55.1	37.26	162.44	104.19	135.76
Wildlife Circle, Palakkad	Allot	52.1	89.80	215.51	84.00	35.04
	Exp.	48.1	89.80	215.48	82.23	35.01
Social Forestry, Kollam	Allot	164	1.40	18.30	20.00	
	Exp.	74.11	1.38	18.11	19.87	
Social Forestry, Ernakulam	Allot	74.69	11.10	40.61	0.00	
	Exp.	4.69	9.99	40.60	0.00	
Social Forestry, Kozhikode	Allot	10	1.50	46.00	23.47	
	Exp.	10	1.50	45.96	22.67	
Forest Headquarters	Allot	24	79.31	23.31	28.20	41.49
	Exp.	24	0.28	20.68	28.05	26.95
Research Division	Allot	0	57.46	0.00	0.12	
	Exp.	0	55.59	0.00	0.12	
CCF HRD	Allot	0	200.00	64.00	0.26	
	Exp.	0	0.00	64.00	0.26	
Total	**Allot**	**796**	**1578.91**	**1608.00**	**850.00**	**500.00**
	Exp.	**595.17**	**1088.88**	**1603.21**	**824.13**	**472.71**

Chief Executive Officer
Kerala State CAMPA

Attachment 2

KERALA FOREST DEPARTMENT

PLAN PROGRESS REPORT (FINANCIAL) as on 31 March **2024** DURING 2023-24 (Rs in lakhs)

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
A.	**STATE SECTOR SCHEMES**																	
I	**Management of Natural Forests**																	
1	Forest Protection (2406-01-101-81)	2600.000	-	**2600.000**	2600.000	-	**2600.000**			2600.000	-	**2600.000**	2475.980	-	**2475.980**	2273.188	**91.81**	**87.43**
2	Forest Protection (Survey of Forest Boundaries & Forest Protection) (4406-01-101-99)	2800.000	-	**2800.000**	2800.000	-	**2800.000**			2800.000	-	**2800.000**	1820.560	-	**1820.560**	1609.036	**88.38**	**57.47**
3	Regeneration of Denuded Forest (2406-01-101-94)	300.000	-	**300.000**	300.000	-	**300.000**			300.000	-	**300.000**	225.480	-	**225.480**	187.107	**82.98**	**62.37**
4	Non-wood Forest Produce Including Promotion of Medicinal Plants (2406-01-101-80)	200.000	-	**200.000**	200.000	-	**200.000**			200.000	-	**200.000**	143.860	-	**143.860**	127.834	**88.86**	**63.92**
	Sub Total (I)	**5900.000**	**0.000**	**5900.000**	**5900.000**	**0.000**	**5900.000**			**5900.000**	**0.000**	**5900.000**	**4665.880**	**0.000**	**4665.880**	**4197.165**	**89.95**	**71.14**
II	**Improving Productivity of Plantations**																	
1	Hard Wood Species (4406-01-105-87) (01)	500.000	-	**500.000**	500.000	-	**500.000**			500.000	-	**500.000**	364.100	-	**364.100**	330.999	**90.91**	**66.20**
2	Industrial Raw Materials (4406-01-105-87) (02)	200.000	-	**200.000**	200.000	-	**200.000**			200.000	-	**200.000**	144.740	-	**144.740**	130.720	**90.31**	**65.36**
	Sub Total (II)	**700.000**	**0.000**	**700.000**	**700.000**	**0.000**	**700.000**			**700.000**	**0.000**	**700.000**	**508.840**	**0.000**	**508.840**	**461.719**	**90.74**	**65.96**
III	**Infrastructure Development**																	
1	Roads (4406-01-070-99)	400.000	-	**400.000**	400.000	-	**400.000**			400.000	-	**400.000**	260.000	-	**260.000**	245.408	**94.39**	**61.35**
2	Building (4406-01-070-97)	400.000	-	**400.000**	400.000	-	**400.000**			400.000	-	**400.000**	260.000	-	**260.000**	246.680	**94.88**	**61.67**
	Sub Total	**800.000**	**0.000**	**800.000**	**800.000**	**0.000**	**800.000**			**800.000**	**0.000**	**800.000**	**520.000**	**0.000**	**520.000**	**492.087**	**94.63**	**61.51**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
IV	Eco-Tourism (4406-01-800-91)	700.000	-	**700.000**	700.000	-	**700.000**			700.000	-	**700.000**	455.000	-	**455.000**	430.804	**94.68**	**61.54**
V	Human Resource Development (2406-01-003-97)	350.000	-	**350.000**	350.000	-	**350.000**			350.000	-	**350.000**	350.000	-	**350.000**	348.665	**99.62**	**99.62**
VI	Resource Planning & Research (2406-01-004-92)	150.000	-	**150.000**	150.000	-	**150.000**			150.000	-	**150.000**	102.045	-	**102.045**	100.827	**98.81**	**67.22**
VII	Forest Management Information System & GIS (2406-01-800-57)	150.000	-	**150.000**	150.000	-	**150.000**			150.000	-	**150.000**	97.500	-	**97.500**	97.459	**99.96**	**64.97**
VIII	Extension Community Forestry & Agro Forestry (2406-01-101-78)	1000.000	-	**1000.000**	1000.000	-	**1000.000**			1000.000	-	**1000.000**	650.000	-	**650.000**	616.752	**94.88**	**61.68**
IX	Works with assistance from RIDF (4406-01-800-90)	5157.000	-	**5157.000**	5157.000	-	**5157.000**			3500.000	-	**3500.000**	4725.875	-	**4725.875**	3616.892	**76.53**	**70.14**
X	Measures to reduce Man Animal conflict (2406-02-110-09)	3085.000	-	**3085.000**	3085.000	-	**3085.000**			2500.000	-	**2500.000**	3085.000	-	**3085.000**	2914.892	**94.49**	**94.49**
XI	Zoological Park at Puthur, Thrissur (2406-02-110-48)	600.000	-	**600.000**	600.000	-	**600.000**			600.000	-	**600.000**	348.000	-	**348.000**	176.797	**50.80**	**29.47**
XII	Elephant Rehabilitation Centre at Kappukkad near Kottoor (2406-02-110-29)	100.000	-	**100.000**	100.000	-	**100.000**			100.000	-	**100.000**	65.000	-	**65.000**	62.490	**96.14**	**62.49**
XIII	Conservation of Biodiversity (2406-02-110-68)	1000.000	-	**1000.000**	1000.000	-	**1000.000**			1000.000	-	**1000.000**	788.800	-	**788.800**	719.129	**91.17**	**71.91**
XIV	Eco Development Programme (2406-02-110-56)	375.000	-	**375.000**	375.000	-	**375.000**			375.000	-	**375.000**	256.425	-	**256.425**	235.681	**91.91**	**62.85**
	SUB TOTAL (A)	**20067.000**	**0.000**	**20067.000**	**20067.000**	**0.000**	**20067.000**			**17825.000**	**0.000**	**17825.000**	**16618.365**	**0.000**	**16618.365**	**14471.359**	**87.08**	**72.12**
B	**SCHEMES HAVING 60:40 SHARES BETWEEN CENTRE AND STATE**																	
1	**Integrated Development of Wildlife Habitats**																	
i	**Management of Wildlife Sancturies**																	
1	Neyyar Wildlife Sanctuary (2406-02-110-28) (01)	-	55.500	**55.500**	-	55.500	**55.500**			0.000	0.000	**0.000**	0.000	15.090	**15.090**	15.090	**100.00**	**27.19**
	Neyyar Wildlife Sanctuary (2406-02-110-28) (02)	37.000	-	**37.000**	37.000	-	**37.000**			0.000	0.000	**0.000**	9.752	0.000	**9.752**	9.752	**100.00**	**26.36**
	Subtotal	**37.000**	**55.500**	**92.500**	**37.000**	**55.500**	**92.500**			**0.000**	**0.000**	**0.000**	**9.752**	**15.090**	**24.842**	**24.842**	**100.00**	**26.86**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
	Wayanad Wildlife Sanctuary (2406-02-110-27) (01)	-	120.000	**120.000**	-	120.000	**120.000**			0.000	0.000	**0.000**	0.000	27.321	**27.321**	27.321	**100.00**	**22.77**
	Wayanad Wildlife Sanctuary (2406-02-110-27) (02)	80.000	-	**80.000**	80.000	-	**80.000**			0.000	0.000	**0.000**	18.214	0.000	**18.214**	18.214	**100.00**	**22.77**
	Subtotal	**80.000**	**120.000**	**200.000**	**80.000**	**120.000**	**200.000**			**0.000**	**0.000**	**0.000**	**18.214**	**27.321**	**45.535**	**45.535**	**100.00**	**22.77**
3	Idukki Wildlife Sanctuary (2406-02-110-26) (01)	-	60.000	**60.000**	-	60.000	**60.000**			0.000	0.000	**0.000**	0.000	17.669	**17.669**	17.669	**100.00**	**29.45**
	Idukki Wildlife Sanctuary (2406-02-110-26) (02)	40.000	-	**40.000**	40.000	-	**40.000**			0.000	0.000	**0.000**	11.779	0.000	**11.779**	11.779	**100.00**	**29.45**
	Subtotal	**40.000**	**60.000**	**100.000**	**40.000**	**60.000**	**100.000**			**0.000**	**0.000**	**0.000**	**11.779**	**17.669**	**29.448**	**29.448**	**100.00**	**29.45**
4	Peechi, Vazhani (2406-02-110-25) (01)	-	60.000	**60.000**	-	60.000	**60.000**			0.000	0.000	**0.000**	0.000	15.479	**15.479**	15.479	**100.00**	**25.80**
	Peechi, Vazhani (2406-02-110-25) (02)	40.000	-	**40.000**	40.000	-	**40.000**			0.000	0.000	**0.000**	10.319	0.000	**10.319**	10.319	**100.00**	**25.80**
	Subtotal	**40.000**	**60.000**	**100.000**	**40.000**	**60.000**	**100.000**			**0.000**	**0.000**	**0.000**	**10.319**	**15.479**	**25.798**	**25.798**	**100.00**	**25.80**
5	Peppara Wildlife Sanctuary (2406-02-110-24) (01)	-	48.000	**48.000**	-	48.000	**48.000**			0.000	0.000	**0.000**	0.000	9.300	**9.300**	9.300	**100.00**	**19.38**
	Peppara Wildlife Sanctuary (2406-02-110-24) (02)	32.000	-	**32.000**	32.000	-	**32.000**			0.000	0.000	**0.000**	5.574	0.000	**5.574**	5.574	**100.00**	**17.42**
	Subtotal	**32.000**	**48.000**	**80.000**	**32.000**	**48.000**	**80.000**			**0.000**	**0.000**	**0.000**	**5.574**	**9.300**	**14.874**	**14.874**	**100.00**	**18.59**
6	Shendurney Wildlife Sanctuary (2406-02-110-23) (01)	-	60.000	**60.000**	-	60.000	**60.000**			0.000	0.000	**0.000**	0.000	13.215	**13.215**	13.215	**100.00**	**22.03**
	Shendurney Wildlife Sanctuary (2406-02-110-23) (02)	40.000	-	**40.000**	40.000	-	**40.000**			0.000	0.000	**0.000**	8.761	0.000	**8.761**	8.761	**100.00**	**21.90**
	Subtotal	**40.000**	**60.000**	**100.000**	**40.000**	**60.000**	**100.000**			**0.000**	**0.000**	**0.000**	**8.761**	**13.215**	**21.977**	**21.977**	**100.00**	**21.98**
7	Chimmoney Wildlife Sanctuary (2406-02-110-22) (01)	-	52.500	**52.500**	-	52.500	**52.500**			0.000	0.000	**0.000**	0.000	13.661	**13.661**	13.661	**100.00**	**26.02**
	Chimmoney Wildlife Sanctuary (2406-02-110-22) (02)	35.000	-	**35.000**	35.000	-	**35.000**			0.000	0.000	**0.000**	7.431	0.000	**7.431**	7.431	**100.00**	**21.23**
	Subtotal	**35.000**	**52.500**	**87.500**	**35.000**	**52.500**	**87.500**			**0.000**	**0.000**	**0.000**	**7.431**	**13.661**	**21.092**	**21.092**	**100.00**	**24.10**
8	Aralam Wildlife Sanctuary (2406-02-110-21) (01)	-	52.500	**52.500**	-	52.500	**52.500**			0.000	0.000	**0.000**	0.000	12.255	**12.255**	12.255	**100.00**	**23.34**

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		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
8	Aralam Wildlife Sanctuary (2406-02-110-21) (02)	35.000	-	**35.000**	35.000	-	**35.000**			0.000	0.000	**0.000**	8.093	0.000	**8.093**	8.093	**100.00**	**23.12**
	Subtotal	**35.000**	**52.500**	**87.500**	**35.000**	**52.500**	**87.500**			**0.000**	**0.000**	**0.000**	**8.093**	**12.255**	**20.348**	**20.348**	**100.00**	**23.25**
9	Chinnar Wildlife Sanctuary (2406-02-110-20) (01)	-	39.000	**39.000**	-	39.000	**39.000**			0.000	0.000	**0.000**	0.000	11.349	**11.349**	11.349	**100.00**	**29.10**
	Chinnar Wildlife Sanctuary (2406-02-110-20) (02)	26.000	-	**26.000**	26.000	-	**26.000**			0.000	0.000	**0.000**	7.566	0.000	**7.566**	7.566	**100.00**	**29.10**
	Subtotal	**26.000**	**39.000**	**65.000**	**26.000**	**39.000**	**65.000**			**0.000**	**0.000**	**0.000**	**7.566**	**11.349**	**18.915**	**18.915**	**100.00**	**29.10**
10	Thattekkad Birds Sanctuary (2406-02-110-19) (01)	-	34.500	**34.500**	-	34.500	**34.500**			0.000	0.000	**0.000**	0.000	13.751	**13.751**	13.751	**100.00**	**39.86**
	Thattekkad Birds Sanctuary (2406-02-110-19) (02)	23.000	-	**23.000**	23.000	-	**23.000**			0.000	0.000	**0.000**	9.167	0.000	**9.167**	9.167	**100.00**	**39.86**
	Subtotal	**23.000**	**34.500**	**57.500**	**23.000**	**34.500**	**57.500**			**0.000**	**0.000**	**0.000**	**9.167**	**13.751**	**22.918**	**22.918**	**100.00**	**39.86**
11	Mangalavanam Birds Sanctuary (2406-02-110-18) (01)	-	12.000	**12.000**	-	12.000	**12.000**			0.000	0.000	**0.000**	0.000	2.910	**2.910**	2.910	**100.00**	**24.25**
	Mangalavanam Birds Sanctuary (2406-02-110-18) (02)	8.000	-	**8.000**	8.000	-	**8.000**			0.000	0.000	**0.000**	1.940	0.000	**1.940**	1.940	**100.00**	**24.25**
	Subtotal	**8.000**	**12.000**	**20.000**	**8.000**	**12.000**	**20.000**			**0.000**	**0.000**	**0.000**	**1.940**	**2.910**	**4.850**	**4.850**	**100.00**	**24.25**
12	Kurinjimala Sanctuary (2406-02-110-17) (01)	-	18.000	**18.000**	-	18.000	**18.000**			0.000	0.000	**0.000**	0.000	5.493	**5.493**	5.493	**100.00**	**30.52**
	Kurinjimala Sanctuary (2406-02-110-17) (02)	12.000	-	**12.000**	12.000	-	**12.000**			0.000	0.000	**0.000**	3.662	0.000	**3.662**	3.662	**100.00**	**30.52**
	Subtotal	**12.000**	**18.000**	**30.000**	**12.000**	**18.000**	**30.000**			**0.000**	**0.000**	**0.000**	**3.662**	**5.493**	**9.155**	**9.155**	**100.00**	**30.52**
13	Choolannur Peacock Sanctuary (2406-02-110-16) (01)	-	15.000	**15.000**	-	15.000	**15.000**			0.000	0.000	**0.000**	0.000	4.080	**4.080**	4.080	**100.00**	**27.20**
	Choolannur Peacock Sanctuary (2406-02-110-16) (02)	10.000	-	**10.000**	10.000	-	**10.000**			0.000	0.000	**0.000**	2.720	0.000	**2.720**	2.720	**100.00**	**27.20**
	Subtotal	**10.000**	**15.000**	**25.000**	**10.000**	**15.000**	**25.000**			**0.000**	**0.000**	**0.000**	**2.720**	**4.080**	**6.800**	**6.800**	**100.00**	**27.20**
14	Malabar Sanctuary (2406-02-110-15) (01)	-	25.500	**25.500**	-	25.500	**25.500**			0.000	0.000	**0.000**	0.000	6.033	**6.033**	6.033	**100.00**	**23.66**
	Malabar Sanctuary (2406-02-110-15) (02)	17.000	-	**17.000**	17.000	-	**17.000**			0.000	0.000	**0.000**	4.012	0.000	**4.012**	4.012	**100.00**	**23.60**

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		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
	Subtotal	**17.000**	**25.500**	**42.500**	**17.000**	**25.500**	**42.500**			**0.000**	**0.000**	**0.000**	**4.012**	**6.033**	**10.045**	**10.045**	**100.00**	**23.64**
15	Kottiyoor Wildlife Sanctuary (2406-02-110-14) (01)	-	28.500	**28.500**	-	28.500	**28.500**			0.000	0.000	**0.000**	0.000	7.125	**7.125**	7.125	**100.00**	**25.00**
	Kottiyoor Wildlife Sanctuary (2406-02-110-14) (02)	19.000	-	**19.000**	19.000	-	**19.000**			0.000	0.000	**0.000**	4.280	0.000	**4.280**	4.280	**100.00**	**22.53**
	Subtotal	**19.000**	**28.500**	**47.500**	**19.000**	**28.500**	**47.500**			**0.000**	**0.000**	**0.000**	**4.280**	**7.125**	**11.405**	**11.405**	**100.00**	**24.01**
16	Karimpuzha Wildlife Sanctuary (2406-02-110-13) (01)	-	33.000	**33.000**	-	33.000	**33.000**			0.000	0.000	**0.000**	0.000	8.543	**8.543**	8.543	**100.00**	**25.89**
	Karimpuzha Wildlife Sanctuary (2406-02-110-13) (02)	22.000	-	**22.000**	22.000	-	**22.000**			0.000	0.000	**0.000**	4.815	0.000	**4.815**	4.815	**100.00**	**21.89**
	Subtotal	**22.000**	**33.000**	**55.000**	**22.000**	**33.000**	**55.000**			**0.000**	**0.000**	**0.000**	**4.815**	**8.543**	**13.358**	**13.358**	**100.00**	**24.29**
	Subtotal of WL Sanctuaries	**476.000**	**714.000**	**1190.000**	**476.000**	**714.000**	**1190.000**			**0.000**	**0.000**	**0.000**	**118.085**	**183.272**	**301.357**	**301.357**	**100.00**	**25.32**
ii	**Management of National Parks**																	
1	Eravikulam National Park (2406-02-110-79) (01)	-	75.000	**75.000**	-	75.000	**75.000**			0.000	0.000	**0.000**	0.000	18.171	**18.171**	18.171	**100.00**	**24.23**
	Eravikulam National Park (2406-02-110-79) (02)	50.000	-	**50.000**	50.000	-	**50.000**			0.000	0.000	**0.000**	12.114	0.000	**12.114**	12.114	**100.00**	**24.23**
	Subtotal	**50.000**	**75.000**	**125.000**	**50.000**	**75.000**	**125.000**			**0.000**	**0.000**	**0.000**	**12.114**	**18.171**	**30.285**	**30.285**	**100.00**	**24.23**
2	Silent Valley National Park (2406-02-110-78) (01)	-	84.000	**84.000**	-	84.000	**84.000**			0.000	0.000	**0.000**	0.000	15.090	**15.090**	15.090	**100.00**	**17.96**
	Silent Valley National Park (2406-02-110-78) (02)	56.000	-	**56.000**	56.000	-	**56.000**			0.000	0.000	**0.000**	10.060	0.000	**10.060**	10.060	**100.00**	**17.96**
	Subtotal	**56.000**	**84.000**	**140.000**	**56.000**	**84.000**	**140.000**			**0.000**	**0.000**	**0.000**	**10.060**	**15.090**	**25.150**	**25.150**	**100.00**	**17.96**
3	Anamudi National Park (2406-02-110-77) (01)	-	33.000	**33.000**	-	33.000	**33.000**			0.000	0.000	**0.000**	0.000	8.355	**8.355**	8.355	**100.00**	**25.32**
	Anamudi National Park (2406-02-110-77) (02)	22.000	-	**22.000**	22.000	-	**22.000**			0.000	0.000	**0.000**	5.570	0.000	**5.570**	5.570	**100.00**	**25.32**
	Subtotal	**22.000**	**33.000**	**55.000**	**22.000**	**33.000**	**55.000**			**0.000**	**0.000**	**0.000**	**5.570**	**8.355**	**13.925**	**13.925**	**100.00**	**25.32**
4	Mathikettanmala National Park (2406-02-110-76) (01)	-	33.000	**33.000**	-	33.000	**33.000**			0.000	0.000	**0.000**	0.000	8.664	**8.664**	8.664	**100.00**	**26.25**
	Mathikettanmala National Park (2406-02-110-76) (02)	22.000	-	**22.000**	22.000	-	**22.000**			0.000	0.000	**0.000**	5.776	0.000	**5.776**	5.776	**100.00**	**26.25**
	Subtotal	**22.000**	**33.000**	**55.000**	**22.000**	**33.000**	**55.000**			**0.000**	**0.000**	**0.000**	**5.776**	**8.664**	**14.440**	**14.440**	**100.00**	**26.25**
5	Pampadumshola National Park (2406-02-110-75) (01)	-	33.000	**33.000**	-	33.000	**33.000**			0.000	0.000	**0.000**	0.000	8.679	**8.679**	8.679	**100.00**	**26.30**

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		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
5	Pampadumshola National Park (2406-02-110-75) (02)	22.000		**22.000**	22.000		**22.000**			0.000	0.000	**0.000**	5.786	0.000	**5.786**	5.786	**100.00**	**26.30**
	Subtotal	**22.000**	**33.000**	**55.000**	**22.000**	**33.000**	**55.000**			**0.000**	**0.000**	**0.000**	**5.786**	**8.679**	**14.465**	**14.465**	**100.00**	**26.30**
	Subtotal of National Parks	**172.000**	**258.000**	**430.000**	**172.000**	**258.000**	**430.000**			**0.000**	**0.000**	**0.000**	**39.306**	**58.959**	**98.265**	**98.265**	**100.00**	**22.85**
iii	**Management of Community Reserve**																	
1	Integrated Development of Wild Life Habitats - Management of Community Reserve (60:40 between Centre and State) (2406-02-110-72) (01) Kadalundi Reserve	-	18.000	**18.000**	-	18.000	**18.000**			0.000	0.000	**0.000**	0.000	4.695	**4.695**	**4.695**	**100.00**	**26.08**
	Integrated Development of Wild Life Habitats - Management of Community Reserve (60:40 between Centre and State) (2406-02-110-72) (02) Kadalundi Reserve	12.000	-	**12.000**	12.000	-	**12.000**			0.000	0.000	**0.000**	3.130	0.000	**3.130**	**3.130**	**100.00**	**26.08**
	Subtotal	**12.000**	**18.000**	**30.000**	**12.000**	**18.000**	**30.000**			**0.000**	**0.000**	**0.000**	**3.130**	**4.695**	**7.825**	**7.825**	**100.00**	**26.08**
iv	**Project Tiger (60:40 between Central and State)**																	
1	Periyar Tiger Reserve (2406-02-110-74) (01)	-	570.000	**570.000**	-	546.490	**546.490**	-23.51	**Re-approriation**	0.000	0.000	**0.000**	0.000	305.573	**305.573**	305.573	**100.00**	**53.61**
	Periyar Tiger Reserve (2406-02-110-74) (02)	380.000	-	**380.000**	360.280	-	**360.280**	-19.72		0.000	0.000	**0.000**	254.974	0.000	**254.974**	254.974	**100.00**	**67.10**
	Subtotal	**380.000**	**570.000**	**950.000**	**360.280**	**546.490**	**906.770**			**0.000**	**0.000**	**0.000**	**254.974**	**305.573**	**560.547**	**560.547**	**100.00**	**59.00**
2	Parambikulam Tiger Reserve (2406-02-110-73) (01)	-	435.000	**435.000**	-	414.950	**414.950**	-20.05		0.000	0.000	**0.000**	0.000	260.619	**260.619**	260.619	**100.00**	**59.91**
	Parambikulam Tiger Reserve (2406-02-110-73) (02)	290.000	-	**290.000**	272.560	-	**272.560**	-17.44		0.000	0.000	**0.000**	220.088	0.000	**220.088**	220.088	**100.00**	**75.89**
	Subtotal	**290.000**	**435.000**	**725.000**	**272.560**	**414.950**	**687.510**			**0.000**	**0.000**	**0.000**	**220.088**	**260.619**	**480.707**	**480.707**	**100.00**	**66.30**
	Periyar Tiger Reserve (TSP) (2406-02-796-96) (01)					**23.510**	**23.510**	**23.510**	**Additional authrization**					**23.510**	**23.510**	23.510	**100.00**	
	Periyar Tiger Reserve (TSP) (2406-02-796-96) (02)				**19.720**		**19.720**	**19.720**					**19.720**		**19.720**	19.720	**100.00**	
	Subtotal				**19.720**	**23.510**	**43.230**						**19.720**	**23.510**	**43.230**	**43.230**	**100.00**	
	Parambikulam Tiger Reserve (TSP) (2406-02-796-94) (01)					**20.050**	**20.050**	**20.050**						**20.050**	**20.050**	20.050	**100.00**	
	Parambikulam Tiger Reserve (TSP) (2406-02-796-94) (02)				**17.440**		**17.440**	**17.440**					**17.440**		**17.440**	17.440	**100.00**	

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
	Subtotal				**17.440**	**20.050**	**37.490**						**17.440**	**20.050**	**37.490**	**37.490**	**100.00**	
	Subtotal of Project Tiger	**670.000**	**1005.000**	**1675.000**	**670.000**	**1005.000**	**1675.000**			**0.000**	**0.000**	**0.000**	**512.222**	**609.751**	**1121.973**	**1121.973**	**100.00**	**66.98**
v	Project Elephant (2406-02-110-35)(1)	-	780.000	**780.000**	-	780.000	**780.000**			0.000	0.000	**0.000**	0.000	342.912	**342.912**	**342.912**	**100.00**	**43.96**
	Project Elephant (2406-02-110-35)(2)	520.000	-	**520.000**	520.000	-	**520.000**			0.000	0.000	**0.000**	222.292	0.000	**222.292**	**222.292**	**100.00**	**42.75**
	Subtotal of Project Elephant	**520.000**	**780.000**	**1300.000**	**520.000**	**780.000**	**1300.000**			**0.000**	**0.000**	**0.000**	**222.292**	**342.912**	**565.204**	**565.204**	**100.00**	**43.48**
iv	**Recovery Programme for Nilgiri Tahr ***																	
1	Recovery Programme for Vulture(2406-02-110-11(01) #		33.000	**33.000**		33.000	**33.000**			0.000	0.000	**0.000**	0.000	8.309	**8.309**	8.309	**100.00**	**25.18**
	Recovery Programme for Vulture(2406-02-110-11(02) #	22.000		**22.000**	22.000		**22.000**			0.000	0.000	**0.000**	5.542	0.000	**5.542**	5.542	**100.00**	**25.19**
	Subtotal	**22.000**	**33.000**	**55.000**	**22.000**	**33.000**	**55.000**			**0.000**	**0.000**	**0.000**	**5.542**	**8.309**	**13.851**	**13.851**	**100.00**	**25.18**
1	Recovery Programme for Nilgiri Tahr (2406-02-110-12(01) #		39.000	**39.000**		39.000	**39.000**			0.000	0.000	**0.000**	0.000	9.750	**9.750**	9.750	**100.00**	**25.00**
	Recovery Programme for Nilgiri Tahr (2406-02-110-12(02)	26.000		**26.000**	26.000		**26.000**			0.000	0.000	**0.000**	6.500	0.000	**6.500**	6.500	**100.00**	**25.00**
	Subtotal	**26.000**	**39.000**	**65.000**	**26.000**	**39.000**	**65.000**			**0.000**	**0.000**	**0.000**	**6.500**	**9.750**	**16.250**	**16.250**	**100.00**	**25.00**
vi	**National Mission for Green India**																	
i	National Afforestation Programme - National Mission for Green India (60:40 between Centre and State) (2406-01-102-86) (1)	-	600.000	**600.000**	-	600.000	**600.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	**0.000**	**#DIV/0!**	**0.00**
	National Afforestation Programme - National Mission for Green India (60:40 between Centre and State) (2406-01-102-86) (2)	400.000	-	**400.000**	400.000	-	**400.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	**0.000**	**#DIV/0!**	**0.00**
	Subtotal	**400.000**	**600.000**	**1000.000**	**400.000**	**600.000**	**1000.000**			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**#DIV/0!**	**0.00**
vii	Forest Fire Prevention & Manangement Scheme (2406-01-101-77) (1) (FPMS)	-	360.000	**360.000**	-	471.600	**471.600**	**111.600**	**Additional authrization**	0.000	1060.150	**1060.150**	0.000	471.600	**471.600**	**471.600**	**100.00**	**131.00**
	Forest Fire Prevention & Manangement Scheme (2406-01-101-77) (2) (FPMS)	240.000	-	**240.000**	314.410	-	**314.410**	**74.410**		706.760	0.000	**706.760**	314.410	0.000	**314.410**	**314.410**	**100.00**	**131.00**
	Subtotal	**240.000**	**360.000**	**600.000**	**314.410**	**471.600**	**786.010**			**706.760**	**1060.150**	**1766.910**	**314.410**	**471.600**	**786.010**	**786.010**	**100.00**	**131.00**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
vii	Forest Fire Prevention & Manangement Scheme TSP (2406-01-796-98) (1) (FPMS)	-		**0.000**	-	156.040	**156.040**	**156.040**	Additional authrization	-	360.660	**360.660**	-	156.040	**156.040**	**156.040**	**100.00**	
	Forest Fire Prevention & Manangement Scheme (2406-01-796-98) (2) (FPMS)	0.000		**0.000**	104.020	-	**104.020**	**104.020**		240.440	-	**240.440**	104.020	-	**104.020**	**104.020**	**100.00**	
	Subtotal	**0.000**	**0.000**	**0.000**	**104.020**	**156.040**	**260.060**			**240.440**	**360.660**	**601.100**	**104.020**	**156.040**	**260.060**	**260.060**	**100.00**	
3	**Conservation of Natural Resources & Ecosystems**																	
i	Nilgiri Biosphere Reserve (2406-02-110-34) (1)	-	270.000	**270.000**	-	270.000	**270.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Nilgiri Biosphere Reserve (2406-02-110-34) (2)	180.000	-	**180.000**	180.000	-	**180.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Subtotal	**180.000**	**270.000**	**450.000**	**180.000**	**270.000**	**450.000**			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
ii	Agasthyamala Biosphere Reserve (2406-02-110-33) (1)	-	180.000	**180.000**	-	180.000	**180.000**			0.000	36.000	**36.000**	0.000	59.656	**59.656**	59.656	**100.00**	**33.14**
	Agasthyamala Biosphere Reserve (2406-02-110-33) (2)	120.000	-	**120.000**	120.000	-	**120.000**			24.000	0.000	**24.000**	39.768	0.000	**39.768**	39.768	**100.00**	**33.14**
	Subtotal	**120.000**	**180.000**	**300.000**	**120.000**	**180.000**	**300.000**			**24.000**	**36.000**	**60.000**	**39.768**	**59.656**	**99.424**	**99.424**	**100.00**	**33.14**
iii	Wetland Conservation (2406-02-110-32) (1)	-	242.000	**242.000**	-	242.000	**242.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Wetland Conservation (2406-02-110-32) (2)	161.000	-	**161.000**	161.000	-	**161.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Subtotal	**161.000**	**242.000**	**403.000**	**161.000**	**242.000**	**403.000**			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
	National coastal mission (Conservation & management of mangroves in vembanad and kannur region) (2406-02-110-10(2)				**14.550**		**14.550**			**0.000**	**0.000**	**0.000**	**14.550**	**0.000**	**14.550**	**12.550**	**86.25**	**86.25**
	Subtotal				**14.550**	**0.000**	**14.550**			**0.000**	**0.000**	**0.000**	**14.550**	**0.000**	**14.550**	**12.550**	**86.25**	**86.25**
iv	Integrated Development of Wildlife Habitats to Wayanad Wildlife Sanctuary for Voluntary Relocation of Settlments from Protected Areas (2406-02-110-31) (1)	-	600.000	**600.000**	-	600.000	**600.000**			0.000	0.000	**0.000**	0.000	553.500	**553.500**	553.500	**100.00**	**92.25**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19
iv	Integrated Development of Wildlife Habitats to Wayanad Wildlife Sanctuary for Voluntary Relocation of Settlments from Protected Areas (2406-02-110-31) (2)	400.000	-	**400.000**	498.000	-	**498.000**			0.000	0.000	**0.000**	498.000	0.000	**498.000**	369.000	**74.10**	**92.25**
	Subtotal	**400.000**	**600.000**	**1000.000**	**498.000**	**600.000**	**1098.000**			**0.000**	**0.000**	**0.000**	**498.000**	**553.500**	**1051.500**	**922.500**	**87.73**	**92.25**
v	Integrated Development of Wildlife Habitats - Protection of wildlife outside Protected Areas. (2406-02-110-52) (1)	-	600.00	**600.000**	-	600.00	**600.000**			0.000	0.000	**0.000**	0.000	102.551	**102.551**	102.551	**100.00**	**17.09**
	Integrated Development of Wildlife Habitats - Protection of wildlife outside Protected Areas. (2406-02-110-52) (2)	400.000	-	**400.000**	400.000	-	**400.000**			0.000	0.000	**0.000**	62.534	0.000	**62.534**	62.534	**100.00**	**15.63**
	Subtotal	**400.000**	**600.000**	**1000.000**	**400.000**	**600.000**	**1000.000**			**0.000**	**0.000**	**0.000**	**62.534**	**102.551**	**165.085**	**165.085**	**100.00**	**16.51**
	Subtotal of Nature Resources & Ecosystems	**1261.000**	**1892.000**	**3153.000**	**1373.550**	**1892.000**	**3265.550**			**24.000**	**36.000**	**60.000**	**614.852**	**715.707**	**1330.559**	**1199.559**	**90.15**	**38.04**
	SUB TOTAL (B)	**3799.000**	**5699.000**	**9498.000**	**4089.980**	**5966.640**	**10056.620**			**971.200**	**1456.810**	**2428.010**	**1940.359**	**2560.995**	**4501.354**	**4370.354**	**97.09**	**46.01**
C	**SCHEMES HAVING 75:25 SHARES BETWEEN CENTRE AND STATE**																	
1	Minimum Support Price For Minor Forest Produce 2406-01-105-89 (1)	-	300.000	**300.000**	-	300.000	**300.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Minimum Support Price For Minor Forest Produce 2406-01-105-89 (2)	100.000	-	**100.000**	100.000	-	**100.000**			0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	SUB TOTAL (C)	**100.000**	**300.000**	**400.000**	**100.000**	**300.000**	**400.000**			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
	GRAND TOTAL (A+B+C)	**23966.000**	**5999.000**	**29965.000**	**24256.980**	**6266.640**	**30523.620**			**18796.200**	**1456.810**	**20253.010**	**18558.724**	**2560.995**	**21119.719**	**18841.713**	**89.21**	**61.73**
D	**EXTERNALLY AIDED PROJECTS**																	
i	KIIFBI	11001.160	0	**11001.160**	-	-	**-**			11001.160	0	**11001.160**	-			**3814.300**		**34.67**
ii	RKDP	14646.360	0	**14646.360**	-	-	**-**			33520.000	0	**33520.000**	3613.000	0.000	**3613.000**	**3605.780**	**99.80**	**24.62**
	SUB TOTAL (D)	**25647.520**	**0.000**	**25647.520**	-	-	**-**			**44521.160**	**0.000**	**44521.160**	**3613.000**	**0.000**	**3613.000**	**7420.080**		**28.93**

Note:- 83% release amount received on State Schemes.

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Revised Outlay			Addl. amount recived	Mode of receipt	Approved Plan as on 30.04.2023			Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total	State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.000	17.000	18	19

:- 47% release amount recieved on State share of CSS.

:- 43% release amount recieved on Central share of CSS.

KERALA FOREST DEPARTMENT

PLAN PROGRESS REPORT (FINANCIAL) TILL THE DATE OF 31 th March 2023 DURING 2022-23 (Rs in lakhs)

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A.	**STATE SECTOR SCHEMES**																	
I	**Management of Natural Forests**																	
1	Forest Protection (2406-01-101-81)	2600.000	-	**2600.000**			2600.000	-	**2600.000**	2600.000	-	**2600.000**	2591.990	-	**2591.990**	2187.576	**84.40**	**84.14**
2	Forest Protection (Survey of Forest Boundaries & Forest Protection) (4406-01-101-99)	2800.000	-	**2800.000**			2800.000	-	**2800.000**	2800.000	-	**2800.000**	1722.280	-	**1722.280**	1714.695	**99.56**	**61.24**
3	Regeneration of Denuded Forest (2406-01-101-94)	300.000	-	**300.000**			300.000	-	**300.000**	300.000	-	**300.000**	93.360	-	**93.360**	92.891	**99.50**	**30.96**
4	Non-wood Forest Produce Including Promotion of Medicinal Plants (2406-01-101-80)	200.000	-	**200.000**			200.000	-	**200.000**	200.000	-	**200.000**	94.820	-	**94.820**	93.331	**98.43**	**46.67**
	Sub Total (I)	**5900.000**	**0.000**	5900.000			**5900.000**	**0.000**	5900.000	**5900.000**	**0.000**	5900.000	**4502.450**	**0.000**	**4502.450**	**4088.492**	**90.81**	**69.30**
II	**Improving Productivity of Plantations**																	
1	Hard Wood Species (4406-01-105-87) (01)	500.000	-	**500.000**			500.000	-	**500.000**	500.000	-	**500.000**	386.100	-	**386.100**	385.494	**99.84**	**77.10**
2	Industrial Raw Materials (4406-01-105-87) (02)	200.000	-	**200.000**			200.000	-	**200.000**	200.000	-	**200.000**	65.240	-	**65.240**	65.082	**99.76**	**32.54**
	Sub Total (II)	**700.000**	**0.000**	700.000			**700.000**	**0.000**	700.000	**700.000**	**0.000**	700.000	**451.340**	**0.000**	**451.340**	**450.576**	**99.83**	**64.37**
III	**Infrastructure Development**																	
1	Roads (4406-01-070-99)	400.000	-	**400.000**			400.000	-	**400.000**	400.000	-	**400.000**	242.000	-	**242.000**	241.789	**99.91**	**60.45**
2	Building (4406-01-070-97)	400.000	-	**400.000**			400.000	-	**400.000**	400.000	-	**400.000**	256.120	-	**256.120**	255.852	**99.90**	**63.96**
	Sub Total	**800.000**	**0.000**	800.000			**800.000**	**0.000**	800.000	**800.000**	**0.000**	800.000	**498.120**	**0.000**	**498.120**	**497.640**	**99.90**	**62.21**
IV	Eco-Tourism (4406-01-800-91)	700.000	-	**700.000**			700.000	-	**700.000**	700.000	-	**700.000**	584.010	-	**584.010**	564.311	**96.63**	**80.62**
V	Human Resource Development (2406-01-003-97)	350.000	-	**350.000**			350.000	-	**350.000**	350.000	-	**350.000**	350.000	-	**350.000**	331.698	**94.77**	**94.77**
VI	Resource Planning & Research (2406-01-004-92)	150.000	-	**150.000**			150.000	-	**150.000**	150.000	-	**150.000**	99.540	-	**99.540**	99.523	**99.98**	**66.35**
VII	Forest Management Information System & GIS (2406-01-800-57)	150.000	-	**150.000**			150.000	-	**150.000**	150.000	-	**150.000**	93.000	-	**93.000**	92.958	**99.96**	**61.97**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
VIII	Extension Community Forestry & Agro Forestry (2406-01-800-55)	1000.000	-	**1000.000**			1000.000	-	**1000.000**	1000.000	-	**1000.000**	620.000	-	**620.000**	617.214	**99.55**	**61.72**
IX	Eco-Tourism - Project Green Grass (2406-01-800-52)	108.000	-	**108.000**			108.000	-	**108.000**	108.000	-	**108.000**	66.940	-	**66.940**	66.876	**99.90**	**61.92**
X	Works with assistance from RIDF (4406-01-800-90)	3500.000	-	**3500.000**			3500.000	-	**3500.000**	3500.000	-	**3500.000**	3245.000	-	**3245.000**	3225.209	**99.39**	**92.15**
XI	Measures to reduce Man Animal conflict (2406-01-800-56)	2500.000	-	**2500.000**			2500.000	-	**2500.000**	2500.000	-	**2500.000**	2500.000	-	**2500.000**	2431.706	**97.27**	**97.27**
XII	Zoological Park at Puthur, Thrissur (2406-02-110-48)	600.000	-	**600.000**			600.000	-	**600.000**	600.000	-	**600.000**	143.820	-	**143.820**	51.216	**35.61**	**8.54**
XIII	Elephant Rehabilitation Centre at Kappukkad near Kottoor (2406-02-110-29)	100.000	-	**100.000**			100.000	-	**100.000**	100.000	-	**100.000**	62.000	-	**62.000**	61.912	**99.86**	**61.91**
XIV	Conservation of Biodiversity (2406-02-110-68)	1000.000	-	**1000.000**			1000.000	-	**1000.000**	1000.000	-	**1000.000**	620.000	-	**620.000**	619.656	**99.94**	**61.97**
XV	Eco Development Programme (2406-02-110-56)	375.000	-	**375.000**			375.000	-	**375.000**	375.000	-	**375.000**	232.500	-	**232.500**	232.098	**99.83**	**61.89**
	SUB TOTAL (A)	**17933.000**	**0.000**	**17933.000**			**17933.000**	**0.000**	**17933.000**	**17933.000**	**0.000**	**17933.000**	**14068.720**	**0.000**	**14068.720**	**13431.086**	**95.47**	**74.90**
B	**SCHEMES HAVING 60:40 SHARES BETWEEN CENTRE AND STATE**																	
1	**Integrated Development of Wildlife Habitats**																	
i	**Management of Wildlife Sancturies**																	
1	Neyyar Wildlife Sanctuary (2406-02-110-28) (01)	-	55.500	**55.500**			-	55.500	**55.500**	0.000	37.710	**37.710**		9.430	**9.430**	9.430	**100.00**	**16.99**
	Neyyar Wildlife Sanctuary (2406-02-110-28) (02)	37.000	-	**37.000**			37.000	-	**37.000**	25.140	0.000	**25.140**	22.940		**22.940**	22.940	**100.00**	**62.00**
	Subtotal	**37.000**	**55.500**	**92.500**			**37.000**	**55.500**	**92.500**	**25.140**	**37.710**	**62.850**	**22.940**	**9.430**	**32.370**	**32.370**	**100.00**	**34.99**
2	Wayanad Wildlife Sanctuary (2406-02-110-27) (01)	-	120.000	**120.000**	**-12.840**		-	107.160	**107.160**	0.000	61.680	**61.680**		15.420	**15.420**	15.420	**100.00**	**14.39**
	Wayanad Wildlife Sanctuary (2406-02-110-27) (02)	80.000	-	**80.000**	**-8.000**		72.000	-	**72.000**	41.120	0.000	**41.120**	44.640		**44.640**	44.640	**100.00**	**62.00**
	Subtotal	**80.000**	**120.000**	**200.000**	**-20.840**		**72.000**	**107.160**	**179.160**	**41.120**	**61.680**	**102.800**	**44.640**	**15.420**	**60.060**	**60.060**	**100.00**	**33.52**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
3	Idukki Wildlife Sanctuary (2406-02-110-26) (01)	-	60.000	**60.000**			-	60.000	**60.000**	0.000	41.460	**41.460**	0.000	10.370	**10.370**	10.370	**100.00**	**17.28**
	Idukki Wildlife Sanctuary (2406-02-110-26) (02)	40.000	-	**40.000**			40.000	-	**40.000**	27.640	0.000	**27.640**	20.800	0.000	**20.800**	20.800	**100.00**	**52.00**
	Subtotal	**40.000**	**60.000**	**100.000**			**40.000**	**60.000**	**100.000**	**27.640**	**41.460**	**69.100**	**20.800**	**10.370**	**31.170**	**31.170**	**100.00**	**31.17**
4	Peechi, Vazhani (2406-02-110-25) (01)	-	60.000	**60.000**			-	60.000	**60.000**	0.000	47.940	**47.940**	0.000	11.990	**11.990**	11.990	**100.00**	**19.98**
	Peechi, Vazhani (2406-02-110-25) (02)	40.000	-	**40.000**			40.000	-	**40.000**	31.960	0.000	**31.960**	20.800	0.000	**20.800**	20.800	**100.00**	**52.00**
	Subtotal	**40.000**	**60.000**	**100.000**			**40.000**	**60.000**	**100.000**	**31.960**	**47.940**	**79.900**	**20.800**	**11.990**	**32.790**	**32.790**	**100.00**	**32.79**
5	Peppara Wildlife Sanctuary (2406-02-110-24) (01)	-	48.000	**48.000**			-	48.000	**48.000**	0.000	41.100	**41.100**	0.000	10.280	**10.280**	10.280	**100.00**	**21.42**
	Peppara Wildlife Sanctuary (2406-02-110-24) (02)	32.000	-	**32.000**			32.000	-	**32.000**	27.400	0.000	**27.400**	19.840	0.000	**19.840**	19.840	**100.00**	**62.00**
	Subtotal	**32.000**	**48.000**	**80.000**			**32.000**	**48.000**	**80.000**	**27.400**	**41.100**	**68.500**	**19.840**	**10.280**	**30.120**	**30.120**	**100.00**	**37.65**
6	Shendurney Wildlife Sanctuary (2406-02-110-23) (01)	-	60.000	**60.000**			-	60.000	**60.000**	0.000	43.512	**43.512**	0.000	10.880	**10.880**	10.880	**100.00**	**18.13**
	Shendurney Wildlife Sanctuary (2406-02-110-23) (02)	40.000	-	**40.000**			40.000	-	**40.000**	29.008	0.000	**29.008**	20.800	0.000	**20.800**	20.800	**100.00**	**52.00**
	Subtotal	**40.000**	**60.000**	**100.000**			**40.000**	**60.000**	**100.000**	**29.008**	**43.512**	**72.520**	**20.800**	**10.880**	**31.680**	**31.680**	**100.00**	**31.68**
7	Chimmoney Wildlife Sanctuary (2406-02-110-22) (01)	-	52.500	**52.500**			-	52.500	**52.500**	0.000	43.500	**43.500**	0.000	10.880	**10.880**	10.880	**100.00**	**20.72**
	Chimmoney Wildlife Sanctuary (2406-02-110-22) (02)	35.000	-	**35.000**			35.000	-	**35.000**	29.000	0.000	**29.000**	21.700	0.000	**21.700**	21.700	**100.00**	**62.00**
	Subtotal	**35.000**	**52.500**	**87.500**			**35.000**	**52.500**	**87.500**	**29.000**	**43.500**	**72.500**	**21.700**	**10.880**	**32.580**	**32.580**	**100.00**	**37.23**
8	Aralam Wildlife Sanctuary (2406-02-110-21) (01)	-	52.500	**52.500**			-	52.500	**52.500**	0.000	43.722	**43.722**	0.000	10.930	**10.930**	10.930	**100.00**	**20.82**
	Aralam Wildlife Sanctuary (2406-02-110-21) (02)	35.000	-	**35.000**			35.000	-	**35.000**	29.148	0.000	**29.148**	21.700	0.000	**21.700**	21.700	**100.00**	**62.00**
	Subtotal	**35.000**	**52.500**	**87.500**			**35.000**	**52.500**	**87.500**	**29.148**	**43.722**	**72.870**	**21.700**	**10.930**	**32.630**	**32.630**	**100.00**	**37.29**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
9	Chinnar Wildlife Sanctuary (2406-02-110-20) (01)	-	39.000	**39.000**			-	39.000	**39.000**	0.000	38.700	**38.700**	0.000	9.680	**9.680**	9.680	**100.00**	**24.82**
	Chinnar Wildlife Sanctuary (2406-02-110-20) (02)	26.000	-	**26.000**			26.000	-	**26.000**	25.800	0.000	**25.800**	16.120	0.000	**16.120**	16.120	**100.00**	**62.00**
	Subtotal	**26.000**	**39.000**	**65.000**			**26.000**	**39.000**	**65.000**	**25.800**	**38.700**	**64.500**	**16.120**	**9.680**	**25.800**	**25.800**	**100.00**	**39.69**
10	Thattekkad Birds Sanctuary (2406-02-110-19) (01)	-	34.500	**34.500**			-	34.500	**34.500**	0.000	30.600	**30.600**	0.000	7.650	**7.650**	7.650	**100.00**	**22.17**
	Thattekkad Birds Sanctuary (2406-02-110-19) (02)	23.000	-	**23.000**			23.000	-	**23.000**	20.400	0.000	**20.400**	14.260	0.000	**14.260**	14.260	**100.00**	**62.00**
	Subtotal	**23.000**	**34.500**	**57.500**			**23.000**	**34.500**	**57.500**	**20.400**	**30.600**	**51.000**	**14.260**	**7.650**	**21.910**	**21.910**	**100.00**	**38.10**
11	Mangalavanam Birds Sanctuary (2406-02-110-18) (01)	-	12.000	**12.000**			-	12.000	**12.000**	0.000	15.000	**15.000**	0.000	3.750	**3.750**	3.750	**100.00**	**31.25**
	Mangalavanam Birds Sanctuary (2406-02-110-18) (02)	8.000	-	**8.000**			8.000	-	**8.000**	10.000	0.000	**10.000**	4.960	0.000	**4.960**	4.960	**100.00**	**62.00**
	Subtotal	**8.000**	**12.000**	**20.000**			**8.000**	**12.000**	**20.000**	**10.000**	**15.000**	**25.000**	**4.960**	**3.750**	**8.710**	**8.710**	**100.00**	**43.55**
12	Kurinjimala Sanctuary (2406-02-110-17) (01)	-	18.000	**18.000**			-	18.000	**18.000**	0.000	13.950	**13.950**	0.000	3.490	**3.490**	3.490	**100.00**	**19.39**
	Kurinjimala Sanctuary (2406-02-110-17) (02)	12.000	-	**12.000**			12.000	-	**12.000**	9.300	0.000	**9.300**	7.440	0.000	**7.440**	7.440	**100.00**	**62.00**
	Subtotal	**12.000**	**18.000**	**30.000**			**12.000**	**18.000**	**30.000**	**9.300**	**13.950**	**23.250**	**7.440**	**3.490**	**10.930**	**10.930**	**100.00**	**36.43**
13	Choolannur Peacock Sanctuary (2406-02-110-16) (01)	-	15.000	**15.000**			-	15.000	**15.000**	0.000	12.180	**12.180**	0.000	3.050	**3.050**	3.050	**100.00**	**20.33**
	Choolannur Peacock Sanctuary (2406-02-110-16) (02)	10.000	-	**10.000**			10.000	-	**10.000**	8.120	0.000	**8.120**	6.200	0.000	**6.200**	6.200	**100.00**	**62.00**
	Subtotal	**10.000**	**15.000**	**25.000**			**10.000**	**15.000**	**25.000**	**8.120**	**12.180**	**20.300**	**6.200**	**3.050**	**9.250**	**9.250**	**100.00**	**37.00**
14	Malabar Sanctuary (2406-02-110-15) (01)	-	25.500	**25.500**			-	25.500	**25.500**	0.000	27.000	**27.000**	0.000	6.750	**6.750**	6.750	**100.00**	**26.47**
	Malabar Sanctuary (2406-02-110-15) (02)	17.000	-	**17.000**			17.000	-	**17.000**	18.000	0.000	**18.000**	10.540	0.000	**10.540**	10.540	**100.00**	**62.00**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
	Subtotal	**17.000**	**25.500**	**42.500**			**17.000**	**25.500**	**42.500**	**18.000**	**27.000**	**45.000**	**10.540**	**6.750**	**17.290**	**17.290**	**100.00**	**40.68**
15	Kottiyoor Wildlife Sanctuary (2406-02-110-14) (01)	-	28.500	**28.500**			-	28.500	**28.500**	0.000	26.280	**26.280**	0.000	6.570	**6.570**	6.570	**100.00**	**23.05**
	Kottiyoor Wildlife Sanctuary (2406-02-110-14) (02)	19.000	-	**19.000**			19.000	-	**19.000**	17.520	0.000	**17.520**	11.780	0.000	**11.780**	11.780	**100.00**	**62.00**
	Subtotal	**19.000**	**28.500**	**47.500**			**19.000**	**28.500**	**47.500**	**17.520**	**26.280**	**43.800**	**11.780**	**6.570**	**18.350**	**18.350**	**100.00**	**38.63**
16	Karimpuzha Wildlife Sanctuary (2406-02-110-13) (01)	-	33.000	**33.000**			-	33.000	**33.000**	0.000	35.220	**35.220**	0.000	8.810	**8.810**	8.810	**100.00**	**26.70**
	Karimpuzha Wildlife Sanctuary (2406-02-110-13) (02)	22.000	-	**22.000**			22.000	-	**22.000**	23.480	0.000	**23.480**	13.640	0.000	**13.640**	13.640	**100.00**	**62.00**
	Subtotal	**22.000**	**33.000**	**55.000**			**22.000**	**33.000**	**55.000**	**23.480**	**35.220**	**58.700**	**13.640**	**8.810**	**22.450**	**22.450**	**100.00**	**40.82**
	Subtotal of WL Sanctuaries	**476.000**	**714.000**	**1190.000**	**-20.840**		**468.000**	**701.160**	**1169.160**	**373.036**	**559.554**	**932.590**	**278.160**	**139.930**	**418.090**	**418.090**	**100.00**	**35.76**
ii	**Management of National Parks**																	
1	Eravikulam National Park (2406-02-110-79) (01)	-	130.000	**130.000**	**-12.840**		-	117.160	**117.160**	0.000	44.790	**44.790**	0.000	11.200	**11.200**	11.200	**100.00**	**9.56**
	Eravikulam National Park (2406-02-110-79) (02)	85.000	-	**85.000**	**-9.690**		75.310	-	**75.310**	29.860	0.000	**29.860**	29.860	0.000	**29.860**	29.860	**100.00**	**39.65**
	Subtotal	**85.000**	**130.000**	**215.000**	**-22.530**		**75.310**	**117.160**	**192.470**	**29.860**	**44.790**	**74.650**	**29.860**	**11.200**	**41.060**	**41.060**	**100.00**	**21.33**
2	Silent Valley National Park (2406-02-110-78) (01)	-	116.000	**116.000**	**-12.840**		-	103.160	**103.160**	0.000	52.530	**52.530**	0.000	13.130	**13.130**	13.130	**100.00**	**12.73**
	Silent Valley National Park (2406-02-110-78) (02)	75.000	-	**75.000**	**-8.000**		67.000	-	**67.000**	35.020	0.000	**35.020**	35.020	0.000	**35.020**	35.020	**100.00**	**52.27**
	Subtotal	**75.000**	**116.000**	**191.000**	**-20.840**		**67.000**	**103.160**	**170.160**	**35.020**	**52.530**	**87.550**	**35.020**	**13.130**	**48.150**	**48.150**	**100.00**	**28.30**
3	Anamudi National Park (2406-02-110-77) (01)	-	28.000	**28.000**			-	28.000	**28.000**	0.000	25.380	**25.380**	0.000	6.350	**6.350**	6.350	**100.00**	**22.68**
	Anamudi National Park (2406-02-110-77) (02)	20.000	-	**20.000**			20.000	-	**20.000**	16.920	0.000	**16.920**	12.400	0.000	**12.400**	12.400	**100.00**	**62.00**
	Subtotal	**20.000**	**28.000**	**48.000**			**20.000**	**28.000**	**48.000**	**16.920**	**25.380**	**42.300**	**12.400**	**6.350**	**18.750**	**18.750**	**100.00**	**39.06**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
4	Mathikettanmala National Park (2406-02-110-76) (01)	-	28.000	**28.000**			-	28.000	**28.000**	0.000	25.284	**25.284**	0.000	6.320	**6.320**	6.320	**100.00**	**22.57**
	Mathikettanmala National Park (2406-02-110-76) (02)	20.000	-	**20.000**			20.000	-	**20.000**	16.856	0.000	**16.856**	12.400	0.000	**12.400**	12.400	**100.00**	**62.00**
	Subtotal	**20.000**	**28.000**	**48.000**			**20.000**	**28.000**	**48.000**	**16.856**	**25.284**	**42.140**	**12.400**	**6.320**	**18.720**	**18.720**	**100.00**	**39.00**
5	Pampadumshola National Park (2406-02-110-75) (01)	-	28.000	**28.000**			-	28.000	**28.000**	0.000	24.600	**24.600**	0.000	6.150	**6.150**	6.150	**100.00**	**21.96**
	Pampadumshola National Park (2406-02-110-75) (02)	20.000		**20.000**			20.000		**20.000**	16.400	0.000	**16.400**	12.400	0.000	**12.400**	12.400	**100.00**	**62.00**
	Subtotal	**20.000**	**28.000**	**48.000**			**20.000**	**28.000**	**48.000**	**16.400**	**24.600**	**41.000**	**12.400**	**6.150**	**18.550**	**18.550**	**100.00**	**38.65**
	Subtotal of National Parks	**220.000**	**330.000**	**550.000**	**-43.370**		**202.310**	**304.320**	**506.630**	**115.056**	**172.584**	**287.640**	**102.080**	**43.150**	**145.230**	**145.230**	**100.00**	**28.67**
iii	**Management of Community Reserve**																	
1	Integrated Development of Wild Life Habitats - Management of Community Reserve (60:40 between Centre and State) (2406-02-110-72) (01) Kadalundi Reserve	-	18.000	**18.000**			-	18.000	**18.000**	0.000	10.296	**10.296**	0.000	2.570	2.570	2.570	**100.00**	**14.28**
	Integrated Development of Wild Life Habitats - Management of Community Reserve (60:40 between Centre and State) (2406-02-110-72) (02) Kadalundi Reserve	12.000	-	**12.000**			12.000	-	**12.000**	6.864	0.000	**6.864**	7.440	0.000	7.440	7.440	**100.00**	**62.00**
	Subtotal	**12.000**	**18.000**	**30.000**			**12.000**	**18.000**	**30.000**	**6.864**	**10.296**	**17.160**	**7.440**	**2.570**	**10.010**	**10.010**	**100.00**	**33.37**
iv	**Project Tiger (60:40 between Central and State)**																	
1	Periyar Tiger Reserve (2406-02-110-74) (01)	-	570.000	**570.000**			-	570.000	**570.000**	0.000	475.970	**475.970**	0.000	324.550	**324.550**	324.550	**100.00**	**56.94**
	Periyar Tiger Reserve (2406-02-110-74) (02)	380.000	-	**380.000**			380.000	-	**380.000**	396.600	0.000	**396.600**	226.320	0.000	226.320	226.320	**100.00**	**59.56**
	Subtotal	**380.000**	**570.000**	**950.000**			**380.000**	**570.000**	**950.000**	**396.600**	**475.970**	**872.570**	**226.320**	**324.550**	**550.870**	**550.870**	**100.00**	**57.99**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
2	Parambikulam Tiger Reserve (2406-02-110-73) (01)	-	435.000	**435.000**			-	435.000	**435.000**	0.000	381.430	**381.430**	0.000	240.715	**240.715**	240.715	**100.00**	**55.34**
	Parambikulam Tiger Reserve (2406-02-110-73) (02)	290.000	-	**290.000**			290.000	-	**290.000**	343.570	0.000	**343.570**	227.310	0.000	**227.310**	227.310	**100.00**	**78.38**
	Subtotal	**290.000**	**435.000**	**725.000**			**290.000**	**435.000**	**725.000**	**343.570**	**381.430**	**725.000**	**227.310**	**240.715**	**468.025**	**468.025**	**100.00**	**64.56**
	Subtotal of Project Tiger	**670.000**	**1005.000**	**1675.000**			**670.000**	**1005.000**	**1675.000**	**740.170**	**857.400**	**1597.570**	**453.630**	**565.265**	**1018.895**	**1018.895**	**100.00**	**60.83**
v	Project Elephant (2406-02-110-35)(1)	-	780.000	**780.000**			-	780.000	**780.000**	0.000	580.596	**580.596**	0.000	319.331	319.331	319.331	**100.00**	**40.94**
	Project Elephant (2406-02-110-35)(2)	520.000	-	**520.000**			520.000	-	**520.000**	387.064	0.000	**387.064**	212.895	0.000	212.895	212.895	**100.00**	**40.94**
	Subtotal of Project Elephant	**520.000**	**780.000**	**1300.000**			**520.000**	**780.000**	**1300.000**	**387.064**	**580.596**	**967.660**	**212.895**	**319.331**	**532.226**	**532.226**	**100.00**	**40.94**
vi	**Recovery Programme for Nilgiri Tahr ***																	
1	Recovery Programme for Nilgiri Tahr (2406-02-110-12(01) #	-	**0.000**	**0.000**	**27.940**	*Re-appropriation.*	-	27.940	**27.940**	-	111.750	**111.750**	-	27.940	27.940	27.940	**100.00**	**100.00**
	Recovery Programme for Nilgiri Tahr (2406-02-110-12(02)	**0.000**	-	**0.000**	**18.630**		18.630	-	**18.630**	74.500	-	**74.500**	18.630	-	18.630	18.630	**100.00**	**100.00**
	Subtotal	**0.000**	**0.000**	**0.000**	**46.570**		**18.630**	**27.940**	**46.570**	**74.500**	**111.750**	**186.250**	**18.630**	**27.940**	**46.570**	**46.570**	100.000	**100.00**
1	Recovery Programme for saving critically endangered Species(2406-02-110-11(01) #	-	**0.000**	**0.000**	**10.580**	*Re-appropriation.*	-	10.580	**10.580**	-	42.330	**42.330**	-	10.580	**10.580**	10.580	**100.00**	**100.00**
	Recovery Programme for saving critically endangered Species(2406-02-110-11(02) #	**0.000**	-	**0.000**	**7.060**		7.060	-	**7.060**	28.220	-	**28.220**	7.060	-	**7.060**	7.060	**100.00**	**100.00**
	Subtotal	**0.000**	**0.000**	**0.000**	**17.640**	**0.000**	**7.060**	**10.580**	**17.640**	**28.220**	**42.330**	**70.550**	**7.060**	**10.580**	**17.640**	**17.640**	**100.00**	**100.00**
2	**National Mission for Green India**																	

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
i	National Afforestation Programme - National Mission for Green India (60:40 between Centre and State) (2406-01-102-86) (1)	-	600.000	**600.000**	**-600.000**	**Re-appropriation & Addl.Autorisation**	-	0.000	**0.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	**0.00**	**0.00**
	National Afforestation Programme - National Mission for Green India (60:40 between Centre and State) (2406-01-102-86) (2)	400.000	-	**400.000**	**567.120**		967.120	-	**967.120**	967.120	0.000	**967.120**	967.120	0.000	967.120	967.120	**100.00**	**100.00**
	National Afforestation Programme - National Mission for Green India (2406-01-789-99)	0.000			**99.000**		99.000		**99.000**	99.000		**99.000**	99.000		99.000	99.000	**100.00**	**100.00**
	National Afforestation Programme - National Mission for Green India (2406-01-796-99)	0.000			**21.760**		21.760		**21.760**	21.760		**21.760**	21.760		21.760	21.760	**100.00**	**100.00**
	Subtotal	**400.000**	**600.000**	**1000.000**	**87.880**		**1087.880**	**0.000**	**1087.880**	**1087.880**	**0.000**	**1087.880**	**1087.880**	**0.000**	**1087.880**	**1087.880**	**100.00**	**100.00**
3	**FPMS CSS 60%**																	
i	Forest Fire Prevention & Manangement Scheme (2406-01-800-53) (1) (FPMS)	-	360.000	**360.000**			-	360.000	**360.000**	0.000	828.980	**0.000**	0.000	171.215	171.215	171.215	**100.00**	**47.56**
	Forest Fire Prevention & Manangement Scheme (2406-01-800-53) (2) (FPMS)	240.000	-	**240.000**			240.000	-	**240.000**	552.660	0.000	**0.000**	114.020	0.000	114.020	114.020	**100.00**	**47.51**
	Subtotal	**240.000**	**360.000**	**600.000**			**240.000**	**360.000**	**600.000**	**552.660**	**828.980**	**0.000**	**114.020**	**171.215**	**285.235**	**285.235**	**100.00**	**47.54**
ii	Forest Fire Prevention & Manangement Scheme TSP (2406-01-796-98) (01) **	-	0.000	**0.000**	**121.450**	Addl. Authrsn	-	121.450	**121.450**	-	151.810	**151.810**	-	121.450	121.450	121.450	**100.00**	**100.00**
	Forest Fire Prevention & Manangement Scheme TSP (2406-01-796-98) (02) **	0.000	-	**0.000**	**80.970**	Addl. Authrsn	80.970	-	**80.970**	101.210	-	**101.210**	80.970	-	80.970	80.970	**100.00**	**100.00**
	Subtotal	**0.000**	**0.000**	**0.000**	**202.420**		**80.970**	**121.450**	**202.420**	**101.210**	**151.810**	**253.020**	**80.970**	**121.450**	**202.420**	**202.420**	**100.00**	**100.00**
4	**Conservation of Natural Resources & Ecosystems**																	
i	Nilgiri Biosphere Reserve (2406-02-110-34) (1)	-	270.000	**270.000**			-	270.000	**270.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	**0.00**	**0.00**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
	Nilgiri Biosphere Reserve (2406-02-110-34) (2)	180.000	-	**180.000**			180.000	-	**180.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	**0.00**	**0.00**
	Subtotal	**180.000**	**270.000**	**450.000**			**180.000**	**270.000**	**450.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
ii	Agasthyamala Biosphere Reserve (2406-02-110-33) (1)	-	180.000	**180.000**			-	180.000	**180.000**	0.000	61.185	**61.185**	0.000	53.540	53.540	53.540	**100.00**	**29.74**
	Agasthyamala Biosphere Reserve (2406-02-110-33) (2)	120.000	-	**120.000**			120.000	-	**120.000**	40.790	0.000	**40.790**	35.690	0.000	35.690	35.690	**100.00**	**29.74**
	Subtotal	**120.000**	**180.000**	**300.000**			**120.000**	**180.000**	**300.000**	**40.790**	**61.185**	**101.975**	**35.690**	**53.540**	**89.230**	**89.230**	**100.00**	**29.74**
iii	Wetland Conservation (2406-02-110-32) (1)	-	242.000	**242.000**			-	242.000	**242.000**	0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Wetland Conservation (2406-02-110-32) (2)	161.000	-	**161.000**			146.450	-	**146.450**	0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Subtotal	**161.000**	**242.000**	**403.000**			**146.450**	**242.000**	**388.450**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
iv	**National costal mission (conservation and management of mangroves in vembanad and kunnar region) (2406-02-110-10) (01)**		**0.000**	**0.000**				**0.000**	**0.000**	0.000	0.000	**0.000**		**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
	National costal mission (conservation and management of mangroves in vembanad and kunnar region) (2406-02-110-10) (02)			**0.000**		**Re-appropriation**	**14.550**		**14.550**	0.000	0.000	**0.000**	**0.000**		**0.000**	**0.000**	**0.00**	**0.00**
	Subtotal	**0.000**	**0.000**	**0.000**			**14.550**	**0.000**	**14.550**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
v	Integrated Development of Wildlife Habitats to Wayanad Wildlife Sanctuary for Voluntary Relocation of Settlments from Protected Areas (2406-02-110-31) (1)	-	600.000	**600.000**			-	600.000	**600.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	**0.00**	**0.00**
	Integrated Development of Wildlife Habitats to Wayanad Wildlife Sanctuary for Voluntary Relocation of Settlments from Protected Areas (2406-02-110-31) (2)	400.000	-	**400.000**			400.000	-	**400.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	**0.00**	**0.00**
	Subtotal	**400.000**	**600.000**	**1000.000**			**400.000**	**600.000**	**1000.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**

Sl. No.	Name of Scheme/Head of Account	Finanacial																
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2023			Release during the year through BAMS			Amount Spent	% of achievement against Release amount	% of achievement against Budget
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total	State Share	Central Share	Total			
vi	Integrated Development of Wildlife Habitats - Protection of wildlife outside Protected Areas. (2406-02-110-52) (1)	-	600.00	**600.000**			-	600.00	**600.000**	0.000	365.220	**365.220**	0.000	91.310	91.310	91.310	**100.00**	**15.22**
	Integrated Development of Wildlife Habitats - Protection of wildlife outside Protected Areas. (2406-02-110-52) (2)	400.000	-	**400.000**			400.000	-	**400.000**	243.480	0.000	**243.480**	60.870	0.000	60.870	60.870	**100.00**	**15.22**
	Subtotal	**400.000**	**600.000**	**1000.000**			**400.000**	**600.000**	**1000.000**	**243.480**	**365.220**	**608.700**	**60.870**	**91.310**	**152.180**	**152.180**	**100.00**	**15.22**
	Subtotal of Nature Resources & Ecosystems	**1261.000**	**1892.000**	**3153.000**	**0.000**		**1261.000**	**1892.000**	**3153.000**	**284.270**	**426.405**	**710.675**	**96.560**	**144.850**	**241.410**	**241.410**	**100.00**	**7.66**
	SUB TOTAL (B)	**3799.000**	**5699.000**	**9498.000**	**290.300**		**4567.850**	**5220.450**	**9788.300**	**3750.930**	**3741.705**	**6110.995**	**2459.325**	**1546.281**	**4005.606**	**4005.606**	**100.00**	**40.92**
C	**SCHEMES HAVING 75:25 SHARES BETWEEN CENTRE AND STATE**																	
1	Minimum Support Price For Minor Forest Produce 2406-01-105-89 (1)	-	300.000	**300.000**			-	300.000	**300.000**	0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Minimum Support Price For Minor Forest Produce 2406-01-105-89 (2)	100.000	-	**100.000**			100.000	-	**100.000**	0.000	0.000	**0.000**	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	SUB TOTAL (C)	**100.000**	**300.000**	**400.000**			**100.000**	**300.000**	**400.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
	GRAND TOTAL (A+B+C)	**21832.000**	**5999.000**	**27831.000**	**290.300**		**22600.850**	**5520.450**	**28121.300**	**21683.930**	**3741.705**	**24043.995**	**16528.045**	**1546.281**	**18074.326**	**17436.692**	**96.47**	**62.01**
D	**EXTERNALLY AIDED PROJECTS**																	
i	KIFFBI	11001.160	0	**11001.160**			**-**	**-**	**-**	11001.160	0	**11001.160**	-			**3042.610**		**27.66**
ii	RBK	13040.600	0	**13040.600**			**-**	**-**	**-**	13040.600	0	**13040.160**	3000.000	0.000	**3000.000**	2905.061	**96.84**	**22.28**
	SUB TOTAL (D)	**24041.760**	**0.000**	**24041.760**			**-**	**-**	**-**	**24041.760**	**0.000**	**24041.320**	**3000.000**	**0.000**	**3000.000**	**5947.671**	**-**	**24.74**

KERALA FOREST DEPARTMENT

PLAN PROGRESS REPORT (FINANCIAL) TILL THE END OF **MARCH 2022** DURING 2021-22 (Rs in lakhs)

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A.	**STATE SECTOR SCHEMES**																		
I	**Management of Natural Forests**																		
1	Forest Protection (2406-01-101-81)	2500.000	-	**2500.000**			2500.000	-	**2500.000**	2500.000	-	**2500.000**		2500.000	-	**2500.000**	2495.541	**99.82**	**99.82**
2	Forest Protection (Survey of Forest Boundaries & Forest Protection) (4406-01-101-99)	2700.000	-	**2700.000**			2700.000	-	**2700.000**	2700.000	-	**2700.000**		2700.000	-	**2700.000**	2693.908	**99.77**	**99.77**
3	Regeneration of Denuded Forest (2406-01-101-94)	275.000	-	**275.000**			275.000	-	**275.000**	275.000	-	**275.000**		275.000	-	**275.000**	273.354	**99.40**	**99.40**
4	Non-wood Forest Produce Including Promotion of Medicinal Plants (2406-01-101-80)	190.000	-	**190.000**			190.000	-	**190.000**	190.000	-	**190.000**		190.000	-	**190.000**	189.1	**99.54**	**99.54**
	Sub Total (I)	**5665.000**	**0.000**	**5665.000**			**5665.000**	**0.000**	**5665.000**	**5665.000**	**0.000**	**5665.000**		**5665.000**	**0.000**	**5665.000**	**5651.919**	**99.77**	**99.77**
II	**Improving Productivity of Plantations**																		
1	Hard Wood Species (4406-01-105-87) (01)	500.000	-	**500.000**			500.000	-	**500.000**	500.000	-	**500.000**		500.000	-	**500.000**	499.585	**99.92**	**99.92**
2	Industrial Raw Materials (4406-01-105-87) (02)	240.000	-	**240.000**			240.000	-	**240.000**	240.000	-	**240.000**		240.000	-	**240.000**	238.840	**99.52**	**99.52**
	Sub Total (II)	**740.000**	**0.000**	**740.000**			**740.000**	**0.000**	**740.000**	**740.000**	**0.000**	**740.000**		**740.000**	**0.000**	**740.000**	**738.425**	**99.79**	**99.79**
III	**Infrastructure Development**																		
1	Roads (4406-01-070-99)	400.000	-	**400.000**			400.000	-	**400.000**	400.000	-	**400.000**		400.000	-	**400.000**	363.778	**90.94**	**90.94**
2	Building (4406-01-070-97)	400.000	-	**400.000**			400.000	-	**400.000**	400.000	-	**400.000**		400.000	-	**400.000**	398.378	**99.59**	**99.59**
	Sub Total	**800.000**	**0.000**	**800.000**			**800.000**	**0.000**	**800.000**	**800.000**	**0.000**	**800.000**		**800.000**	**0.000**	**800.000**	**762.156**	**95.27**	**95.27**
IV	Eco-Tourism (4406-01-800-91)	500.000	-	**500.000**			500.000	-	**500.000**	500.000	-	**500.000**		500.000	-	**500.000**	499.805	**99.96**	**99.96**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
V	Human Resource Development (2406-01-003-97)	350.000	-	**350.000**	**300.000**	*Addl. Authrsn*	650.000	-	**650.000**	650.000	-	**650.000**		650.000	-	**650.000**	650.000	**100.00**	**100.00**
VI	Resource Planning & Research (2406-01-004-92)	150.000	-	**150.000**			150.000	-	**150.000**	150.000	-	**150.000**		150.000	-	**150.000**	149.992	**99.99**	**99.99**
VII	Forest Management Information System & GIS (2406-01-800-57)	150.000	-	**150.000**			150.000	-	**150.000**	150.000	-	**150.000**		150.000	-	**150.000**	149.606	**99.74**	**99.74**
VIII	Extension Community Forestry & Agro Forestry (2406-01-800-55 (01))	1000.000	-	**1000.000**			1000.000	-	**1000.000**	1000.000	-	**1000.000**		1000.000	-	**1000.000**	998.737	**99.87**	**99.87**
IX	Eco-Tourism - Project Green Grass (2406-01-800-52)	108.000	-	**108.000**			108.000	-	**108.000**	108.000	-	**108.000**		108.000	-	**108.000**	107.756	**99.77**	**99.77**
X	Works with assistance from RIDF (4406-01-800-90)	3000.000	-	**3000.000**			3000.000	-	**3000.000**	3000.000	-	**3000.000**		3000.000	-	**3000.000**	2968.681	**98.96**	**98.96**
XI	Measures to reduce Man Animal conflict (2406-01-800-56)	2200.000	-	**2200.000**			2200.000	-	**2200.000**	2200.000	-	**2200.000**		2200.000	-	**2200.000**	2199.88	**99.99**	**99.99**
XII	Zoological Park at Puthur, Thrissur (2406-02-110-48)	500.000	-	**500.000**			500.000	-	**500.000**	500.000	-	**500.000**		500.000	-	**500.000**	500.000	**100.00**	**100.00**
XIII	Elephant Rehabilitation Centre at Kappukkad near Kottoor (2406-02-110-29)	100.000	-	**100.000**			100.000	-	**100.000**	100.000	-	**100.000**		100.000	-	**100.000**	74.975	**74.97**	**74.97**
XIV	Conservation of Biodiversity (2406-02-110-68)	1000.000	-	**1000.000**			1000.000	-	**1000.000**	1000.000	-	**1000.000**		1000.000	-	**1000.000**	998.786	**99.88**	**99.88**
XV	Eco Development Programme (2406-02-110-56)	375.000	-	**375.000**			375.000	-	**375.000**	375.000	-	**375.000**		375.000	-	**375.000**	374.803	**99.95**	**99.95**
	SUB TOTAL (A)	**16638.000**	**0.000**	**16638.000**	**300.000**		**16938.000**	**0.000**	**16938.000**	**16938.000**	**0.000**	**16938.000**		**16938.000**	**0.000**	**16938.000**	**16825.525**	**99.34**	**99.34**
B	**SCHEMES HAVING 60:40 SHARES BETWEEN CENTRE AND STATE**																		
1	**Integrated Development of Wildlife Habitats**																		
i	**Management of Wildlife Sancturies**																		
1	Neyyar Wildlife Sanctuary (2406-02-110-28) (01)	-	55.500	**55.500**			-	55.500	**55.500**	-	46.320	**46.320**	11.580	-	11.580	**11.580**	11.580	**100.00**	**20.86**
	Neyyar Wildlife Sanctuary (2406-02-110-28) (02)	37.000	-	**37.000**			37.000	-	**37.000**	30.880	-	**30.880**	-	29.970	-	**29.970**	29.970	**100.00**	**81.00**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Subtotal	**37.000**	**55.500**	**92.500**			**37.000**	**55.500**	**92.500**	**30.880**	**46.320**	**77.200**	**11.580**	**29.970**	**11.580**	**41.550**	**41.550**	**100.00**	**44.92**
2	Wayanad Wildlife Sanctuary (2406-02-110-27) (01)	-	117.000	**117.000**	**-10.880**		-	106.120	**106.120**	-	60.960	**60.960**	15.240	-	15.240	**15.240**	15.239	**99.99**	**14.36**
	Wayanad Wildlife Sanctuary (2406-02-110-27) (02)	78.000	-	**78.000**	**-7.250**		70.750	-	**70.750**	40.640	-	**40.640**	-	40.635	-	**40.635**	40.623	**99.97**	**57.42**
	Subtotal	**78.000**	**117.000**	**195.000**	**-18.130**		**70.750**	**106.120**	**176.870**	**40.640**	**60.960**	**101.600**	**15.240**	**40.635**	**15.240**	**55.875**	**55.862**	**99.98**	**31.58**
3	Idukki Wildlife Sanctuary (2406-02-110-26) (01)	-	60.000	**60.000**			-	60.000	**60.000**	-	35.220	**35.220**	8.805	-	8.810	**8.810**	8.810	**100.00**	**14.68**
	Idukki Wildlife Sanctuary (2406-02-110-26) (02)	40.000	-	**40.000**			40.000	-	**40.000**	23.480	-	**23.480**	-	23.480	-	**23.480**	23.480	**100.00**	**58.70**
	Subtotal	**40.000**	**60.000**	**100.000**			**40.000**	**60.000**	**100.000**	**23.480**	**35.220**	**58.700**	**8.805**	**23.480**	**8.810**	**32.290**	**32.290**	**100.00**	**32.29**
4	Peechi, Vazhani (2406-02-110-25) (01)	-	60.000	**60.000**			-	60.000	**60.000**	-	46.404	**46.404**	11.601	-	11.600	**11.600**	11.600	**100.00**	**19.33**
	Peechi, Vazhani (2406-02-110-25) (02)	40.000	-	**40.000**			40.000	-	**40.000**	30.936	-	**30.936**	-	30.930	-	**30.930**	30.930	**100.00**	**77.32**
	Subtotal	**40.000**	**60.000**	**100.000**			**40.000**	**60.000**	**100.000**	**30.936**	**46.404**	**77.340**	**11.601**	**30.930**	**11.600**	**42.530**	**42.529**	**100.00**	**42.53**
5	Peppara Wildlife Sanctuary (2406-02-110-24) (01)	-	48.000	**48.000**			-	48.000	**48.000**	-	37.770	**37.770**	9.442	-	9.440	**9.440**	9.438	**99.98**	**19.66**
	Peppara Wildlife Sanctuary (2406-02-110-24) (02)	32.000	-	**32.000**			32.000	-	**32.000**	25.180	-	**25.180**	-	25.180	-	**25.180**	25.180	**100.00**	**78.69**
	Subtotal	**32.000**	**48.000**	**80.000**			**32.000**	**48.000**	**80.000**	**25.180**	**37.770**	**62.950**	**9.442**	**25.180**	**9.440**	**34.620**	**34.618**	**99.99**	**43.27**
6	Shendurney Wildlife Sanctuary (2406-02-110-23) (01)	-	60.000	**60.000**			-	60.000	**60.000**	-	53.640	**53.640**	13.410	-	13.410	**13.410**	13.410	**100.00**	**22.35**
	Shendurney Wildlife Sanctuary (2406-02-110-23) (02)	40.000	-	**40.000**			40.000	-	**40.000**	35.760	-	**35.760**	-	32.400	-	**32.400**	32.398	**99.99**	**81.00**
	Subtotal	**40.000**	**60.000**	**100.000**			**40.000**	**60.000**	**100.000**	**35.760**	**53.640**	**89.400**	**13.410**	**32.400**	**13.410**	**45.810**	**45.808**	**100.00**	**45.81**
7	Chimmoney Wildlife Sanctuary (2406-02-110-22) (01)	-	52.500	**52.500**			-	52.500	**52.500**	-	44.337	**44.337**	11.084	-	11.080	**11.080**	11.080	**100.00**	**21.10**
	Chimmoney Wildlife Sanctuary (2406-02-110-22) (02)	35.000	-	**35.000**			35.000	-	**35.000**	29.558	-	**29.558**	-	28.350	-	**28.350**	28.349	**100.00**	**81.00**
	Subtotal	**35.000**	**52.500**	**87.500**			**35.000**	**52.500**	**87.500**	**29.558**	**44.337**	**73.895**	**11.084**	**28.350**	**11.080**	**39.430**	**39.429**	**100.00**	**45.06**
8	Aralam Wildlife Sanctuary (2406-02-110-21) (01)	-	52.500	**52.500**			-	52.500	**52.500**	-	44.982	**44.982**	11.246	-	11.250	**11.250**	11.250	**100.00**	**21.43**
	Aralam Wildlife Sanctuary (2406-02-110-21) (02)	35.000	-	**35.000**			35.000	-	**35.000**	29.988	-	**29.988**	-	28.350	-	**28.350**	28.350	**100.00**	**81.00**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Subtotal	**35.000**	**52.500**	**87.500**			**35.000**	**52.500**	**87.500**	**29.988**	**44.982**	**74.970**	**11.246**	**28.350**	**11.250**	**39.600**	**39.600**	**100.00**	**45.26**
9	Chinnar Wildlife Sanctuary (2406-02-110-20) (01)	-	39.000	**39.000**			-	39.000	**39.000**	-	30.810	**30.810**	7.702	-	7.700	**7.700**	7.696	**99.95**	**19.73**
	Chinnar Wildlife Sanctuary (2406-02-110-20) (02)	26.000	-	**26.000**			26.000	-	**26.000**	20.540	-	**20.540**	-	20.540	-	**20.540**	20.535	**99.97**	**78.98**
	Subtotal	**26.000**	**39.000**	**65.000**			**26.000**	**39.000**	**65.000**	**20.540**	**30.810**	**51.350**	**7.702**	**20.540**	**7.700**	**28.240**	**28.231**	**99.97**	**43.43**
10	Thattekkad Birds Sanctuary (2406-02-110-19) (01)	-	34.500	**34.500**			-	34.500	**34.500**	-	28.770	**28.770**	7.192	-	7.190	**7.190**	7.189	**99.99**	**20.84**
	Thattekkad Birds Sanctuary (2406-02-110-19) (02)	23.000	-	**23.000**			23.000	-	**23.000**	19.180	-	**19.180**	-	18.630	-	**18.630**	18.630	**100.00**	**81.00**
	Subtotal	**23.000**	**34.500**	**57.500**			**23.000**	**34.500**	**57.500**	**19.180**	**28.770**	**47.950**	**7.192**	**18.630**	**7.190**	**25.820**	**25.819**	**100.00**	**44.90**
11	Mangalavanam Birds Sanctuary (2406-02-110-18) (01)	-	7.500	**7.500**			-	7.500	**7.500**	-	10.620	**10.620**	1.855	-	2.660	**2.660**	2.660	**100.00**	**35.47**
	Mangalavanam Birds Sanctuary (2406-02-110-18) (02)	5.000	-	**5.000**			5.000	-	**5.000**	7.080	-	**7.080**	-	4.050	-	**4.050**	4.050	**100.00**	**81.00**
	Subtotal	**5.000**	**7.500**	**12.500**			**5.000**	**7.500**	**12.500**	**7.080**	**10.620**	**17.700**	**1.855**	**4.050**	**2.660**	**6.710**	**6.710**	**100.00**	**53.68**
12	Kurinjimala Sanctuary (2406-02-110-17) (01)	-	13.500	**13.500**			-	13.500	**13.500**	-	12.600	**12.600**	3.150	-	3.150	**3.150**	3.150	**100.00**	**23.33**
	Kurinjimala Sanctuary (2406-02-110-17) (02)	9.000	-	**9.000**			9.000	-	**9.000**	8.400	-	**8.400**	-	7.290	-	**7.290**	7.288	**99.97**	**80.98**
	Subtotal	**9.000**	**13.500**	**22.500**			**9.000**	**13.500**	**22.500**	**8.400**	**12.600**	**21.000**	**3.150**	**7.290**	**3.150**	**10.440**	**10.438**	**99.98**	**46.39**
13	Choolannur Peacock Sanctuary (2406-02-110-16) (01)	-	10.500	**10.500**			-	10.500	**10.500**	-	10.826	**10.826**	2.706	-	2.710	**2.710**	2.707	**99.90**	**25.78**
	Choolannur Peacock Sanctuary (2406-02-110-16) (02)	7.000	-	**7.000**			7.000	-	**7.000**	7.217	-	**7.217**	-	3.500	-	**3.500**	3.495	**99.87**	**49.93**
	Subtotal	**7.000**	**10.500**	**17.500**			**7.000**	**10.500**	**17.500**	**7.217**	**10.826**	**18.043**	**2.706**	**3.500**	**2.710**	**6.210**	**6.203**	**99.88**	**35.44**
14	Malabar Sanctuary (2406-02-110-15) (01)	-	25.500	**25.500**			-	25.500	**25.500**	-	18.804	**18.804**	4.701	-	4.700	**4.700**	4.700	**100.00**	**18.43**
	Malabar Sanctuary (2406-02-110-15) (02)	17.000	-	**17.000**			17.000	-	**17.000**	12.536	-	**12.536**	-	12.530	-	**12.530**	12.530	**100.00**	**73.71**
	Subtotal	**17.000**	**25.500**	**42.500**			**17.000**	**25.500**	**42.500**	**12.536**	**18.804**	**31.340**	**4.701**	**12.530**	**4.700**	**17.230**	**17.230**	**100.00**	**40.54**
15	Kottiyoor Wildlife Sanctuary (2406-02-110-14) (01)	-	28.500	**28.500**			-	28.500	**28.500**	-	21.750	**21.750**	**5.437**	-	5.440	**5.440**	5.440	**100.00**	**19.09**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
15	Kottiyoor Wildlife Sanctuary (2406-02-110-14) (02)	19.000	-	**19.000**			19.000	-	**19.000**	14.500	-	**14.500**	-	14.500	-	**14.500**	14.500	**100.00**	**76.32**
	Subtotal	**19.000**	**28.500**	**47.500**			**19.000**	**28.500**	**47.500**	**14.500**	**21.750**	**36.250**	**5.437**	**14.500**	**5.440**	**19.940**	**19.940**	**100.00**	**41.98**
16	Karimpuzha Wildlife Sanctuary (2406-02-110-13) (01)	-	40.500	**40.500**			-	40.500	**40.500**	-	29.250	**29.250**	**7.312**	-	7.310	**7.310**	7.308	**99.97**	**18.04**
	Karimpuzha Wildlife Sanctuary (2406-02-110-13) (02)	27.000	-	**27.000**			27.000	-	**27.000**	19.500	-	**19.500**	-	19.500	-	**19.500**	19.500	**100.00**	**72.22**
	Subtotal	**27.000**	**40.500**	**67.500**			**27.000**	**40.500**	**67.500**	**19.500**	**29.250**	**48.750**	**7.312**	**19.500**	**7.310**	**26.810**	**26.808**	**99.99**	**39.71**
	Subtotal of WL Sanctuaries	**470.000**	**705.000**	**1175.000**	**-18.130**		**462.750**	**694.120**	**1156.870**	**355.375**	**533.063**	**888.438**	**132.463**	**339.835**	**133.270**	**473.105**	**473.065**	**99.99**	**40.89**
ii	**Management of National Parks**																		
1	Eravikulam National Park (2406-02-110-79) (01)	-	120.000	**120.000**	**-25.250**		-	94.750	**94.750**	-	44.568	**44.568**	**11.142**	-	11.140	**11.140**	11.136	**99.97**	**11.75**
	Eravikulam National Park (2406-02-110-79) (02)	80.000	-	**80.000**	**-10.900**		69.100	-	**69.100**	29.712	-	**29.712**	-	29.710	-	**29.710**	29.710	**100.00**	**43.00**
	Subtotal	**80.000**	**120.000**	**200.000**	**-36.150**		**69.100**	**94.750**	**163.850**	**29.712**	**44.568**	**74.280**	**11.142**	**29.710**	**11.140**	**40.850**	**40.846**	**99.99**	**24.93**
2	Silent Valley National Park (2406-02-110-78) (01)	-	120.000	**120.000**			-	120.000	**120.000**	-	55.110	**55.110**	**13.777**	-	13.780	**13.780**	13.780	**100.00**	**11.48**
	Silent Valley National Park (2406-02-110-78) (02)	80.000	-	**80.000**			80.000	-	**80.000**	36.740	-	**36.740**	-	36.740	-	**36.740**	36.740	**100.00**	**45.93**
	Subtotal	**80.000**	**120.000**	**200.000**			**80.000**	**120.000**	**200.000**	**36.740**	**55.110**	**91.850**	**13.777**	**36.740**	**13.780**	**50.520**	**50.520**	**100.00**	**25.26**
3	Anamudi National Park (2406-02-110-77) (01)	-	30.000	**30.000**			-	30.000	**30.000**	-	24.702	**24.702**	**6.175**	-	6.180	**6.180**	6.180	**100.00**	**20.60**
	Anamudi National Park (2406-02-110-77) (02)	20.000	-	**20.000**			20.000	-	**20.000**	16.468	-	**16.468**	-	16.200	-	**16.200**	16.200	**100.00**	**81.00**
	Subtotal	**20.000**	**30.000**	**50.000**			**20.000**	**30.000**	**50.000**	**16.468**	**24.702**	**41.170**	**6.175**	**16.200**	**6.180**	**22.380**	**22.380**	**100.00**	**44.76**
4	Mathikettanmala National Park (2406-02-110-76) (01)	-	30.000	**30.000**			-	30.000	**30.000**	-	20.550	**20.550**	**5.137**	-	5.140	**5.140**	5.137	**99.95**	**17.12**
	Mathikettanmala National Park (2406-02-110-76) (02)	20.000	-	**20.000**			20.000	-	**20.000**	13.700	-	**13.700**	-	13.700	-	**13.700**	13.693	**99.95**	**68.47**
	Subtotal	**20.000**	**30.000**	**50.000**			**20.000**	**30.000**	**50.000**	**13.700**	**20.550**	**34.250**	**5.137**	**13.700**	**5.140**	**18.840**	**18.830**	**99.95**	**37.66**
5	Pampadumshola National Park (2406-02-110-75) (01)	-	30.000	**30.000**			-	30.000	**30.000**	-	23.190	**23.190**	**5.797**	-	5.800	**5.800**	5.796	**99.94**	**19.32**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Pampadumshola National Park (2406-02-110-75) (02)	20.000		**20.000**			20.000		**20.000**	15.460	-	**15.460**	-	15.460	-	**15.460**	15.46	**100.00**	**77.30**
	Subtotal	**20.000**	**30.000**	**50.000**			**20.000**	**30.000**	**50.000**	**15.460**	**23.190**	**38.650**	**5.797**	**15.460**	**5.800**	**21.260**	**21.256**	**99.98**	**42.51**
	Subtotal of National Parks	**220.000**	**330.000**	**550.000**	**-36.150**		**209.100**	**304.750**	**513.850**	**112.080**	**168.120**	**280.200**	**42.028**	**111.810**	**42.040**	**153.850**	**153.833**	**99.99**	**29.94**
iii	**Management of Community Reserve**																		
1	Integrated Development of Wild Life Habitats - Management of Community Reserve (60:40 between Centre and State) (2406-02-110-72) (01) Kadalundi Reserve	-	15.000	**15.000**			-	15.000	**15.000**	0.000	12.450	**12.450**	**3.112**	0.000	3.110	**3.110**	3.108	**99.94**	**20.72**
	Integrated Development of Wild Life Habitats - Management of Community Reserve (60:40 between Centre and State) (2406-02-110-72) (02) Kadalundi Reserve	10.000	-	**10.000**			10.000	-	**10.000**	8.300	-	**8.300**	-	8.100	-	**8.100**	8.100	**100.00**	**81.00**
	Subtotal	**10.000**	**15.000**	**25.000**	**0.000**		**10.000**	**15.000**	**25.000**	**8.300**	**12.450**	**20.750**	**3.112**	**8.100**	**3.110**	**11.210**	**11.208**	**99.98**	**44.83**
iv	**Project Tiger (60:40 between Central and State)**																		
1	Periyar Tiger Reserve (2406-02-110-74) (01)	-	532.500	**532.500**			-	532.500	**532.500**	0.000	402.310	**402.310**	402.310	0.000	402.310	**402.310**	402.198	**99.97**	**75.53**
	Periyar Tiger Reserve (2406-02-110-74) (02)	355.000	-	**355.000**			355.000	-	**355.000**	340.380	0.000	**340.380**	-	312.400	0.000	**312.400**	312.361	**99.99**	**87.99**
	Subtotal	**355.000**	**532.500**	**887.500**			**355.000**	**532.500**	**887.500**	**340.380**	**402.310**	**742.690**	**402.310**	**312.400**	**402.310**	**714.710**	**714.559**	**99.98**	**80.51**
2	Parambikulam Tiger Reserve (2406-02-110-73) (01)	-	435.000	**435.000**			-	435.000	**435.000**	0.000	329.900	**329.900**	329.895	0.000	329.895	**329.895**	318.920	**96.67**	**73.32**
	Parambikulam Tiger Reserve (2406-02-110-73) (02)	290.000	-	**290.000**			290.000	-	**290.000**	301.700	0.000	**301.700**	-	246.500	0.000	**246.500**	246.181	**99.87**	**84.89**
	Subtotal	**290.000**	**435.000**	**725.000**			**290.000**	**435.000**	**725.000**	**301.700**	**329.900**	**631.600**	**329.895**	**246.500**	**329.895**	**576.395**	**565.101**	**98.04**	**77.95**
	Subtotal of Project Tiger	**645.000**	**967.500**	**1612.500**	**0.000**		**645.000**	**967.500**	**1612.500**	**642.080**	**732.210**	**1374.290**	**732.205**	**558.900**	**732.205**	**1291.105**	**1279.661**	**99.11**	**79.36**
v	Project Elephant *** (2406-02-110-35)(1)	-	780.000	**780.000**			-	780.000	**780.000**	0.000	624.930	**624.930**	580.960	0.000	580.960	**580.960**	580.768	**99.97**	**74.46**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
v	Project Elephant *** (2406-02-110-35)(2)	520.000	-	**520.000**			520.000	-	**520.000**	416.620	0.000	**416.620**		436.620	0.000	**436.620**	435.563	**99.76**	**83.76**
	Subtotal of Project Elephant	**520.000**	**780.000**	**1300.000**	**0.000**		**520.000**	**780.000**	**1300.000**	**416.620**	**624.930**	**1041.550**	**580.960**	**436.620**	**580.960**	**1017.580**	**1016.331**	**99.88**	**78.18**
vi	**Recovery Programme for Nilgiri Tahr ***																		
1	Recovery Programme for Nilgiri Tahr (2406-02-110-12(01) #	-	**0.000**	**0.000**	**17.090**	*Re-appropriation*	-	17.090	**17.090**	-	50.536	**50.536**	8.178	-	17.090	**17.090**	17.083	**99.96**	**99.96**
	Recovery Programme for Nilgiri Tahr (2406-02-110-12(02)	**0.000**	-	**0.000**	**5.460**		5.460	-	**5.460**	33.690	-	**33.690**	-	5.460	-	**5.460**	5.454	**99.90**	**99.90**
	Subtotal	**0.000**	**0.000**	**0.000**	**22.550**		**5.460**	**17.090**	**22.550**	**33.690**	**50.536**	**84.226**	**8.178**	**5.460**	**17.090**	**22.550**	**22.538**	**99.94**	**99.94**
2	Recovery Programme for Nilgiri Tahr - SCP Component (2406-02-789-98(01)	-	**0.000**	**0.000**	**4.080**	*Re-appropriation.*	-	4.080	**4.080**	-	25.207	**25.207**	4.080	-	4.080	**4.080**	4.080	**100.00**	**100.00**
	Recovery Programme for Nilgiri Tahr - SCP Component (2406-02-789-98(02)	**0.000**	-	**0.000**	**2.720**		2.720	-	**2.720**	16.805	-	**16.805**	-	2.720	-	**2.720**	2.720	**100.00**	**100.00**
	Subtotal	**0.000**	**0.000**	**0.000**	**6.800**		**2.720**	**4.080**	**6.800**	16.805	25.207	**42.012**	**4.080**	**2.720**	**4.080**	**6.800**	**6.800**	**100.00**	**100.00**
3	Recovery Programme for Nilgiri Tahr - TSP Component (2406-02-796-98(01)	-	**0.000**	**0.000**	**4.080**	*Re-appropriation.*	-	4.080	**4.080**	-	25.207	**25.207**	4.080	-	4.080	**4.080**	4.080	**100.00**	**100.00**
	Recovery Programme for Nilgiri Tahr - TSP Component (2406-02-796-98(02)	**0.000**	-	**0.000**	**2.720**		2.720	-	**2.720**	16.805	-	**16.805**	-	2.720	-	**2.720**	2.720	**100.00**	**100.00**
	Subtotal	**0.000**	**0.000**	**0.000**	**6.800**		**2.720**	**4.080**	**6.800**	**16.805**	**25.207**	**42.012**	**4.080**	**2.720**	**4.080**	**6.800**	**6.800**	**100.00**	**100.00**
	Subtotal of Recovery Programme for Nilgiri Tahr	**0.000**	**0.000**	**0.000**	**36.150**		**10.900**	**25.250**	**36.150**	**67.300**	**100.950**	**168.250**	**16.338**	**10.900**	**25.250**	**36.150**	**36.138**	**99.97**	**99.97**
vii	**Recovery Programme for saving critically Endangered Species. ***																		
1	Recovery Programme for saving critically Endangered Species - General (2406-02-110-11(01)	-	**0.000**	**0.000**	**4.360**	*Re-appropriation.*	-	4.360	**4.360**	-	17.418	**17.418**	4.355	-	4.360	**4.360**	4.360	**100.00**	**100.00**
	Recovery Programme for saving critically Endangered Species - General (2406-02-110-11(02)	**0.000**	-	**0.000**	**2.910**		2.910	-	**2.910**	11.612	-	**11.612**	-	2.910	-	**2.910**	2.909	**99.96**	**99.96**
	Subtotal	**0.000**	**0.000**	**0.000**	**7.270**		**2.910**	**4.360**	**7.270**	11.612	17.418	**29.030**	**4.355**	**2.910**	**4.360**	**7.270**	**7.269**	**99.98**	**99.98**

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	Recovery Programme for saving critically Endangered Species - SCP (2406-02-789-97(01)	-	**0.000**	**0.000**	**3.260**	*Re-appropriation.*	-	3.260	**3.260**	-	13.041	**13.041**	3.260	-	3.260	**3.260**	3.26	**100.00**	**100.00**
	Recovery Programme for saving critically Endangered Species - SCP (2406-02-789-97(02)	**0.00**	-	**0.000**	**2.170**		2.170	-	**2.170**	8.694	-	**8.694**	-	2.170	-	**2.170**	2.16	**99.73**	**99.73**
	Subtotal	**0.000**	**0.000**	**0.000**	**5.430**		**2.170**	**3.260**	**5.430**	8.694	13.041	**21.735**	**3.260**	**2.170**	**3.260**	**5.430**	**5.424**	**99.89**	**99.89**
3	Recovery Programme for saving critically Endangered Species - TSP (2406-02-796-97(01)	-	**0.000**	**0.000**	**3.260**	*Re-appropriation.*	-	3.260	**3.260**	-	13.041	**13.041**	3.260	-	3.260	**3.260**	3.260	**99.99**	**99.99**
	Recovery Programme for saving critically Endangered Species - TSP (2406-02-796-97(02)	**0.000**	-	**0.000**	**2.170**		2.170	-	**2.170**	8.694	-	**8.694**	-	2.170	-	**2.170**	2.169	**99.96**	**99.96**
	Subtotal	**0.000**	**0.000**	**0.000**	**5.430**		**2.170**	**3.260**	**5.430**	**8.694**	**13.041**	**21.735**	**3.260**	**2.170**	**3.260**	**5.430**	**5.429**	**99.98**	**99.98**
	Subtotal of Recovery Programme for saving critically Endangered Species.	**0.000**	**0.000**	**0.000**	**18.130**		**7.250**	**10.880**	**18.130**	**29.000**	**43.500**	**72.500**	**10.875**	**7.250**	**10.880**	**18.130**	**18.122**	**99.95**	**99.95**
vi	**National Mission for Green India**																		
i	National Afforestation Programme - National Mission for Green India (60:40 between Centre and State) (2406-01-102-86) (1)	-	493.500	**493.500**			-	493.500	**493.500**	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**	**0.000**	**0.00**	**0.00**
	National Afforestation Programme - National Mission for Green India (60:40 between Centre and State) (2406-01-102-86) (2)	329.000	-	**329.000**			329.000	-	**329.000**	0.000	0.000	0.000	-	0.000	0.000	**0.000**	**0.000**	**0.00**	**0.00**
	Subtotal	**329.000**	**493.500**	**822.500**			**329.000**	**493.500**	**822.500**	**0.000**	**0.000**	**0.000**	**-**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
vii	Forest Fire Prevention & Manangement Scheme (2406-01-800-53) (1) (FPMS)**	-	240.000	**240.000**	**1.430**	*Addl. Authrsn*	-	241.430	**241.430**	0.000	301.790	301.790	241.430	0.000	241.430	**241.430**	240.915	**99.79**	**99.79**
	Forest Fire Prevention & Manangement Scheme (2406-01-800-53) (2) (FPMS)**	160.000	-	**160.000**	**0.950**	*Addl. Authrsn*	160.950	-	**160.950**	201.190	0.000	201.190	-	160.950	0.000	**160.950**	160.730	**99.86**	**99.86**
	Subtotal	**160.000**	**240.000**	**400.000**	**2.380**		**160.950**	**241.430**	**402.380**	**201.190**	**301.790**	**502.980**	**241.430**	**160.950**	**241.430**	**402.380**	**401.645**	**99.82**	**99.82**
3	**Conservation of Natural Resources & Ecosystems**																		

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
i	Nilgiri Biosphere Reserve (2406-02-110-34) (1)	-	150.000	**150.000**			-	150.000	**150.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Nilgiri Biosphere Reserve (2406-02-110-34) (2)	100.000	-	**100.000**			100.000	-	**100.000**	0.000	0.000	**0.000**	-	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Subtotal	**100.000**	**150.00**	**250.000**			**100.000**	**150.00**	**250.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.000	**0.00**	**0.00**
ii	Agasthyamala Biosphere Reserve (2406-02-110-33) (1)	-	180.000	**180.000**			-	180.000	**180.000**	0.000	223.110	**223.110**	122.690	0.000	122.690	**122.690**	122.563	**99.90**	**68.09**
	Agasthyamala Biosphere Reserve (2406-02-110-33) (2)	120.000	-	**120.000**			120.000	-	**120.000**	148.740	0.000	**148.740**	-	97.200	0.000	**97.200**	97.046	**99.84**	**80.87**
	Subtotal	**120.000**	**180.000**	**300.000**	**0.000**		**120.000**	**180.000**	**300.000**	**148.740**	**223.110**	**371.850**	**122.690**	**97.200**	**122.690**	**219.890**	**219.610**	**99.87**	**73.20**
iii	Wetland Conservation (2406-02-110-32) (1)	-	255.000	**255.000**			-	255.000	**255.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Wetland Conservation (2406-02-110-32) (2)	170.000	-	**170.000**			170.000	-	**170.000**	0.000	0.000	**0.000**	-	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Subtotal	**170.000**	**255.00**	**425.000**			**170.000**	**255.00**	**425.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**	**0.00**
iv	Integrated Development of Wildlife Habitats to Wayanad Wildlife Sanctuary for Voluntary Relocation of Settlments from Protected Areas (2406-02-110-31) (1)	-	450.000	**450.000**			-	450.000	**450.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Integrated Development of Wildlife Habitats to Wayanad Wildlife Sanctuary for Voluntary Relocation of Settlments from Protected Areas (2406-02-110-31) (2)	300.000	-	**300.000**			300.000	-	**300.000**	0.000	0.000	**0.000**	-	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Subtotal of Nature Resources & Ecosystems	**690.000**	**1035.000**	**1725.000**	**0.000**		**690.000**	**1035.000**	**1725.000**	**148.740**	**223.110**	**371.850**	**122.690**	**97.200**	**122.690**	**219.890**	**219.610**	**99.87**	**12.73**
	SUB TOTAL (B)	**3044.000**	**4566.000**	**7610.000**	**2.380**		**3044.950**	**4567.430**	**7612.380**	**1980.685**	**2740.123**	**4720.808**	**1882.101**	**1731.565**	**1891.835**	**3623.400**	**3609.611**	**99.62**	**47.42**
C	**SCHEMES HAVING 75:25 SHARES BETWEEN CENTRE AND STATE**																		

Sl. No.	Name of Scheme/Head of Account	Finanacial																	
		Budget Outlay			Addl. amount recived	Mode of receipt	Revised Outlay			Approved Plan as on 31.03.2022			G.O.I. Release	Release during the year			Amount Spent	% of achievement against Release amount	% of achievement against Budget Outlay
		State Share	Central Share	Total			State Share	Central Share	Total	State Share	Central Share	Total		State Share	Central Share	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Minimum Support Price For Minor Forest Produce 2406-01-105-89 (1)	-	504.000	**504.000**			-	504.000	**504.000**	0.000	0.000	**0.000**	0.000	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	Minimum Support Price For Minor Forest Produce 2406-01-105-89 (2)	168.000	-	**168.000**			168.000	-	**168.000**	0.000	0.000	**0.000**	-	0.000	0.000	**0.000**	0.000	**0.00**	**0.00**
	SUB TOTAL (C)	**168.000**	**504.000**	**672.000**	**0.000**		**168.000**	**504.000**	**672.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.000	**0.00**	**0.00**
	GRAND TOTAL (A+B+C)	**19850.000**	**5070.000**	**24920.000**	**302.380**		**20150.950**	**5071.430**	**25222.380**	**18918.685**	**2740.123**	**21658.808**	**1882.101**	**18669.565**	**1891.835**	**20561.400**	**20435.136**	**99.39**	**81.02**
D	**EXTERNALLY AIDED PROJECTS**																		
i	**KIFFBI**	11001.160	0	**11001.160**	**0.000**		-	-	-	11001.160	0	**11001.160**	-	-	-	-	**373.980**	-	**3.40**
ii	**RBK**	13040.600	0	**13040.600**	**0.000**		-	-	-	13040.600	0	**13040.160**	-	2313.340	0.000	2313.340	**1021.830**	**44.17**	**7.84**
	SUB TOTAL (D)	**24041.760**	**0.000**	**24041.760**	**0.000**		-	-	-	**24041.760**	**0.000**	**24041.320**	-	**2313.340**	**0.000**	**2313.340**	**1395.810**	-	**5.81**

Note: 1. Under the Centrally Sponsored Schemes, Budget Heads revised as per G.O.(Rt)No.4516/2021/Fin Dated. 16.06.2021.

2. 25% of Central share released as 1st instalment under the IDWH - Wildlife Sanctuaries and National Parks.

3. * Under these CSS, reappropriated funds as per G.O.(Rt)No.5694/2021/Fin Dated, 31.08.2021. (Reappropriated funds from the Budget allocation of Wayanad Wildlife Sanctuary and Eravikkulam National Park)

4. ** Under the Scheme FPMS (CSS 60%) An amount of Rs.95 lakhs (Central share) and Rs.36 lakhs (State share) released through BAMS as 1st Instalment. In addition to, an amount of Rs.146.43 lakhs (Central share) and 124.95 lakhs (State share) transfered from BAMS to the Single Nodal Agency Bank Account.

5. * Under the CSS Project Elephant, 2nd release of Central share Rs.238.50 lakhs and additional release amount of Rs.50 lakhs (SC Sub Plan) also transfered from BAMS to Single Nodal Agency Bank Account. An additional amount Rs.30 lakhs (Central share) and Rs.20 lakhs (State share) distributed in the component of Project Elephant SC Sub Plan.**

6. # In this Scheme, Upsent previous balance also distributed

7. Cumulative expenditure of all projects under KIIFB is Rs.1704.71 Lakhs.

Annexure III

KERALA FOREST DEPARTMENT

Forest Land Diverted for Non Forest Purpose as per Sec (2) F(C) Act, 1980 in Kerala (Stage II Approval) - Diversions having more than 1.00 Ha area

Sl.No.	Name of the Project	GOI Order	Date	User Agency	Extent (ha)	Forest Division
1	2	3	4	5	6	7
1	VSSC Valiamala	8-10/81FRY (coord)	20.08.81	VSSC	80.800	Trivandrum
2	Kallada IP		09.01.81	Irrigation Dept.	2.377	Konni
3	Mineral Water (KSIDC)	8-8/82FRY (Cons)	24.03.82	KSIDC	32.000	Trivandrum
4	Kerala Police Fire Range	8-10/ FRY (Coord)	06.04.82	Kerala Police	24.281	Trivandrum
5	110 KV line Idmlr-Chky	8-149/82 FRY (Cons)	22.07.82	KSEB	62.000	Malayattur
6	220 KV Line sabarigiri-Trivandrum	8-65/82 FRY (Cons)	09.01.82	KSEB	180.110	Ranni, Konni, Thenmal,
7	110 KV line Pathanamthitta-Kakkad	9/293/82 FRY (Cons)	27.09.82	KSEB	7.238	Ranni
8	110 KV Line Malabar Cements, Palakkad	8-322/82 FRY (Cons)	18.11.82	KSEB	2.640	Palakkad
9	Oil Palm India	7-25/80 FRY (Cons)	23.20.83	Oil Palm India Ltd	468.000	Punalur
10	66 KV Tap line to Malabar Cements	8-122/83 FRY (Cons)	31.05.83	KSEB	9.900	Palakkad Spl.
11	110 KV line to Seed Garden, Wandoor	8-124/83 FRY (Cons)	23.12.83	KSEB	1.120	NBR Spl
12	66 KV Line Kainatti-S.Batheri, KKD	8-294/FRY (Cons)	23.12.83	KSEB	1.120	KKD
13	66 KV Line Valara-Karimanal	8-334/82 FRY (Cons)	03.02.84	KSEB	3.600	Munnar
14	Naval Phys Research Lab Cochin (UWAR)	8-43/83 FRY (Cons)	09.02.84	GOI	7.080	Kothamangal am
15	Peringalkuthu HEP Sch.(Investig.)	8-171/83 FRY (Cons)	03.04.84	KSEB	1.150	Vazhachal
16	Approach Road to Myladi Bridge	8-26/84 FRY (Cons)	03.04.84	PWD	1.100	NBR Spl
17	Lower Periyar Hydel Project	8-360/82 FRY (Cons)	03.04.84	KSEB	127.000	Munnar
18	11 KV line Villumala-Kodmankode Sett.	8-114/83/ FRY (Cons)	19.05.84	KSEB	4.000	Punalur, Thenmala
19	Fathima Matha Convent	8-180/84 FRY (Coons)	15.06.84	RD	2.653	Trichur
20	66 KV line Edamon-Ayur	8-315/82 FRY (Cons)	22.11.84	KSEB	2.280	Punalur

21	MVIP RB Canal	8-242/84 FRY (Cons)	17.12.84	Irrigation Dept.	1.306	Kothamangalam
22	220 KV line Idukki-Udumalpet	8-494/82-FC	03.06.86	KSEB	180.070	KTM, Munnar
23	Sabarimala Facilities	8-184/82 FRY (Cons)	30.09.86	Travancore DB	5.340	Ranni, Thekkady
24	VSSC, PSLV	8-10/81 FC	04.11.87	VSSC	34.520	Trivandrum
25	KSEB diversioon channel, Peringalkuthu	8-40/88 FC	18.04.88	KSEB	7.500	Vazhachal
26	220 KV line Trichur-Kozhikode	8-98/87 FC	09.07.90	KSEB	22.400	Trichur
27	220 KV Line LP-Kochi	8-284/87 FC	10.07.90	KSEB	16.410	Munnar, Kthlm
28	220 KV line Idukki-LP	8-8/89 FC	10.07.90	KSEB	25.585	Munnar, Kthlm
29	66 KV liine Thenmala-Edamon	8-220/88 FC	10.07.90	KSEB	14.152	Punalur, Thenmala
30	Anakkayam Small HEP	8-36/90 FC	19.07.90	KSEB	8.000	Vazhachal
31	400 KV line Udumalpet-Trichur	8-107/86 FC	06.08.90	KSEB	12.615	Trichur
32	Pepper Cultivation	8-511/89 FC	06.11.90	KFD	300.000	Wayanad (N&S),KKD
33	220 KV Line LP-Trichur	8-8/89 FC	25.08.91	KSEB	11.347	Munnar, Chalakudy, Vazhachal
34	Renewal of lease, Kyatkum	8-8/82 FC	18.08.94	Hyatkum Ltd.	15.150	Trivandrum
35	Regularisation of pre 1.1.77 encroachments	8-118/86 FC	31.01.95	Rev. Dept. Kerala	28,588.000	Many
36	DWS at Kottapadi	FCA11.2/KER/DWS/48	13.03.95	PHED	3.357	Malayattur
37	Bhoothathankettu HEP	FCA11.2/1/HP/KER	14.03.95	KSEB	1.960	Malayattur
38	Ullungal small HEP	FCA11.2/KER/67/HP(254)	13.05.96	KSEB	1.820	Ranni
39	Karikkayam small HEP	FCA11.2/KER/66/HP(253)	13.05.96	KSEB	4.930	Ranni
40	Kuttiyadi Audmentation Scheme	8-27/95/FC	20.08.96	KSEB	240.000	Wayanad S
41	220 KV line Panjal-Areacode	FCA11.2/KER/61/TL	17.12.96	KSEB	1.295	Mannarghat
42	Idamalayar Irrigation Project	8-324/88 FC	10.07.97	Irrigation Dept.	115.047	Malayattur
43	Widening Chalakayam-Pamba road	FCA11.2/80/KER/RC	29.07.97	Travancore DB	1.922	Ranni
44	Jawahar NavodayaSchool, Iduki	FCA16.1/KER/BC-57/51	21.08.98	JNS, Idukki	11.700	Kottayam
45	Rubble collection in Trichur Circle	FCA16.1/64/KER	22.01.99	KFD	29.730	TCR,KLI,CKDY,MLTR
46	DVCR Cochin Airport, Nedumbasseri	FCA11.2/87/KER/Misc	18.02.99	CIAL	1.987	Kothamangalam

47	Electrification PeringasseriTr.Stl.	FCA11.2/KER/51/TL	08.04.99	KSEB	1.500	Kothamangalam
48	Firing Range CRPF elambracode	8-13/97/FC	21.06.99	CRPF	32.290	Trivandrum
49	66 KV line Pamba Sabarimala	FCA16.1/KER/TC/56	07.10.99	KSEB	13.526	Ranni
50	Weir &Channel Mukkali-Panathanthode	FCA11.2/90/KER/IP	22.10.99	Irrigation Dept.	1.250	Mannarghat
51	Athirapalli HEP	8-12/97/FC	16.12.99	KSEB	138.600	Chalakudy
52	Parking facility at Pamba	FCA16.1/KER/Misc/88	02.02.00	TDB	5.000	Ranni
53	Sengulam Augmentation Sch.	FCA16.1/61/IP/KER	09.08.00	KSEB	5.155	Munnar
54	Optical Fibre Cable, Paravoor-Achencoil	11-9/98-FC	16.10.00	Telecom	1.467	Punalur,Thenmala, Achenkovil
55	Vented cross bars in Kaki & Pamba	FCA11.2/95/KER/IP	09.11.00	Irrigation Dept.	1.109	Ranni
56	Meenvallom Mini Hydel Project	FCA11.2/KER/85/IP	22.12.00	Panchayat	1.150	Mannarghat
57	Construction of MCHR at Idamalayar	F(C)A/11.2/108/KER/Misc. 929	08.03.01	KSEB	2.570	Malayattur
58	Collection of sand from southern Circle	F(C)A/11.6/KER/MIN/827	20.07.01	KFD	10.452	Trivandrum, Ranni, Thenmala
59	Kuttiyadi HEP-Additional Extension Scheme	F(C)A/16.1/63/KER/HEP/1266	20.09.01	KSEB	11.200	Kozhikode
60	Kerala Blind School,Muttam	F(C)A/11.2/92/KER/BC/1443	16.10.01	Kerala Federation of the Blind	1.210	Kothamangalam
61	400 KV DC-Madurai-Trivandrum	8-9/200-FC	03.04.02	PGCIL	57.907	Punalur, Thenmala
62	400 KV DC Madurai-Thiruvananthapuram line	GO(MS)No.32/2002/F&WLD	25.07.02	PGCIL	23.920	
63	Renewal of lease to RPL	8-27/2001-FC	22.04.03	RPL	2,193.770	Punalur
64	Rehabilitation of Tribals FP/KL/Other/420/2002	F.No:8-16/2002 FC	06.02.04	State Govt.	7,693.226	Various Divns.
65	Diversion of Irrigation component at Pamba-Kakki	No:KLB-026/2004-BAN	27.12.04	Irrigation Dept.	1.443	Ranni
66	Kuttiady Additional Extension scheme	F©A/16.1/KER/HEP/68	13.01.05	KSEB	1.650	Kozhikode
67	Mankulam HEP Project	4KLC 089/2005-BAN/4221	15.04.05	KSEB	11.913	Munnar
68	Diversion of Forest Land for Nilakkal Base campe for Sabarimal Pilgrims	F.No::8-30/2005 FC	07.06.05	TDB	110.524	Ranni
69	Palakapandy diversion scheme	4-KLB069/05 BAN	29.06.05	Irrigation Dept.	3.375	Nemmara

70	Diversion of Forest Land is Periyar Tiger Reserve for development of Sabarimala	F.No:8-70/2005. FC Govt.of India, New Delhi	12.09.05	TDB	12.675	PTR West
71	Farm Tourism Project	F(c)A-11.2/121/KER/Mi	23.09.05	PCK	2.000	Chalakkudy
72	Nenmara-Nelliampathy road	4-KLB175/06-BAN	19.10.06	PWD	4.047	Nemmara
73	Mysore-Kozhikode Power line	GO(Rt)No. 454/07/F&WLD	08.08.07	PGCIL	39.842	Wayanad (S) (N) & KKD
74	For fixing electric line	GO. IMoEf No. 4KLC 244/2006	04.10.07	Power grid corporation	10.230	
75	Koodamkulam Atomic Power Project	F.No.8-47/07-FC	13.11.07	PGCIL	47.702	
76	Meenvattam SHEP	GO(Rt)No. 216/08/F&WLD	25.04.08	KSEB	1.150	
77	Allathodu Tribal Colony	GO(Rt) No. 346/2008/F&WL	03.07.08	KSEB	1.624	Ranni
78	Re-routing 400 KV line Udumalpet Thrissur Near Kuthuran Hills	4 KLB 510/2008-BAN/2679/15.07.2008	15.07.08	PGCIL	2.047	Peechi Wild Life
79	Koodankulam Power Project	4 KLB 187/2006-BAN/2149	31.03.08	PGCIL	1.058	
80	400 KV line	4KLB 333/2007-BAN/4135/24.03.2009	24.03.09	PGCIL	1.624	
81	Electrification of Kattachira Kudppanakkunu Tribal colony	4KLB 529/2008-BAN/30.04.2009	30.04.09	KSEB	4.955	Ranni
82	Thottiyar Hydro Electric Project	4KLB 090/2005/BAN/5154	11.06.07	KSEB	3.813	Munnar
83	Peruvatharamuri Small Hydro Electric Project	4-KLC 107/2006-BAN/9489	10.08.11	KSEB	6.480	Ranni
84	Fish landing centre at Chaliyar in Beypore Thope	4-KLB 781/2011-BAN/9985	25.10.11	KIDC	2.064	Kozhikode
85	CNG Pipe line in Kochi	4-KLB 825/2011-BAN/607	08.02.12	GAIL	4.330	Palakkad
86	Peechi - Vazhani Wildlife Sanctury NH-47	4 KLC 844/2011/BAN/1669	07.08.12	NHA1	13.950	Wildlife Division, Peechi
87	Widening of NH47 between Vadakanchery and Thrissur	4-KLC 844/2011-BAN/3408	14.05.13	NHA1	13.950	Thrissur and Peechi Vazhani

88	Diversion of forest land for electrification of Chembanaruvi colony in Mannarappara	4-KLB 070/2005-BAN/1162	13.12.16	KSEB	4.400	Punalur (3.88) Konni (0.52)
89	Pottayilludavu Malavaram for Christian National Evangelism	F.No. 4-KLB 906/2012-BAN/627 GO(Rt) No. 330/2021/F&WLD	16.09.21 16.10.21	Christian National Evang. Commission	1.130	Palakkad
	Total area diverted (more than 1.00 Ha)				**41,179.869**	**Ha**

Forest Land Diverted for Non Forest Purpose as per Sec (2) F(C) Act, 1980 in Kerala (Stage II Approval) - Diversions having less than 1.00 Ha area

KERALA FOREST DEPARTMENT

Sl.No.	Name of the Project	GOI Order	Date	User Agency	Extent (ha)	Forest Division
1	2	3	4	5	6	7
1	110 KV KKD Sp	8-159/82 FRY (Cons)	08.06.82	KSEB	0.340000	KKD Spl
2	Tel.Exchange at Pamba	8-39/83 FRY(Cons)	08.03.83	Telecom	0.200000	Ranni
3	P&T Wireless Stn. Saramkuthi	8-55/83 FRY	03.05.83	Telecom	0.063000	Thekkady
4	DWS Kanhiramkolly Tribal Settlement,Kannur	8-428/83 FRY (Cons)	24.01.84	KWA	0.030000	Tellichery Spl
5	Ambayathodu-Palchuram Road	8-20/84 FRY (Cons)	10.04.84	Kottiyur Panchayat	0.833000	Tellichery Spl
6	DWS Bathery	8-442/84 FRY (Cons)	07.02.85	KWA	0.810000	Wayanad S(KKD)
7	11 KV line Vanamcode Tribal Colony	8-82/86 FRY (Cons)	28.05.86	KSEB	0.250000	NBR Spl
8	Post Office building,Edamon	8-34/84 FRY (Cons)	03.07.86	P&T	0.040000	Thenmala
9	Wind Generators (Captive power)	8-325/88 FC	20.09.88	KSEB	0.255000	Palakkad Spl.
10	Intake well cum pumphouse, Mylamoodu	8-295/87 FC	01.11.88	KWA	0.075000	Trivandrum
11	Telephone cable, Peringamala	8-523/88 FC	05.01.89	Telecom	0.001000	Trivandrum
12	11 KV line Vennacode Tribal Sett.	8-128/89 FC	10.04.89	KSEB	0.900000	NBR South
13	Pipeline in Mannappattuchira	8-334/89 FC	09.08.89	Irrigation Dept.	0.086000	Malayattur
14	LT 3 phase liine to Parkuthu	8-524/88 FC	12.09.89	KSEB	0.240000	Kothamangalam
15	SP line to Areeswaram temple	8-475/89 FC	13.12.89	KSEB	0.020000	Trichur
16	Nedumboi sub-station	8(B)-(4)6/89 FC(S)	26.12.89	KSEB	0.113000	Wayanad N
17	Valve, generator, Peppara Project	8(B)-8-1/89 FC (S)	18.01.90	KSEB	0.630000	Trivandrum
18	Borewell and pipeline Kadakkamon Depot	8(B)-(7)4/89 FC (S)	05.02.90	C.Ground Water Board	0.012000	Punalur
19	Drinking Water Supply, Moozhickal	8(B)-(7)5/89 FC (S)	22.02.90	KWA	0.365000	Thekkady WL
20	LT Line to Kochadappupara	8(B)-(4)7/89 FC (S)	23.02.90	KSEB	0.080000	Trivandrum

21	Drinking Water Supply, Thenmala	8(B)-(7)8/89 FC (S)	23.02.90	TML Panchayat	0.261000	Thenmala
22	LT kine Illithode-Mulamkudi	8(B)-(4)8/89 FC (S)	06.04.90	KSEB	0.450000	Malayattur
23	ANERT Wind Project	8(B)-(13)1/89 FC (S)	23.04.90	ANERT	0.054000	Palakkad-Trivandrum
24	Pipeline in Kakkinad Tribal Sett.	8-233/88 FC	08.05.90	PHED	0.020000	Trichur
25	St.Thomas Ch. Burial ground, Thevarmalai	8(b)(XV)-4(90) FC (S)	25.07.90	Revenue	0.400000	Ranni
26	11 KV line Konni-Manneera	8(B)-(4)3/89 FC (S)	13.09.90	KSEB	0.035000	Konni
27	Hospital Kannoth	8(B)-8/90 FC (S)	09.01.91	Rural Devp. Dept.	0.404000	Kannur
28	Extension of pre-Act lease	8(B)(1)-3/90 FC(S)	28.01.91	T.P.Kuriakose,MLTR	0.016000	Malayattur
29	Approach road, Manakayam	8(B)-9/90 FC(S)	31.01.91	PWD	0.084000	Ranni
30	Weir across Odakunnu at Dhoni	8(B)-(1)1/90 FC(S)	14.08.91	MID Palakkad	0.033000	Palakkad
31	Pumphouse, Varandarapalli	FCA/11.2/IP/KER	20.08.91	Irrigation Dept.	0.010000	Chalakudy
32	Trichur-Shoranur Road (Veloor Feeder)	FCA/11.2/3-RC/KER	20.08.91	PWD	0.062000	Trichur
33	Ambalapad Vanitha Vyavasaya Sangham	FCA/12.2/5-BC/KER	08.10.91	Vanitha Sangham	0.080000	Trichur
34	UFH set Kerala Police,Meenimparamala	FC(A)11.2/2/KER	22.09.92	Kerala Police	0.120000	Nemmara
35	Renewal of pre-Act lease,Telecom	FCA11.2/1/TC/KER	23.09.92	Telecom	0.006000	Trichur
36	LT Line, Kothamangalam	FCA11.2/TL/KER	23.09.92	KSEB	0.051000	Kothamangalam
37	Telephone line 5star estate,Chalakudy	FCA11.2/3/KER	08.02.93	Telecom	0.032000	Chalakudy
38	LT line to Venniyani Amb.colony,Kthm	FCA11.2/12/TL/KER(121)	11.02.93	KSEB	0.771000	Kothamangalam
39	UHF Stn Police, Peramkottamala, Tvm.	FCA11.2/KER/52/FC(194)	26.04.93	Kerala Police	0.120000	Trivandrum
40	Laying UG cable from Illithode to Maramuri	FCA/11.2/KER/53/TL(195)	23.02.94	Telecom	0.350000	Malayattoor
41	Telephone line MTR	FCA11.2/KER/53/TL(195)	23.02.94	Telecom	0.350000	Malayattur
42	Road to Ind.Devpt.Area Palakkad	FCA11.2/KER/63/RC(243)	14.02.95	DIC Palakkad	0.002000	Palakkad

43	Vilakkuvattom CSI Church	FCA11.2/KER/59/Misc.	26.07.95	CSI	0.404000	Punalur
44	3P line Kothamangalam	FCA11.2/KER/65/TL(246)	18.08.95	KSEB	0.045000	Kothamangalam
45	LiftIrrigation, Thayyur, Trichur	FCA11.2/KER/64/IP/244	30.08.95	Irrigation Dept.	0.088000	Trichur
46	Footbridge, Kodenchery Panchayat	FCA11.2/KER/62/Misc.	24.06.96	Panchayat	0.100000	Kozhikode
47	LV line Tholpetti-Anappara	FCA11.2/KER/70/TL(266)	08.08.96	KSEB	0.980000	Wayanad N
48	Causeway at Kakathode	FCA11.2/KER/77/RC/303	13.01.97	Dstt. Admn. PTHA	0.143000	Konni
49	Temporary shops Sabarimala Route	FCA11.2/KER89/Misc.	10.10.97	KFD	0.463000	Ranni
50	Sand for Travancore DB	FCA16.1/59/KER/MIN	23.10.97	TDB	0.403000	Ranni
51	Telephone line, Cheenikuzhi Coupe road	FCA11.2/81/KER/TC	24.03.98	Telecom	0.111000	Kothamangalam
52	Microwave Station,Telecom Laha	F(C)A/11.2/KER/89/IC	18.05.98	Telecom	0.202000	Ranni
53	DWS Vellikulangara, Chalakudy	FCA11.2/KER/55/DWS	10.06.98	KWA	0.271000	Chalakudy
54	Sewage treatment plant Sabarimala	FCA11.2/82/KER/Misc.	26.11.98	TDB	0.423000	Thekkady WL
55	Collection of sand from Chalakudy River	F(C)A/11.2/89/KER/SBQ/MIN	22.01.99	KFD	0.950000	Chalakudy
56	Kavarampilly Panchayat Lift Irrigation	FCA11.2/99/KER/IP	27.05.99	Panchayat	0.236000	Vazhachal
57	Electric line to Nayattukundu Col.	FCA11.2/88/KER/TL	17.11.99	KSEB	0.510000	Chalakudy
58	Checkdam at Kunnar	FCA16.1/KER/Misc/88	02.02.00	TDB	0.200000	Thekkady WL
59	Electric line Anchal	FCA11.2/100/KER/TL/465	29.05.00	KSEB	0.018000	Punalur
60	Anamala-Periachola Road	FCA11.2/103/KER/RC	19.09.00	KFD	0.030000	Nemmara
61	Underground cable Machad Range	11-9/98-FC	16.10.00	Telecom	0.088000	Trichur
62	Water supply to Thekkumkara Panchayat	FCA11.2/104/KER/Misc	10.01.01	Panchayat	0.049000	Trichur
63	Bridge at Edathara Kattachikadavu	FCA11.2/105/KER/3304	10.01.01	PWD	0.049000	Konni
64	Gas Pipeline Kavasseri	FCA11.2/99/KER/Misc	15.02.01	Petronet	0.758000	Trichur

65	Lower meenmutty SHEP	F(C)A/11.2/107/KER/HEP/36679	22.02.01	KSEB	0.265000	Trivandrum
66	DWS Malampuzha Panchaya, Palakkad	FCA11.2/98/KER/DWS/3795	02.03.01	Panchayat	0.095000	Palakkad
67	Electric Transmission line, Malayattur	FCA11.2/94/KER/TL/4021	27.03.01	KSEB	0.148000	Malayattur
68	AR Water Supply scheme to Koodal & Enadimangalam	FCA11.2/4/DW/KER/4022	27.03.01	KWA	0.012000	Punalur
69	Water Supply, Madakkathara Panchayat	F(C)A/11.2/102/KER/DWS/350	20.05.01	KWA	0.238000	Thrissur
70	Electricline, Palode	F(C)A/11.2/109/KER/1265	20.09.01	KSEB	0.078000	Trivandrum
71	11 KV line Konni	F(C)A/11.2/111/KER/TL	04.01.02	KSEB	0.825000	Konni
72	Peppara SHEP	F(C)A/11.2/1/BC/KER/275	10.05.02	KSEB	0.300000	Trivandrum
73	UG Cable, Nilakkal	GO(Rt)No206/02	06.07.02	KSEB	0.033000	Ranni
74	Laying underground pipeline	GO(Rt)No207/02/F&WLD	06.07.02	KWA	0.011000	Kothamangalam
75	Mundakkayam-Koruthodu Road	F(C)A/11.2/114/KER/RC/793	19.07.02	PWD	0.857000	Kottayam
76	Bridge at Vellilappara	F(C)A/11.2/115/KER/RC/1296	30.09.02	PWD	0.700000	Chalakudy-Vazhachal
77	Cheristream	FCA/11.2/119/KER/HEP/980	12.08.03 28.10.03	KSEB	0.060000	Kottayam
78	Footbridge in Keezhayam	F(C)A/11.2/112/KER/Misc	19.05.04	BDO	0.029700	Punalur
79	Intake arrangements at Kallar	F(C)A/11.2/124/KER/Misc/653	22.06.04	KWA	0.042025	Ranni
80	Kinginithode-Pothumattam Road	F(C)A/11.2/118/KER/RC/6	23.06.04	Panchayat	0.180000	Kothamangalam
81	Microwave Tower at Vythiri	F©A/11.2/122/KER/1007	21.07.04	Escotel Mobile	0.040000	South Wayanad
82	Road link between Chalakudy and Vazhachal	No.F(C)/A/11.2/127/KER/RC/1220	16.08.04	PWD	0.582000	Vazha & Chalakudy
83	Kannavam Police Stn.	F(C)A/11.2/121/KER/Misc	08.09.04	Police Dept.	0.109200	Kannur

84	Underground electric cable in Cherukara	GO(Rt)No.61/05/F&WLD	29.01.05	KSEB	0.012000	Punalur
85	underground low tension cable through existing comp road	G.O.(Rt)No.62/05/F&WLD	29.01.05	KSEB	0.021000	Punalur
86	under ground electic cable in Agasthyamala Biosphere reserve.	G.O.(Rt)No.145/05/F&WLD	15.03.05	KSEB	0.121000	Thiruvanantha puram
87	underground electric cable in the habitat of Nedumpacha area	GO(Rt)No:160/05/F&WLD	21.03.05	KSEB	0.071700	Punalur
88	electric line to the forest settlement in Nathikal in Anchal Range	GO(Rt)No.220/05/F&WLD	06.04.05	KSEB	0.104000	Punalur
89	construction of check dam across chittar river at Kundalamkuzhy	GO(Rt)No.222/05/F&WLD	07.04.05	Peringamala Grama Panchayath	0.048000	Thiruvanantha puram
90	underground cable to Kadamanpara settlement	GO(Rt)No:314/05/F&WLD	06.06.05	KSEB	0.024000	Thenmala
91	construction of well-cum pump house at Palavanpady	G.O(Rt)No.315/05/F&WLD	06.06.05	Grama Panchayath	0.020200	Malayattoor
92	Jawahar Navodaya Vidyalaya. Construction well-cum pump house and water supply line	GO(Rt)No:332/05/F&WLD	14.06.05	Jawahar Navodaya Vidyalaya	0.023000	Trivandrum
93	underground cable to Villumala Perankovil settlement	GO(Rt)No:359/05/F&WLD	25.06.05	KSEB	0.012000	Thenmala
94	Overhead electric line through forest area in Kuttichal Grama Panchayath	G.O.(Rt)No:384/06/F&WLD	11.07.05	KSEB	0.193600	Trivandrum
95	Kariyathanpara Water Supply Scheme	G.O.(Rt)No:468/05/F&WLD	27.08.05	Team leader cost ford Koorachundu	0.025300	Kozhikode
96	Sangamam Water Supply Scheme	G.O.(Rt)No:510/05/F&WLD	19.09.05	team leader cost for, KRWSS Koorachundu	0.002730	Kozhikode
97	swimmiing Pool developed in Nanniyode Grama Panchayath	G.O.(Rt)no:596/05/F&WLD	01.10.05	Grama Panchayath	0.009060	Trivandrum
98	Electrification of Nilakkal base camp.*	G.O.(Rt)No:618/05/F&WLD	16.11.05	KSEB	0.210000	Ranni

99	Checkdam across Chittar river	G.O.(Rt)No:662/05/F&WLD	07.12.05	TBGRI	0.000413	
100	Electrification of Vellaram Padam Chettichira ara	G.O.(Rt)No>668/05/F&WLD	08.12.05	KSEB	0.185000	Chalakudy
101	Electrtification of Onthupacha Thakaraman Area	G.O.(Rt)No:3/06/F&WLD	02.01.06	KSEB	0.006500	Punalur
102	Electrification of Valiyarappacha	G.O.(Rt)No:4/2006/F&WLD	02.01.06	KSEB	0.004000	Punalur
103	Under ground cable through forest area in Vazhachal division, Sholayar range.	G.O.(Rt)No:80/06/F&WLD	08.02.05	KSEB	0.008000	Vazhachal
104	Drinking Water facilities in 4 tribal colonies	G.O.(Rt)No:228/06/F&WLD	15.05.06	Grama Panchayath	0.061500	Vazhachal
105	Electrification of church building at Myckamon in Pathanapuram	G.O(Rt)No.300/05/F&WLD	10.07.06	KSEB	0.004000	Punalur
106	CSI Church, Vilakkuvettam	F©A/11.2/KER/59/Misc	10.08.06	Bishop CSI Church	0.404000	Punalur
107	Chalakudy-Vazhachal Road			PWD	0.210000	
108	Chalakudy-Vazhachal Road			PWD	0.372000	
109	Diversion of 0.027 ha of forest land for laying underground pipelines to provide drinking water facilities in Ranni Division.	GO(Rt)No:349/2006/F&WLD	19.08.06	Perunad Grama Panchayath	0.027000	Ranni
110	Diversion of 0.01155 ha of forest land in Goodrical Forest Range for laying underground cable extension of electric line to Nalpathekkar Tribal settlement in Ranni Division.	G.O.(Rt)No:442/06/F&WLD	31.10.06	KSEB	0.011550	Ranni
111	Jalanidhi project in Sholayar Grama Panchayat	GO(Rt)No.453/06/F&WLD	02.11.06	Sholar Grama Panchayat	0.500000	Mannarghat

112	Diversion of 0.146 ha of forest land for laying underground line to provide drinking water facilities in Ranni Division under the Nilakkal Swajaldhara Project.	GO(Rt)No:468/06/F&WLD	08.11.06	Perunad Grama Panchayath	0.046000	Ranni
113	Diversion of 0.54 ha of forest land for laying underground cable for Telecommunication in Ranni Division.	G.O(Rt)No:472/06/F&WLD	13.11.06	BSNL	0.540000	Konni
114	Diversion of 0.0012 ha of forest land for laying underground electric cable in Padavamppara Ezhuvattoor area	G.O(Rt)No:476/06/F&WLD	14.11.06	KSEB	0.001200	Punalur
115	Construction of a permanent school building at Gavi in favor of Seethathode Grama Panchayat	G.O.(Rt)No:531/06/F&WLD	16.12.06	Seethathode Grama Panchayat	0.020300	Ranni
116	For drawing electric line through 1969 Teak plantation	G.O.(RT)No:554/06/F&WLD	27.12.06	KSEB	0.092000	South Wayanad
117	Drinking water facilities at Tirunelly Panchayath	G.O.(Rt)No:558/2006/F&WLD	30.12.06	Kerala Water Authority	0.085000	North Wayanad
118	For School building Pulpalli gramma panchayath	GO(Rt)560/06/F&WLD	30.12.06	Pulpally Grama Panchayath	0.030000	South Wayanad
119		GO(Rt)No.15/07/F&WLD	09.01.07	KSEB	1.050000	Kozhikode
120	Laying UG cable Chalakkayam Pampa road	4-KLB 292/07/BAN	27.02.07	KSEB	0.195000	
121	Microwave Tower at GAVI	4-KLB 274/07/BAN	11.05.07	BSNL	0.120000	
122	For drinking water facilities	GO(Rt) No. 211/08/KFD	21.04.08	KFDC	0.078000	
123	Construction of well-cum pump house at Palavanpady			Kuttampuzha GP	0.020200	Thrissur
124	Electrificationof Velamplavu Tribal Colony	4KLB 328/2007-BAN/2825	14.08.08	KSEB	0.353500	
125	Electrification of Chelikkuzhi Tribal Colony	GO(Rt) No 544/2008/F&WLD	06.11.08	KSEB	0.040000	Ranni

126	Electrical cable for Micamen area in Peravanthoor	GO(Rt)No. 508/08/F&WLD	18.10.08	KSEB	0.000800	
127	Electrification of Chozhiyakode Company kunnu area	Go(MS)no. 512/2008/F&WLD	20.10.08	KSEB	0.004200	Punalur
128	Electrificatin of Cherukarakani Tribal Settlement	GO(Rt) No. 3631/2008/F&WLD/23.12.2008	23.12.08	KSEB	0.325000	
129	Electrification of Attumampuram ST Settlement colony	GO(Rt) No. 403/2008/F&WLD	31.07.08	KSEB	0.525000	
130	Kakkadumpoyil SC/ST Colony	GO(Rt) No. 602/2008/F&WLD	09.12.08	KSEB	0.036000	
131	Construction of General Water Tank at Karayalar metu	GO(Rt) No. 345/2008/F&WLD	10.06.08	KWA	0.013100	
132	Electrification of kurumbanmoozhi-manakayam Tribal colony	GO(Rt)No. 302/2008/F&WLD	03.07.08	KSEB	0.949500	Ranni
133	Electrification of mukkalampadu area in Chaliakkara region	GO(Rt) No. 513/2008/F&WLD	20.10.08	KSEB	0.010000	
134	Electrification of Kakkaponnu area	GO(Rt) No. 458/2008/F&WLD/18.09.2008	18.09.08	KSEB	0.011800	
135	Anakkulam - Onthaupacha road	GO(Rt)No. 80/2008/F&WLD	11.02.08	BSNL	0.315000	Punalur
136	Drinking water supply scheme in KFDC Estate	GO(Rt) No. 211/2008/F&WLD	21.04.08	KWA	0.078000	
137	Laying OFC for electrification in Elappacode Tribal colony	GO(Rt) No. 621/2008/F&WLD	19.12.08	KSEB	0.040000	Ranni
138	Thottiyar Hydro Electric Project	4KLB 090/2005/BAN/5155	14.07.09	KSEB	0.999600	Munnar
139	Electrification of vilongady ot Polanna in Padiri Reserved forest	GO(Rt) No. 380/2009/F&WLD	13.08.09	KSEB	0.300000	
140	Construction of buliding for Government. College, Munnar	4KLB 533/2008-BAN/473	09.06.09	Education Dept	1.000000	Munnar
141	Electrification of resid building of jacob kuriakose	4KLB 654/2009-BAN/5384	21.08.09	KSEB	0.007020	Ranni

142	Installation of Telecom Tower by BSNL & UG cable by EB at Vazhachal & Athirappally	4KLB 645/2009-BAN/5663	18.09.09	BSNL	0.002000	Vazhachal Division
143	Installation of Telecom Tower by BSNL & UG cable by EB at Vazhachal & Athirappally	4KLB 644/2009-BAN/5664	18.09.09	KSEB	0.012000	Vazhachal Division
144	Installation of Telecom Tower by BSNL & UG cable by EB at Vazhachal & Athirappally	4KLB 643/2009-BAN/5677	23.09.09	KSEB	0.012000	Vazhachal Division
145	Installation of Telecom Tower by BSNL & UG cable by EB at Vazhachal & Athirappally	4KLB 642/2009-BAN	25.09.09	BSNL	0.002700	Vazhachal
146	Electrification of Thachacodu in Piravanthoor	4KLB 187/2006-BAN/5927	29.10.09	KSEB	0.004800	Punalur
147	Electrification of Kuryanayam colony	GO(Rt) No. 522/09/F&WLD	10.11.09	KSEB	0.004000	Ranni
148	Electrification of Njanduthodu colony	GO(Rt) No. 523/09/F&WLD	10.11.09	KSEB	0.029000	
149	Diversion of CSI church vilakkuvettor for burial ground	F(C)A/11.2/KER/59/Misc	18.11.09		0.404000	
150	Electrificationof resid building of Kurain Mathew	GO(Rt)No. 465/2010/F&WLD	13.04.10	KSEB	0.005400	
151	Electric Cable for Vegola Chathup SC Colony	4KLB 636/2009/BAN/704	29.04.10	KSEB	0.029000	
152	Maintenance Nachavayal canal	4KLB 695/2010-BAN/7771	13.08.10	Irrigation Dept.	0.071200	
153	Electrification of Kumarankudy Estate	GO(Rt) No. 517/2010/F&WLD	02.12.10	KSEB	0.292000	
154	Laying of UG Cable Kadamancodu, Kuthirikutty Chathupu	GO(Rt)No. 532/2010/F&WLD	15.12.10	KSEB	0.006000	
155	Electrification of Karikkom Chathup SC Colony	GO(Rt)No. 385/2011/F&WLD	24.08.11	KSEB	0.131000	
156	Construction of Melapadam Bridge	4-KLB563/09/BAN/9634	29.08.11	PWD	0.147400	Nilambur N

157	Electrification of Vellilamparappu area	GO(Rt)No. 436/2011/F&WLD	29.09.11	KSEB	0.011800	
158	Electrification of Kelankavu Dharbhapana	GO(Rt)No.522/2011/F&W	07.12.11	KSEB	0.004200	
159	Electrification of Kambancodu Chathup in Karumpuzha Grama Panchayath	GO(Rt)No. 35/2012/F&WLD	19.01.12	KSEB	0.013000	
160	Electrification of Udumbannur-Vannappuram	GO(Rt)No. 38/2012/F&WLD	20.01.12	KSEB	0.140000	Kothamangalam
161	Thrikkalathur - Veettoor Road	GO(Rt)No.174/2012/F&WLD	29.03.12		0.192000	Malayattoor
162	Electrification of Arancode in Kannamkundu	4-KLB 811/2011-BAN/1266	29.05.12	KSEB	0.005625	Nilambur N
163	Erect 45 Solar lamps in Bhoothankettu - Vadattupara, Pandaram city-Chakkimedu	GO(Rt)No.406/2012/F&WLD	07.08.12	KSEB	0.001620	Malayattoor
164	Maintenance of kinginithodu-Pothumattom Road	GO(Rt)No. 430/2012/F&WLD	24.08.12	PWD	0.180000	Kothamangalam
165	Laying OFC by BSNL in Kondazhy-Kayampoovam	GO(Rt)No. 444/2012/F&WLD	07.09.12	BSNL	0.018000	
166	Kanamala Bridge in Erumeli Pampa Road	4-KLB 771/2011-BAN/186	21.09.12	PWD	0.542000	Ranni
167	Construction of new river guage station at Vettilappara under Hydrology section, Chalakkudy	GO(Rt)No.231/2013/F&WLD	19.06.13		0.008100	Chalakkudy
168	Electrification of residence of Sri. Abdul Vaheed, Chithara Village	GO(Rt)No. 294/2013/F&WLD	20.08.13	KSEB	0.002940	Punalur
169	Construction of Panickankudi-Kombodinjal-Ponmudi Road (Beenamol)	4-KLB898/12/BAN/4019	20.08..13	PWD	0.086400	Munnar
170	Construction of 11 KV on line from Neduvannurkadavu toKattilappara	GP(Rt)304/13/F&WLD	21.08.13	KSEB	0.960000	Thenmala
171	Electrifical line to Ambedkar ST Colony	GO(Rt)306/13/F&WLD	21.08.13	KSEB	0.015500	Trivandrum

172	Electridicationof Sivapuram Harijan Colony	GO(Rt)No.321/13/F&WLD	30.08.13	KSEB	0.018000	Pualur
173	Construction of weir across river Kallar	GO(Rt)No. 384/2013/F&WLD	03.09.13	KWA	0.047900	Ranni
174	Drawing electric line in Sasthanada SC Colony	GO(Rt)No.454/2013/F&WLD	16.11.13	KSEB	0.065000	Trivandrum
175	Electrificationof Mruthumoodu Chathup SC Colony	GO(Rt)No. 475/13/F&WLD	26.11.13	KSEB	0.003100	Punalur
176	Widening and imrovement of hairpin curves of Ghat Stretch NH 212	KLB 927/2013-BAN/4737	22.01.14	PWD	0.919680	Kozhikode
177	Dringking water pipeline to Kanakamala Kurishumudy church	GO(Rt)93/2014/F&WLD	26.02.14	BDO Kodakara	0.801600	Chalakkudy
178	Construction of check dam at Pillathode	GO(Rt)114/2014/F&WLD	11.03.14	BDO, Kodakara	0.200000	Chalakkduy
179	Installing River guage post in Kuranpuzha river near Valathode at Nilambur	GO(Rt)No. 123/14/F&WLD	13.03.14	KSEB	0.000003	Nilambur (N)
180	Stringing LT Power line along forest at Pandy, Arthiya road in Delampady Panchayath	GO(Rt)223/2014/F&WLD	26.05.14	KSEB	0.024000	Kasaragod
181	Electrification of Mulappuram Koottakallu area	GO(Rt) No. 301/2014/F&WLD	01.07.14	KSEB	0.411900	Kothamangalam
182	Electrification of Sri. Chandraguptha pillai at Kulatharkaitha	GO(Rt)No.368/2014/F&WLD	13.08.14	KSEB	0.060000	Thiruvanantha puram
183	Electrification of Pezhumoodu area in Piravanthoor GP	GO(Rt)No.382/2014/F&WLD	18.08.14	KSEB	0.015200	Punalur
184	Drawing electric line in Kulathumon temple			KSEB	0.030000	Konni
185	Laying UG cable for electrification of Meervila area in Kadassery	GO(Rt) Nodal Officer.442/2014/F&WLD	26.09.14	KSEB	0.036000	Punalur
186	Construction of electric lines in Appoopanthode	GO(Rt) 448/2014/F&WLD	29.09.14	KSEB	0.320000	Konni
187	Construction of electric line in Thattakudy Church In Naduvathumoozhi	GO(Rt)No. 449/2014/F&WLD	29.09.14	KSEB	0.020000	Konni

188	Electrification of Achancoovil Pallivasal area	GO(Rt)491/2014/F&WLD	21.10.14	KSEB	0.800000	Achenkovil
189	Pipeline along the side of PWD road passing through forest land in Muliyar Panchayath	GO(Rt)489/2014/F&WLD	21.10.14	PWD	0.105000	Kasaragod
190	Electrification of Mallampara Colony in Delampady Pachayath	GO(Rt)No.490/2014/F&WLD	21.10.14	KSEB	0.017500	Kasaragod
191	Laying 11 KV UGC along forest road from Vilakkumaram	GO(Rt)No.550/14/F&WLD	25.11.14	KSEB	0.280000	Thenmala
192	Electrification of Mullumala chathup area	GO(Rt)No.594/2014/F&WLD	18.12.14	KSEB	0.001120	Konni
193	Electrification of Vadakkumala ST colony in East Eleri Panchayath under RGGVY Scheme	GO(Rt)No.2/2015/F&WLD	06.01.15	KSEB	0.112000	Kasaragod
194	Laying UG cable electrification of Vellaraikaya area Adoor Reserve Forest area	GO(Rt)64/2015/F&WLD	12.02.15	KSEB	0.043800	Kasaragod
195	Laying Electric line along the side of Meempatty-Mulakuthottah Road in Pasukkadav section of Kuttiyady Range	GO(Rt)63/2015/F&WLD	12.02.15	KSEB	0.021000	Kozhikode
196	Providing drinking water facilities in Painav in Nagarampara Range	GO(Rt)No.167/2015/F&WLD	20.04.15	KWA	0.040000	Kottayam
197	Diversion of joint water supply scheme in Nanniyode and Anad GP	GO(Rt)190/2015/F&WLD	06.05.15	Nanniyode GP	0.039000	Thiruvananthapuram
198	Laying of pipeline along the side of PWD road in Muliyar Panchayath	GO(Rt)193/2015/F&WLD	11.05.15	KWA	0.175000	Kasaragod
199	Diversion of forest land in drawing electric lines in respect of electrification of Olippara - Varikkamattom	GO(Rt)404/2015/F&WLD	03.09.15	KSEB	0.334500	Kothamangalam
200	Diversion of forest land for laying UG cable in respect of electrificationof Mannookkad SC colony	GO(Rt)405/2015/F&WLD	03.09.15	KSEB	0.108000	Kothamangalam
201	Diversion of forest land for providing 11 KV UG electric feeder for BSF Camp Kainoor	GO(Rt)407/2015/F&WLD	03.09.15	KSEB	0.019250	Thrissur

202	Diversion of forest land for laying 12" dia cross country LPG pipeline from Kochi (Refinery) to Palakkad (Kanjikode) connecting Udayamperoor to IOC plant	4-KLB 1086/2016-BAN/61 (TSR & NMRA) 4-KLB 1086/2016-BAN/1259	18.04.16 01.01.18	KSPPL	0.758000	Thrissur (0.1446) Nenmara 0.138) Peechi WL (0.4754)
203	Diversion of forest land of Kacherikadavu bridge	4-KLB 1009/2014-BAN/1002	10.11.16	PWD	0.284500	Chalakudy
204	Diversion of forest land for establishing 8 MW Anakampoil HEP at Kozhikode	4-KLB 1085/2016-BAN/2039	01.02.17	M/s Anakampoil Power Pvt Ltd.	0.250000	Kozhikode
205	Diversion of forest land for electrification of Kuzhimattom area of Udumbanoor GP	GO(Rt)No.72 /2017/F&WLD	27.02.17	KSEB	0.054000	Kothamangalam
206	Diversion of forest land for reconstruction of Murugan Panchal Bridge	GO(Rt)No.146/2017/F&WLD	12.04.17	PWD NH sub division	0.016000	Thenmala
207	Diversion of forest land for reconstruction of Kazhuthurutty Brdige	GO(Rt)No.145/2017/F&WLD	12.04.17	PWD NH sub division	0.018000	Thenmala
208	Diversion of forest land for electrification of Variyathukadu area	GO(Rt)No.155/2017/F&WLD	22.04.17	KSEB	0.011100	Thrissur
209	Diversion of forest land for providing service connection in favour of Sri. Raveendran Kani, Elavupalam, Thannimoodu, Ex-colony	GO(Rt)No.200/2017/F&WLD	27.05.17	KSEB	0.008000	Trivandrum
210	Diversion of forest land for laying UG OFC for Reliance Jio Ltd.	GO(Rt)No.383/2017/F&WLD	11.10.17	Reliance Jio Info com	0.020000	Munnar
211	Diversion of forest land for providing service connection in favour of Sri. Balakrishnan, Kumbalakode area	GO(Rt)398/2017/F&WLD	21.10.17	KSEB	0.021500	Thrissur
212	Diversion of forest land for UG cable for 11 KV line from Neeliplavu to Thannithode	GO(Rt)No.399/2017/F&WLD	21.10.17	KSEB	0.064000	Ranni
213	Diversion of forest land for cnstruction of Ponmudi Police Station	GO(Rt)No.408/2017/F&WLD	28.10.17	Dist. Police Chief, TVM	0.202343	Thiruvananthapuram

214	Diversion of forest land for service connection to Sri. Rajan, Thrissur	GO(Rt)No.411/2017/F&WLD	28.10.17	KSEB	0.019080	Thrissur
215	Diversion of forest land for Malakkappara Police Station	GO(Rt)No.414/2017/F&WLD	30.10.17	Dist. Police Chief, TSR (Rural)	0.072850	Vazhachal
216	Diversion of forest land for improvement of Vellanad-Chettachal road	GO(Rt)No.524/2017/F&WLD	30.12.17	Road Infrastructure Company Kerala Ltd.	0.320000	Trivandrum
217	Diversion of forest land to Joseph Kurian to Irrigation Canal	F(C)A/11.2/116/KER/IP/1261	01.01.18	Sri. Joseph Kurian	0.172000	NSC Kalady
218	Diversion of forest land for widening of two lane NH into six lane from Vadakkenchery to Mannuthy	GO(Rt)No.15/2018/F&WLD	09.01.18	NHA1	0.082000	Thrissur
219	Diversion of forest land for electrification of Veloorkara area of Udumbanoor GP	GO(Rt)no.278/2018/F&WLD	14.06.18	KSEB	0.865200	Kothamangalam
220	Diversion of forest land for electrification of Channamala SC Colony in Kulathupuzha	GO(Rt)No.285/2018/F&WLD	19.06.18	KSEB	0.028000	Thiruvananthapuram
221	Diversion of forest land for electrification of Mokkuvally area in Thodupuzha	GO(Rt)No.301/2018/F&WLD	25.06.18	KSEB	0.077000	Kothamangalam
222	Diversion of forest land for electrification of Cheenikala SC Colony in Anchal	GO(Rt)No.302/2018/F&WLd	25.06.18	KSEB	0.070000	Punalur
223	Diversion of forest land for electrification of Kochukoottakallu area of karimannoor GP	GO(Rt)No.303/2018/F&WLd	25.06.18	KSEB	0.122400	Kothamangalam
224	Diversion of forest land for electrification of Thazhethotty area of Karimannoor GP	GO(Rt)No.305/2018/F&WLD	25.06.18	KSEB	0.012900	Kothamangalam
225	Diversion of forest land for electrification of Smt. Kala, Prayag at Perumthoyil	GO(Rt)No. 306/2018/F&WLD	25.06.18	KSEB	0.002100	Punalur

226	Diversion of forest land for electrification of Manayathadam area in Thodupuzha	GO(Rt)no.311/2018/F&WLD	28.06.18	KSEB	0.070000	Kothamangalam
227	Diversion of forest land for stringing 1.8 KM ABC in Pazhayanoor and Elanad	GO(Rt)No.312/2018/F&WLD	28.06.18	KSEB	0.180000	Thrissur
228	Diversion of forest land for electrification of Kaithapara area in Thodupuzha	GO(Rt)No.317/2018/F&WLD	29.06.18	KSEB	0.073500	Kothamangalam
229	Diversion of forest land for electrification of Vattakkarikakam Colony in Kulathupuzha	GO(Rt)No.318/2018/F&WLD	29.06.18	KSEB	0.007350	Thiruvananthapuram
230	Diversion of forest land for the construction of Kulamavu Police Station in Idukki	4-KLB 693/2010/BAN/465	03.07.18	SP, Idukki	0.950000	Kothamangalam
231	Diversion of forest land for Smt. Baby	GO(Rt)No.50/2019/F&WLD	08.02.19	KSEB	0.022000	Thiruvananthapuram
232	Diversion of forest land for providing service connection to Sri. Shaju	GO(Rt)No.68/2019/F&WLD	16.02.19	KSEB	0.120100	Thiruvananthapuram
233	Diversion of forest land for Kommery Kunju veedu Colony road	GO(Rt)No.71/1029/F&WLD	19.02.19	PWD	0.204600	Kannur

234	Diversion of forest land for Sri. Prasad K.	GO(Rt)No. 79/2019/F& WLD	20.02.19	KSEB	0.008000	Thiruvanantha puram
235	Construction of Vadakkumpadam Thampurattiparabu road	F.No. KLB1201/20 19- BAN/1821	23.03.20	Pananchery GP	0.540000	Thrissur
236	Diversionof forest land for water scheme for seethathode Panchyath	F.No. 4-KLB 1230/2020/B AN/645 GO(Rt)No. 265/2020/F& WLD	24.09.20 22.10.20	KWA	0.200000	Ranni
237	Diversion of forest land for Hill Highway, Cherupuzha to Kolachal	GO(Rt)No. 56/2021/F& WLD	20.02.21	PWD	0.641480	Kasaragod
238	Diversion of forest land for weir in the upstream (Anakkulam stream at Kozhiyilakuthu)	GO(Rt)No.69 /2021/F&WL D	26.02.21	ABG Engineering Pvt. Ltd.	0.998000	Mankulam
239	Diversion of forest land for concreting Blavanakadavu-Kunchippara road	GO(Rt)No. 75/202/F&W LD	02.03.21	District Panchyat, Ernakulam	0.352500	Malayattoor
240	Diversion of forest land	GO(Rt)No.	20.03.21	Police	0.012160	Thrissur
241	Diversion of forest land for providing drinking water in Kodassery KIIFB	GO(Rt)No. 136/2021/F& WLD	28.04.21	KWA	0.114300	Chalakkudy

242	Diversion of forest land for 33 SC line from Puthukad to Pulikkany Thrissur	GO(Rt)No. 138/2021/F& WLD	30.04.21	KSEB	0.120000	Chalakkudy
243	Diversion of forest land for DMR Tier III Nenmara	GO(Rt)No. 168/2021/F& WLD	08.06.21	Police	0.020300	Nenmara
244	Diversion of forest land for implementation of Upper Shengulam SHEP	F.No. 4-KLB1180/2019/BAN/269	16.07.21	KSEB	0.950000	Munnar
245	Diversion of forest land for the construction of bridge to the Vellarikaya Tribal colony	GO(Rt)No. 60/2022/F& WLD	21.02.22	Delampady GP	0.006300	Kasaragod
246	Diversion of forest land for the purpose of Poovadka- Adukkamthotty - Nellithattu road	GO(Rt)No. 83/2022/F& WLD	06.03.22	Karadla GP	0.270000	Kasaragod
247	For providing drinking water under JJM 3 applicants in Melakode GP	GO(Rt)No. 117/2022/F& WLD	21.03.22	KWA	0.000900	Nenmara
248	Construction of bridge at Malampuzha Ring Road	GO(Rt)No. 280/2022/F& WLD	02.07.22	PWD	0.264000	Palakkad
249	Construction of bridge at Avanippara Tribal settlement	F.No. f-KLB1124/2017-BAN/875 GO(Rt)No. 495/2022/F& WLD	02.11.22 11.11.22	Tribal Development Officer, Konni	0.243000	Konni
	Total area diverted (less than 1.00 Ha)				**48.479399**	**Ha**

Attachment 4

Sl no	Division	Year	Details of Forest land diverted under FC act against each project proposal	Forest Area diverted (In Ha)	CA Proposed (In Ha)	CA carried out at designated sites		Amount of CA received	Total amount spend on CA	PCA proposed (In Ha)	PCA carried out at designated sites (In Ha)	Amount of PCA received	Total amount spend on PCA	Additional CA proposed	Additional CA carried out at designated sites	Amount of Additional CA received	Total amount spend on Additional CA	Amount available under State CAMPA as on 31.03.2023	Monitoring report	Remarks
						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
1	Ranni	1982	110KV TL FOR KAKKAD PROJECT	7.238	7.4 NFL	0	0			NA	NA	NA	NA							
2	Punalur, Thenmala, Konni & Ranni	1982	220KV TL SABARIGIRI - TRIVENDRUM	180.11	360.1 Ha NFL	0	360.1			NA	NA	NA	NA							
3	Malayattoor	1982	Release of 62 ha. of forest land in Malayattoor Forest Division, Ernakulam District for construction of Idamalayar Chalakudy 110 K.V. line.	62	62 Ha NFL (Thundathil Range, Malayatoor)	67 Ha (1964 TP Kurisumudy, NSC Kalady)		3125000	1285287	NA	NA	NA	NA							
4	Nilambur North	1984	CONSTRUCTION OF APPROACH ROAD TO MYLADI BRIDGE	1.1	2.2 Ha (Panayangode in Edavanna range)	0	2.2 Ha (Panayangode in Edavanna range)	468000		NA	NA	NA	NA							
5	Kannur	1984	CONSTRUCTION OF ROAD BETWEEN AMBAYATHODI - PALCHURRAM	0.8328	1.6656 Ha DFL (Kasargode Range, Kannur)	0	1.6656			NA	NA	NA	NA							
6	Munnar	1984	LOWER PERIYAR HEP	127	127 Ha NFL	103	0			NA	NA	NA	NA							
7	Periyar Tiger Reserve	1986	CONSTRUCTION OF COTTAGES AND SHELTER SHEDS	13.55	13.55	13.55	0			NA	NA	NA	NA							
8	Munnar	1986	220KV TL FROM IDUKKI TO UDAMALPAT	180.07	180.07 NFL	180.07	0			NA	NA	NA	NA							
9	Thiruvananthapuram	1987	DIVERSION OF 34.46 HA. OF FOREST LAND IN TRIVANDRUM DISTRICT FOR PUTTING UP THE AUGMENTED FACILITY OF VSSC - PSLV	34.46	34.46 Ha NFL (Orange farm at Nelliyampathy in Palghat District)	34.46	0			NA	NA	NA	NA							
10	Vazhachal	1988	CONSTRUCTION OF AN OPEN CHANNEL TO DIVERT SURPLUS WATER OF PORINGALKUTTU RESERVOIR	7.5	8 Ha NFL (Paringalkattu Project site, Vazhachal division)	8 Ha (Paringalkattu Project site, Vazhachal division)	0			NA	NA	NA	NA							
11	Malayattoor	1989	LAYING TEMPORARY PIPELINE AND C/O POWER HOUSE FOR PUMPING WATER TO MANAPPATTUCHIRA	0.086	0.086 Ha NFL (Idamalayar Canal, Malayattoor)	0.09	0			NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
12	Thenmala	1990	ACCELERATED RURAL WATER SUPPLY SCHEME TO THENMALA	0.261	0.261 NFL	0	0			NA	NA	NA	NA							
13	Thenmala & Punalur	1990	66KV TL FROM GENERATING PLANT AT THENMALA TO EDAMON SUB-STATION	14.1516	14.1516 Ha NFL (Chinnakanal village, Munnar Division)	14.1516	0			NA	NA	NA	NA							
14	Kothamangalam & Idukki	1990	DIVERSION OF FOREST LAND FOR LAYING 220 KV TRANSMISSION LINE FROM IDUKKI TO LOWER PERIYAR	25.585	25.585 Ha NFL (Chinnakanal village, Munnar Division)	25.59	0			NA	NA	NA	NA							
15	Thrissur	1990	LAYING OF 220KV TL TRICHUR TO KOZHIKODE	22.4	22.4 Ha NFL (Chinnakanal village, Munnar Division)	22.4	0			NA	NA	NA	NA							
16	Vazhachal	1990	CONSTRUCTION OF ANAKKAYAM SMALL HEP	8	8 Ha NFL (Charpa Range, Vazhachal)	8 (Chinnakkanal Village of Udumbanchola Taluk in Idukki District)	0	6006800		NA	NA	NA	NA							
17	Kothamangalam, Munnar & Idukki	1990	SETTING UP OF 220 KV D/C TL LOWER PERIYAR TO COCHIN	21.0545	21.0545 Ha NFL (Chinnakanal village, Munnar Division)	21.0545	0			NA	NA	NA	NA							
18	Thrissur	1990	400KV TL UDUMALPET - TIRCHUR	12.615	12.615 Ha NFL (Chinnakanaal village, Munnar Division)	12.62	0			NA	NA	NA	NA							
19	Idukki, Chalakudy & Vazhachal	1992	CONSTRUCTION OF 220 KV TL IN IDUKKI-ERNAKULAM - TRICHUR DIST.	11.347	11.347 Ha NFL (Chinnakanaal village, Munnar Division)	11.35	0			NA	NA	NA	NA							
20	Malayattoor	1995	Renewal of lease of 1.960 ha. of forest land in Thundathil Range of Malayattoor Forest Division in Ernakulam District diverted for Bhoothathankettu Hydro Electric Project with 24 MW capacity in favour of Deputy Chief Engineer, Civil Circle, KSEB, Kothamangalam.	1.96	1.96 Ha (Chinnakamal village, Munnar Division)	1.96	0	219520		NA	NA	NA	NA							
21	Malayattoor	1995	RURAL WATER SUPPLY SCHEME TO KOTTAPPADY PANCHAYAT	3.357	6.714 Ha DFL (Kottapara, Malayattoor Division)	0	6.714 Ha (Kottapara, Malayattoor Division)	90975		NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
22	Idukki, Pathanamthitta, Ernakulam, Thrissur, Kollam	1995	ASSIGNMENT TO PRESENT OCCUPANTS (AGRICULTURE OCCUPANTS)	28588.159	57176.318 Ha DFL (Neryamaryakam Range, Idukki)	0	57176.318			NA	NA	NA	NA							
23	Wayanad South	1996	KUTTIADI HEP AUGMENTATION SCHEME	223	220.143 Ha			18445432		NA	NA	NA	NA							
24	Ranni	1996	CONSTRUCTION OF KARIKKAYAM HYDRO ELECTRIC PROJECT	4.93	4.93 Ha NFL (Ullunkal, Chittar-Seethathode village, Ranni Division)	4.93	0	123250		NA	NA	NA	NA							
25	Ranni	1996	CONSTRUCTION OF ULLUNGAL SMALL HYDRO ELECTRIC SCHEME	1.82	1.82 Ha NFL (Ullunkal, Chittar-Seethathode village, Ranni Division)	1.82 Ha (Makkumchal in Adimaly range)	0	45500		NA	NA	NA	NA							
26	Mannarkkad	1996	CONSTRUCTION OF 220 KV LINE FROM PANJAL TO AREEKKODE	1.295	2.6 Ha DFL	0		96365		NA	NA	NA	NA							
27	Malayattoor	1997	DIVERSION OF 115.047 HA OF FOREST LAND IN ERNAKULAM AND IDUKKI FOR CONSTRUCTION OF MAIN CANAL OF IDAMALAYAR IRRIGATION PROJECT	115.047	115.047 (65.16 ha in Karapuzha, Wayanad Division and Distrct and 52.729 ha in Muttam, Kothamangalam Division, Ernakulam District)	117.889 (65.16 ha in Karapuzha, Wayanad Division and Distrct and 52.729 ha in Muttam, Kothamangalam Division, Ernakulam District)	0	2864000		NA	NA	NA	NA							
28	Ranni	1997	TEMPORARY STALLS/SHOPS ALONG PAMPA ROAD DURING SABARIMALAI SEASON	0.4625	0.5 Ha DFL (Vakkalar Top at Vadasserikara range)	0	0.5 Ha (Vakkalar Top at Vadasserikara range)			NA	NA	NA	NA							
29	Ranni	1998	CONSTRUCTION OF MICROWAVE STATION AT LAHA	0.202	0.404 Ha DFL (Rajampara, Ranni Division)	0	0.404 Ha (Rajampara, Ranni Division)	160000		NA	NA	NA	NA							
30	Kottayam	1998	CONSTRUCTION OF JAWAHAR NAVODAYA VIDYALA	11.7	23.4 Ha DFL (Vairamani, Munnar Division)	0	23.4	886900		NA	NA	NA	NA							
31	Chalakudy	1999	COLLECTION OF RUBBLE BY LOCAL PEOPLE- (TRICHUR-10.14 ,KALADY - 6.06,CHALAKUDDY - 6.43)	29.196	59.47 Ha DFL	0	59.47			NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
32	Kothamangalam	1999	DRAWING OF 11 KV LINE AND LT LINE TO PERINGASSERY TRIBAL SETTLEMENT	1.5	3 Ha DFL (Udumbannoor village, Thodupuzha taluk, Kothamangalam Division)	0	0			NA	NA	NA	NA							
33	Kothamangalam	1999	Construction of DVCR	1.9867	4 Ha NFL	0	4			NA	NA	NA	NA							
34	Ranni	1999	CONSTRUCTION OF 66 KV TL FROM PAMPA S.S. TO SABARIMALA TRAVANCORE DEVASOM BOARD	13.526	27.06 Ha DFL	0	27.06	1187000		NA	NA	NA	NA							
35	Chalakudy	1999	160 MW ADIRAPALLY HEP	138.6	277.2 Ha DFL	0	277.2			NA	NA	NA	NA							
36	Mannarkkad	1999	Diversion of 1.25 ha. (0.93 + 0.32) of forest land in Mukkali Forest station to Panthanthode in Agali Panchayat, Mannarkkad taluk, Mannarkkad Division, Palakkad District for construction of weir and leading channel from stream in favour of the Executive Engineer, Minor Irrigation Division, Palakkad. (0.9384 ha -Bhavani)	1.25	3 Ha DFL	0	3			NA	NA	NA	NA							
37	Mannarkkad	1999	Diversion of 1.15 ha. of forest land in Thuppanad at Meenavallam falls, Karimba Panchayat, Mannarkkad Division, Palakkad District for construction of a small Hydel Project - Meenavallam Micro Hydel Project in favour of the President, District Panchayat, Palakkad.	1.15	2.2 DFL	0		202400		NA	NA	NA	NA							
38	Munnar	2000	FOREST LAND FOR SENGULAM AUGMENTATION SCHEME POWER GENERATION PROJECT	5.155	10.31 Ha DFL (Adimaly Range, Munnar Division)	0	11	861000		NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
39	Ranni	2000	DIVERSION OF FOREST AREA FOR SABARIMALA PILGRIMS AT PLAPALLY FOREST STATION, GOODICAL RANGE. (1.109 ha) Vented cross bars in Kaki & Pamba	1.1	2.5 Ha DFL (Goodrical Range, Ranni Division)	0	2.5			NA	NA	NA	NA							
40	Ranni	2001	IMPROVEMENT OF CHALAKKYAM - PAMPA ROAD IN TRAVANCORE DEVASWOM BOARD	3.62	3.62 Ha (Goodrical Range, Ranni)	0	3.62 Ha (Vakalar)	1221000		8 Ha	0	NA	NA							
41	Kothamangalam	2001	Construction of School for Blind	1.2141	2.5 Ha DFL (Thodupuzha range)	0	2.5			NA	NA	NA	NA							
42	Kozhikode	2001	DIVERSION OF FOREST AREA FOR KUTTIYADI HEP-ADDITIONAL EXTENSION SCHEME IN KOZHIKODE FOREST DIVISION. (Stage-II given for an additional land of 1.65 ha. on 05/12/2006).	12.77	25.54 Ha DFL (Peruvannamoozhi Range)	0	25.54 (kakkayam)	1750000	467029	NA	NA	NA	NA							
43	Nenmara & Thrissur	2001	LAYING OF COCHIN-COIMBATORE PIPELINE IN F/O PETRONET	0.758	2 Ha DFL	0	2	1012000		NA	NA	NA	NA							
44	Thiruvananthapuram	2001	Lower Meenmutty Small Hydro Electric Project	0.265	1 Ha DFL (Sankily section of Kulathupuzha Range)	0	1 (Sankily section of Kulathupuzha Range)	14300		NA	NA	NA	NA							
45	Malayattoor	2001	SRI DHARMASASTHA TEMPLE IN KUTTAPPARA RF TO HARIJAN UNIT	0.4087	0.8 Ha DFL	0	0			1.5 Ha	0									
46	Thiruvananthapuram	2001	PERMITTING REMOVAL OF SAND FOR USE OF LOCAL CONSUMERS	10.452	22.5 Ha DFL	0	22.5	300300		NA	NA	NA	NA							
47	Ranni	2002	CONSTRUCTION OF ERUMELI CHALAKKAYAM ROAD (PHASE III)	6.04	13 Ha DFL (Kanamala Forest Station, Ranni Division)	0	0			NA	NA	NA	NA							
48	Punalur & Thenmala	2002	CONST OF 400 KV DCTL FROM MADURAI TO THIRUVANANTHAPURAM	57.907	116 Ha DFL (Anchal Range)	0	116	2788000	836549	NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
49	Kannur	2004	DIVERSION OF FL FOR CONSTRUCTION OF KANNAVAM POLICE STATION	0.1092	0.1092 Ha NFL	0.1092	0			NA	NA	NA	NA							
50	Kasargod, Kannur, North Wayanad, South Wayanad, Nilambur North, Palakkad, Mannarkad, Nemmara	2004	RESETTLEMENT OF LAND LESS TRIBALS - (related to alleged diversion of FL for creation facilities for Kerala Veterinary & Animal Sciences University (KVASU)	7693.2257	1265 NFL	1265	0			NA	NA	NA	NA							
51	Chalakudy, Kannur	2005	CULTIVATION OF CASH CROPS IN F/O PLANTATION CORPN.(FOR CONVERTING THE BARREN LAND INTO NATURAL FOREST)	2	6 Ha NFL (Vellad village, Talipparambu taluk, Kannanore District)	6 Ha (Vellad village, Talipparambu taluk, Kannanore District)	0			NA	NA	NA	NA							
52	Nenmara	2005	DIVERSION OF FL FOR PALAKKAPANDY DIVERSION SCHEME IN NEMMARA FOREST DIVISION IN FAVOUR OF EXECUTIVE ENGINEER, IRRIGATION DIVISION, CHITTUR.	3.375	3.375 NFL (Kambakallu in Kottakambur village of Idukki District)	0	0	286875		NA	NA	NA	NA							
53	Ranni	2005	DIVERSION OF FOREST LAND TO TDB AT NILAKKAL FOR DEVELOPING BASE CAMP FOR SABARIMALA PILGRIMS	110.524	110.524 NFL (Kambakallu, Munnar Wildlife Division)	110.524	0	10370000		NA	NA	NA	NA							
54	Ranni	2005	PERIYAR TIGER RESERVE FOR DEVELOPMENT OF SBARIMALA TEMPLE	12.675	12.675 Ha NFL (Kottakamboor Village , Devikulam Taluk)	12.675 (Kottakamboor Village , Devikulam Taluk)	0			NA	NA	NA	NA							
55	Ranni	2006	DIVERSION OF 1.4425 HA. OF FL FOR THE IRRIGATION COMPONENT IN PAMBA AND KAKKI RIVERS IN GOODRIKAL RANGE, PLAPPALLY FOREST DIVISION.	1.4425	2.885 Ha DFL (Goodrical Range, Ranni Division)	0	2.885 (Goodrical Range, Ranni Division)	144250		NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
56	Munnar	2007	DIVERSION OF FL FOR THE THOTTIYAR HEP (40 MW) IN NERIYAMANGALAM FOREST RANGE IN MUNNAR FOREST DIVISION.	3.8134	7.6268 ha DFL (Neriyamangalam Range, Munnar Division)	0	7.6268	666000	800000	NA	NA	NA	NA							
57	Chalakudy, Wayanad North, Wayanad South & Kozhikode	2007	DIVERSION OF 39.8424 HA. OF FOREST LAND FOR CONSTRUCTION OF 400 KV DC TRANSMISSION LINE BETWEEN MYSORE AND KOZHIKODE IN WYNAD DISTRICT IN FAVOUR OF M/S. POWER GRID CORPN. OF INDIA..	39.8424	80 Ha DFL (25 ha in Olenchery and 6.5 ha in Manivayal, Wayanad District and 15 ha in Araeswaram, Thirssur District. North Wayanad and Chalakudy Division)	0	80	8136000		NA	NA	NA	NA							
58	Nenmara	2007	Diversion of 4.0469 ha. of forest land in Nemmara Forest Division, Palakkad District for development of road from Nemmara - Nelliyampathy between chainage KM 8/000 - 30/022, Palakkad District in favour of the Executive Engineer, PWD Roads Division, Palakkad. (Approval kept in abeyance)	4.0469	4.0469 Ha NFL (Muthalamada village of Chittur taluk in Palakkad District)	0	0	525000		NA	NA	NA	NA							
59	Chalakudy	2008	DIVERSION OF 1.058 HA. OF FL FOR CONSTRUCTION OF 400 KV TL ASSOCIATED WITH KUDAMKULAM NUCLEAR POWER PROJECT IN F/O PGCI, CHALAKUDY DVN, THRISSUR DT.- 1.058 HA.	1.058	2.12 DFL (Vellikulangara Forest Range, Chalakkudy)		2.12	793500		NA	NA	NA	NA							

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						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
60	Thenmala	2008	DIVERSION OF FOREST LAND FOR CONSTRUCTION OF 400 KV DC TRANSMISSION OF THE THIRUNELVELI - EDAMON IN CONNECTION WITH POWER EVACUATION OF KOODAMKULAM ATOMIC POWER PROJECT IN FAVOUR OF NUCLEAR POWER CORPORATION OF INDIA LIMITED (NPCIL)	47.702	95.404 Ha DFL (Thenmala Range, Pathanamthitta)	0	36.53 Ha (Thenmala Range, Pathanamthitta)	4770200	1200000	NA	NA	NA	NA							
61	Peechi	2008	DIVERSION OF 2.047 HA. OF FOREST LAND IN THRISSUR FOREST DIVISION/DISTRICT FOR RE-ROUTING 400 KV UDUMALPET – THRISSUR TRANSMISSION LINE IN FAVOUR OF POWER GRID CORPORATION OF INDIA LTD.	2.047	4.094 Ha DFL	0	4.094	156000		NA	NA	NA	NA							
62	Munnar	2009	DIVERSION OF FL FOR MANKULAM HEP (40 MW), MALAYATTOOR RF, MUNNAR FOREST DIVISION IN F/O KSEB.	11.913	24 Ha DFL (Neriyamangalam Range, Munnar Division)	0	24	1820800		NA	NA	NA	NA							
63	Punalur & Konni	2009	HA. OF FOREST LAND FOR THE CONSTRUCTION OF EDAMON-COCHIN 400 KV D/C LINE IN PUNALUR AND KONNI FOREST	1.6238	3.2476 Ha DFL (Naduvathumuzhy Forest Range, Konni Division)	0	3.2476 (Naduvathumuzhy Forest Range, Konni Division)	84957		NA	NA	NA	NA							
64	Ranni	2011	DIVERSION OF 4.9551 HA. OF FOREST LAND FOR ELECTRIFICATION OF KATTACHIRA - KUDAPPANAKULAM TRIBAL COLONY IN PATHANAMTHITTA DISTRICT IN FAVOUR OF KSEB.	4.9551	9.9102 Ha DFL (Vadaserikkara Range, Ranni)	0	9.9102	390902		NA	NA	NA	NA							

Sl no	Division	Year	Details of Forest land diverted under FC act against each project proposal	Forest Area diverted (In Ha)	CA Proposed (In Ha)	CA carried out at designated sites		Amount of CA received	Total amount spend on CA	PCA proposed (In Ha)	PCA carried out at designated sites (In Ha)	Amount of PCA received	Total amount spend on PCA	Additional CA proposed	Additional CA carried out at designated sites	Amount of Additional CA received	Total amount spend on Additional CA	Amount available under State CAMPA as on 31.03.2023	Monitoring report	Remarks
						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
65	Ranni	2011	PERUNTHENARUVI SMALL HEP HYDRO ELECTRIC PROJECT	6.4795	6.4795 ha NFL (Kuttiyadi Range, Kozhikode)	6.4795	0	681000		NA	NA	NA	NA							
66	Munnar	2012	KSEB- Thottiyar Hydro Electric Project II	0.9996	2 (Erumeli Forest range, Kottayam Division)	0	2	100000		NA	NA	NA	NA							
67	Thrissur	2013	Diversion of 13.950 ha. of forest land (6.345 ha. in Thrissur Forest Division and 7.605 ha. in Peechi-Vazhani Wildlife Sanctuary) in Thrissur District for widening of NH 47 between Vadakkancherry and Thrissur in favour of National Highways Authority of India (NHAI), Palakkad- Reg.	13.95	27.9 Ha DFL (Poongodu Forest Station, Vadakkenchery, Thrissur)		27.9	3794400		NA	NA	NA	NA							
68	Palakkad	2013	Diversion of 4.33 ha. of forest land in Palakkad Forest Division/District for implementation of Kochi LNG Pipeline Project in favour of GAIL (India) Limited, Kochi- Reg.	4.33	8.66 Ha DFL		8.66	1890000		NA	NA	NA	NA							
69	Vazhachal	2014	Improvement of Athirappilly-Malakkappara Road	0.5348	1.1 Ha (Koovappara in Athirappilly Range)		1.1 Ha (Koovappara in Athirappilly Range)	498040		NA	NA	NA	NA							
70	Vazhachal	2014	Diversion of 4.57 ha. (Revised 4.92 ha) of forest land in Vazhachal Division in Thrissur District for Poringalkuthu Small Hydro Electric Project (24 MW) in favour of Kerala State Electricity Board - Reg.	4.92	9.84 Ha DFL (Kodasseri RF, Vazhachal Division)		9.84 (Kodasseri RF, Vazhachal Division)	3814250		NA	NA	NA	NA							
71	Munnar	2016	Diversion of 9.53 ha. of forest land for Kuttungal Small HEP	9.53				4542000		18 (Makkumchal,Adimaly Forest range)	18									

Sl no	Division	Year	Details of Forest land diverted under FC act against each project proposal	Forest Area diverted (In Ha)	CA Proposed (In Ha)	CA carried out at designated sites		Amount of CA received	Total amount spend on CA	PCA proposed (In Ha)	PCA carried out at designated sites (In Ha)	Amount of PCA received	Total amount spend on PCA	Additional CA proposed	Additional CA carried out at designated sites	Amount of Additional CA received	Total amount spend on Additional CA	Amount available under State CAMPA as on 31.03.2023	Monitoring report	Remarks
						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
72	Konni	2016	Diversion of 4.4 ha. of forest land, i.e. 3.88 ha. of forest land in Punalur Division and 0.52 ha. of forest land in Konni Forest Division in Kollam District for electrification of Chembanaruvi colony in Mannarappara Forest Range under MLA-LAD Scheme in favour of Kerala State Electricity Board, Pathanapuram.	4.4	8.8 Ha DFL (Punalur village, Kollam)		8.8	616000		NA	NA	NA	NA							
73	Kozhikode	2018	Diversion of 0.25 ha. of forest land under Section'2' of Forest (Conservation) Act, 1980 for establishing 8 MW Anakampoil Hydro Electric Project at Kozhikode in favour of M/s Anakampoil Power Private Ltd	0.25	0.5 Ha NFL (Kunduthodu, Thamarassery)			138500		NA	NA	NA	NA							
74	Palakkad	2021	Diversion of 1.13 ha. of forest land for Christian National Evangelism Commission in Pottayilkadu Malavaram in Keralassery in Palakkad Division	1.13	1.13 Ha NFL	0	0	903000		NA	NA	NA	NA							
75	Thrissur	2022	Diversion of 136.8623 ha.of RF land for shifting of Thrissur Zoo from Thrissur to Puthoor at Pattikkad Forest Range, Thrissur Forest Division, Kerala in favour of Kerala Forest Department.	136.8623	41.06 Ha DFL (Wadakanchery range of Thrissur Division)			8786840		NA	NA	NA	NA							
76	Mannarkad	2023	Voltage improvement work at Kanghiramkunnu area	0.0144	0.45 Ha (Kanjiramkunnu)			100000												
77	Nenmara	2023	Providing 4G/5G coverage to Uncovered Villages- Nemmara CAT-2	0.4811	0.1 Ha (Myladumpparutha under Ayilamudi RF)			112000												
78	Nenmara	2024	JJM Muthalamada Drinking water pipeline work in chappakkad	0.0084	2 Ha (Ayilamudi RF)			300000												
79	Nenmara	2024	Jal Jeevan Mission - Thenkirussi - Drinking water pipeline work at Nayadi Colony and Muringamala	0.0354	0.1 Ha (Kavussery VF Malavaram Bit-III)			300000												

Sl no	Division	Year	Details of Forest land diverted under FC act against each project proposal	Forest Area diverted (In Ha)	CA Proposed (In Ha)	CA carried out at designated sites		Amount of CA received	Total amount spend on CA	PCA proposed (In Ha)	PCA carried out at designated sites (In Ha)	Amount of PCA received	Total amount spend on PCA	Additional CA proposed	Additional CA carried out at designated sites	Amount of Additional CA received	Total amount spend on Additional CA	Amount available under State CAMPA as on 31.03.2023	Monitoring report	Remarks
						NFL (In Ha)	DFL (In Ha)													
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20
80	Ranni	2024	Optical Fiber Cable (OFC) Laying from Ranni to Nilakkal in Ranni Forest Division	0.7106	0.7106 (Kumaramperoor)			416000												
81	Nenmara	2024	JJM- 2021-22- Full coverage. – (Part-2) – CWSS to Peringottukurissi and Kuthanur Panchayats- Pipeline extension, providing 1716 Nos FHTCs in Kuthanur Panchayat, Filter media replacement at Manimala WTP, Supply, erection and commissioning of C/W pump sets	0.0092	0.1 Ha(Manthitta)			300000												
				38093.19	**60783.4295**	**2048.72**	**58357.41**			**27.5**	**18**									

Consultancy Project on

'Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities'

Submitted to

Kerala Forests & Wildlife Department(CAMPA)

Submitted by

ICFRE-Institute of Forest Genetics and Tree Breeding

(*Indian Council of Forestry Research and Education*)

Coimbatore – 641002

2023

Project title: Consultancy on third party monitoring and evaluation of CAMPA plantations and other activities carried out under CAMPA funding in Kerala state.

Project period:10 months

Budget (in lakhs): Rs. 35.004 lakhs.

Deliverables and time schedule

Work plan submission	One week after signing the agreement
Field Data Collection	Two - four months
Draft report submission	Two months after Field Data Collection
Final report submission	Two months after Draft report submission
Total Duration	10 Months

Funding agency: CAMPA, Kerala Forests & Wildlife Department

Third party monitoring and evaluation submitted by:ICFRE-Institute of Forest Genetics and Tree Breeding, Coimbatore 641 002.

Background:

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) isestablished with the objectiveto promote afforestation and regeneration activities as a way of compensating for forest lands diverted to non-forest uses.Under the Forest (Conservation) Act, 1980, whenever forest land is converted to non-forest land use for residential, commercial, mining and industrial purposes, an equivalent area of non-forest land has to be taken up for compensatory afforestation.

CAMPA program covers a wide range of activities, including compensatory afforestation, catchment area treatment, assisted natural regeneration, forest fire prevention and control, soil and moisture conservation in forests, wildlife management, improvement of wildlife habitat, management of biological diversity and biological resources, research and innovation in forestry including monitoring and evaluation of activities taken up by the executing agency. Local people normally carry out these infrastructure operations on a temporary basis as and when there is plantation and development in progress.Thus, through these activities, CAMPA has the ability to create immediate and short-term employment for local people and forest-dependent communities.

While CAMPA focuses on short-term employment generation, promotes sustainable forest management practices. It encourages natural regeneration of forests by limiting extraction of wood, charcoal and fodder from forest areas for daily household use, generating awareness on the use of wood waste for household purposes and minimising the use of felled trees. It also ensures that funds are not used to set up monoculture and commercial species as they aggravate the impact of climate change in terms of soil erosion and groundwater depletion.The species selection criteria for planting include adaptive capacity of plants with local climatic conditions and potential additional benefits for the communities, assessing location-specific climate risk and vulnerabilities, socioeconomic conditions, and cultural nuances before investing in specific activities listed under CAMPA.

State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with a special emphasis on training at cutting edge level (forest range level). In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.

Chief ExecutiveOfficer, CAMPA, Kerala is responsible for preparation of the schemes, Annual Plan of Operations (APO) for CAMPA, getting it approved by the Executive Committee, Steering Committee and as well as the Government of India followed by implementation of the approved APO. After receiving the fund allotment under State CAMPA the implementing officers, generally District Forest Officers (DFOs) will execute the assigned activities as per the APO. Kerala Forests & Wildlife Department (KFD) receiving funds since 2009 from CAMPA, MoEF&CC, GoI for various developmental activities*viz.*,Afforestationprograms, soil and moisture conservation works. Capacity building to staff and local communities, establishment of civil structures, etc. in various forest divisions of Kerala.

The CAMPA funds received by the KFDwas spent under five major heads *viz.*, Compensatory Afforestation, Biodiversity Conservation, Soil and Moisture Conservation, etc. Under each major heads, there are different sub heads available and it varies according to site conditions and its need.

Need of third party monitoring and evaluation of CAMPA works

As per the suggestion in the APO, third party evaluation is mandatory to assess the CAMPA works carried out by the SFDs. The technical evaluation would give baseline data, after-effects, and a strategy for moving forward. During the third party evaluation, the works carried out will be assessed for choice of species,seed/propagule sources, site suitability, planting density etc. Also, the team will provide suggestions for further improvement. It has become imperative that projects implemented so far, are assessed for outcomes and impacts. This would not only help in highlighting positive achievements but more importantly, aid in addressing areas of concern.There is a pressing need to evaluate these plantations on three aspects namely area coverage, survival percentage and growth parameters by using qualitative and quantitative approaches. These evaluations need to go beyond status assessments and develop deeper to ascertain the causes behind the success or failure to enable better planning and design of the future plantation projects.

In view of the above, the following objectives are envisaged in the consultancy proposal

Objectives

- To evaluate different plantations established under CAMPA in different forest division of Kerala.
- To evaluate the civil structures (buildings and soil & water conservation structures) established under CAMPA in different forest divisions of Kerala.
- To suggest for improvement in quality of plantations for future.

Methodology

Condition: If the survival percentage for different plantations sites is not available.

Methodology: Choose 10% of the plantation area for each site as its sample size from the total area/different plantations activities for assessment.

Field enumeration in the selected projects

After studying the approaches adopted to sample multi-row block plantations by the various State Forest Departments, it was felt that the row sampling approach with 10% sampling intensity would be the best tradeoff between accuracy and effort. This approach is easy to implement since forest personnel are already familiar to this in their regular monitoring cycles. The field enumeration will cover assessment of two aspects of the plantations namely survival and growth followed by aggregation of results.The evaluation will be carried out on 0.1 ha by laying a 30x30 m plot on the basis of random sampling.In case of medicinal plants plantation 5x5 m quadrats will be laid out randomly in the selected sites. Insoil andmoisture conservation works, 20% sampling will be carried out and civil works 50% M&E will be carried out.In the case of Aided Natural Regeneration and regeneration studies, the quardert size will vary from 1x1 m to 10x10 m according to the plot size and nature of terrain.

Assessing the Survival Percentage

In multi-row block plantations, any row can be selected as initial or starting row for counting and then every 10^{th} row should be selected. In these rows, all the plants should be counted till the end of the row, either dead or surviving, for calculation of survival percentage. For example, if 2^{nd} row has been chosen as initial or start row, then subsequent rows selected should be 12^{th}, 22^{nd} and so on till the end of the plantation area. All the plants of every 10^{th} row or selected rows need to be enumerated.

Assessing the Growth Parameters

Generally the health of a plantation is expressed in terms of growth parameters of the plants. For this, we measure the plant height (in cm or m) and plant girth (in cm or m). This should be done at 1% sampling. Therefore, in all the rows selected above for survival, one start plant should be selected for height and girth measurements at collar (50 cm above the ground level upto 3 year old plantation and 1 m above ground level for up to 5 year old plantation and for plantations older than 5 years, GBH should be taken). Thereafter, every 10^{th} plant should be selected for further recording of height and girth. If the start plant in row one is 3^{rd} then other plants to be measured will be 13^{th}, 23^{rd}, 33^{rd} and so on. It is advised to change the start plant for growth measurement in the 12^{th} row by using a random number between 1 to 10. If the start plant in this 11^{th} row comes to 5^{th} then other plants to be measured will be 15^{th}, 25^{th}, 35^{th} and so on. This should be followed for all the rows. The survival percentage of the plantation can be calculated as the percentage of surviving plants compared to the total plants enumerated. The growth parameters of the plantation namely plantation height and plantation girth can be averaged from the total plants for which these two parameters were measured. These plantation level indicators then need to be filled in the plantation field summary report.

Aggregating the findings

For the purpose of reporting, the survival percent should be weighted by net area planted in the same model. The percentage should be reported separately for each plantation model covered for the counting i.e. if the survival percentage we need to first measure the survival percentage of the sample projects i.e. if this comes to 60% for a 40 ha plantation, 40% for a 100 ha plantation and 80% for a 20 ha plantation then the weighted mean by net area planted comes to (60x40+40x100+80x20)/(40+100+20) which comes to 50%. So, the overall survival percentage of the plantation model is 50%.

Measuring the area coverage

Measuring the area coverage of plantation projects, most modern GPS receivers can be used to get a direct area reading by traversing the perimeter of the plantation. Both 2D and 3D area measurements can also be made using Google Earth Pro which supports measuring area and perimeter with the polygon tool.

Ranking of individual projects

It will be useful to have ranking/scales to evaluate the project needs. However, this is not easy since the site parameters, species and inputs provided will vary from plantation to plantation and it may not be appropriate to rank such heterogeneous plantation projects using a common scale.

Physical Verification of Activities

I. Plantation - *Methodology:*

- 10% plantation randomly selected from various divisions.
- Sampling intensity for evaluation - 10% for block plantations.
- For every hectare of the plantation, the evaluation will be done on a 30 x 30 m plot.
- Each plot will be marked on a map of the plantation area, and GPS co-ordinates of all such (30 x 30 m) plots will be collected.
- In case of linear plantation, every 10th tree/planted sapling of each row will be evaluated for 25% of its length per running km basis (5 intermittent line transects – each for 5% of length per running km) .
- The evaluation will be done on 0.1 ha by laying a 30 x 30 m plot based on random sampling.

II. Soil and water conservation measures:

(a) The teams would obtain the norms and expenditure of SMC activities taken up in the plantation site from the respective offices.
(b) The teams would assess the quantity/ present condition/ treatment plans of the different SMC works. 20% sampling will be carried out.
(c) For civil works, 50% M&E will be carried out, based on random selection from Measurement Books from various divisions.

III. Eradication of weeds

Density assessment - plot counts

- Three or more plots (quadrats) of size 10 x 10m (located randomly over the site) will be marked, and the number of plants within the plots counted.

- To get the actual number per hectare, multiply the average number of plants in the plots by 100.

Plot transects

- Mark out 100m transects, keeping them parallel to one another (10m-50m apart). Using a 2 x 2m plot frame (using a rope) plots would be placed at intervals along the transect.
- The number of plants within the plot would be counted. The values will be converted to density measure by averaging the number of plants in each of the plots (i.e. individuals per hectare)

IV. Forest protection

- 10% of all firelineswill be evaluated in each division based on random selection from Measurement Books from various divisions.

V. Qualitative Aspects

Focussed group discussion (FGD): FGD will be conducted for 10% of the villages in which CAMPA works have been undertaken with at least 15 villagers in a common place within the village.

Ranking of individual projects

The criterion below will be used to evaluate the project needs since the site parameters, species and inputs provided vary from site to site.

Site suitability	High	Medium	Low
Suitable area with favourable site condition rainfall, soil, etc.	7 to 10	>3 to<7	≤3
Medium quality forest sites	>5	2-5	≤2
Poor forest sites	> 4	2-4	≤2

Criteria for classifying a site into suitable site, medium site and poor site

(a) Suitable site: soil depth more than 61 cm, rainfall range between 1270 to 3810 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(b) Medium site: Soil depth ranges between 30.4 cm to 61 cm, rainfall ranges between 889 to 1270 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(c) Poor site: Soil depth less than 30.4 cm, rainfall less than 889 mm and excessive prevalence of mist and fog during monsoon, prevalence of adverse biotic factors and steep slopes.

This approach involved aggregating the percentage of readings falling into the three higher ratings (3-5) under the ‘satisfactory’ heading and the two lower ratings (1-2) under ‘unsatisfactory’. The introduction of these two broad categories allowed better tracking of performance trends. The ranking table is provided below

Score	Assessment	Category
5	Highly satisfactory	Satisfactory

4 3	Satisfactory Moderately satisfactory	
2 1	Unsatisfactory Highly Unsatisfactory	Unsatisfactory

Physical verification

Each of the selected plots were visited by the monitoring team and the following details documented in the field.

- Plot location with GPS co-ordinates and area
- Plantation type and design (wherever available)
- Year of establishment
- Number of saplings planted initially (species wise)
- Height of the saplings when planted
- Number of plants surviving at the time of monitoring
- Average height of surviving plants
- Species composition and distribution
- Protection measures and maintenance
- Anthropogenic pressure, etc.

Parameters considered during M&E

- **For plantations**
  a. **Qualitative** – site suitability (both climatic and edaphic factors), condition of the plantation, choice of species, etc.
  b. **Quantitative** - Total seedling/tree height, collar girth/GBH, survival percentage, etc.
  c. **Other parameters** – Management practices, biotic and abiotic factors, etc.
- **For civil constructions**
  a. Verification (sketch and dimensions) based on the original documents and 'm-book'.

The final technical report will be submitted to CEO, CAMPA, Kerala, on year wise APO in two bound copies along with soft copy.

Plantation Sampling Strategy

Sl No		Rows																
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
1.	*A.indica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
2.	*S. cumini*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
3.	*S. album*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
4.	*P.emblica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
5.	*A.indica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
6.	*S. cumini*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
7.	*S. album*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
8.	*P.emblica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
9.	*A.indica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
10.	*S. cumini*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
11.	*S. album*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
12.	*P.emblica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
13.	*A.indica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
14.	*S. cumini*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
15.	*S. album*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
16.	*P.emblica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
17.	*A.indica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
18.	*S. cumini*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
19.	*S. album*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*
20	*P.emblica*	*	x	*	*	*	*	*	*	*	*	*	x	*	*	*	*	*	*

x

Plants assessed for survival

x

Plants assessed for growth parameters

Source: Sandeep Tambe. 2016. National Evaluation Manual for CAMPA Plantations. Center of Excellence for Application of Management Techniques in Government, Indian Institute of Forest Management, Bhopal.

Expertise and Experience with IFGTB

IFGTB is having 27 scientists and 25 Technical Service Officersin different disciplines and vast knowledge in various fields especially in Forest Ecology and Socio-economic aspects. IFGTB is having experience in conducting different monitoring and evaluation studies to various stakeholders *viz.*, SFDs, Paper industries, etc. **IFGTB has completed the CAMPA Evaluation for Kerala for the period 2009 to 2021.**

Budget Estimate:

Budget Head	**Cost (in Rs)**	**Justification**
Travel TA	**809000**	To reach the identified assembling location in each circle for 52 members
Travel DA	**587000**	DA for the days spent on tour for 52 members
Consumables	**395000**	Purchase of additional GPS, external hard drive, pendrives, computer and printer accessories, paper reams, note books and other essential stationeries for collecting data
Printing Charges	**250000**	Designing, typesetting, proofing and printing etc
Honorarium	**309320**	To pay honorarium to office staff involved in handling of accounts,

		purchase and other services
Contingency	**250000**	To meet any unforseen expenses
Workshops/Meetings	**200000**	For discussion meetings
IC (20%)	**700080**	To be paid as per ICFRE norms to HQ
Total	**3500400**	

Budget release schedule:

Installments	**Proportion and amount**	**Timelines**	**Release dates**
First	40%; Rs. 14,00,160	Signing the MoU	One week after signing the agreement (November 2023)
Second	30%; Rs. 10,50,120	On completion of field activities	Four months after release of first installment (before March 2024)
Third	10%; Rs. 3,50,040	On submission of draft report	Two months after Field Data Collection (June 2024)
Final	20%; Rs. 7,00,080	On submission of final report	Two months after Draft report submission (August 2024)

Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

for the period
2009-2014

Submitted to

Kerala Forests & Wildlife Department (CAMPA)

ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
(Indian Council of Forestry Research and Education)
Coimbatore – 641002

October 2022

Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

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Submitted to

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Coimbatore – 641002

October 2022

वन आनुवंशिकी एवं वृक्ष प्रजनन संस्थान
ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्
Indian Council of Forestry Research & Education
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
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डॉ. सि. कुञ्ञिकण्णन
निदेशक
Dr. C. Kunhikannan
Director

Preface

The State of Kerala established the Compensatory Afforestation Management and Planning Authority (CAMPA) Scheme in 2009 to encourage afforestation, reforestation, and restoration/regeneration activities to compensate for forest land diverted for non-forest purposes and to enhance the state's forest cover. The Kerala Forests & Wildlife Department prepared the Annual Plan of Operations (APO) for the years 2009-2010, 2010-11, 2011-12, 2012-13 and 2013-14, which the MoEFCC, GoI approved. As per the APOs, the state planned various activities including compensatory afforestation, soil and moisture conservation, biodiversity conservation, awareness campaigns on forests, wildlife and the environment, eradication of invasive alien weeds, river bank stabilisation, protection of research plots and seed production areas, creation of fire breaks and other essential maintenance activities towards forest conservation. All these activities were spread across the forest divisions of the state, including wildlife sanctuaries. The success and sustainability of these CAMPA activities, including structures established and plantations raised in terms of planning, implementation, the quantity of inputs, condition of health and survival, and outcomes, need to be evaluated and documented for monitoring purposes by an independent agency. Accordingly, ICFRE - IFGTB, Coimbatore, was awarded the monitoring and evaluation of CAMPA activities undertaken. A team of IFGTB staff including forest officers, scientists and technical personnel have been involved in the work since March 2022. The sampling methodology approved by MoEFCC was broadly followed, and a detailed survey, monitoring and evaluation exercises were conducted to represent all the forest circles and plantation models adopted in a given year. In total, 100 project sites were identified, and 141 activities for the first five years of CAMPA implementation from 2009 to 2014 were monitored and evaluated. Overall the CAMPA activities supported the forests and contributed in enhancing forest health in Kerala. I would like to acknowledge the Kerala Forests & Wildlife Department for their support and assistance in bringing out this document in a comprehensive manner.

(C. Kunhikannan)

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ICFRE - IFGTB

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FACT SHEET

S. No.	Item	Details
1.	Scope of evaluation	Third-party monitoring and evaluation of the CAMPA Activities of Kerala Forests and Wildlife Department (2009-2014)
2.	Period of evaluation work	Signing of MoU – March 2022 Field works – April to June 2022 Report preparation – July to September 2022
3.	Focus	Quality of conservation and development works. Assessment of compensatory afforestation activities. Public awareness campaigns.
4.	Number of evaluation teams	15 Evaluation Teams and one editorial team.
5.	Objectives	• To evaluate different plantations established under CAMPA in different forest divisions of Kerala. • To evaluate the civil structures (buildings and soil & water conservation structures) established under CAMPA in different forest divisions of Kerala. • To suggest for improvement in quality of plantations for future.
6.	Area covered	25 territorial forest divisions. 14 social forestry divisions. 11 wildlife divisions.
7.	Sample size	**Plantation:** 20% plantation randomly selected from various divisions. Sampling intensity for evaluation is nearly 10% for block plantations. For every hectare (ha) of plantation, the evaluation to be done on a 30 x 30 m plot. In the case of a linear plantation, evaluation of every 10th tree/planted sapling of each row for 25% of its length per running km basis. **Soil and Moisture Conservation(SMC) activities:** 20% of SMC works evaluated in each division based on random selection from measurement book (Mbook). **Eradication of weeds:** Density assessment and plot transects. **Forest protection:** 10% of all firelines evaluated in each division.
8.	Findings	• The average survival rate in ecorestoration activities is 78%. Damage by wild animals is high in some divisions. • The quality of other departmental works was rated as high (72%) . • Check-dams and gullies are the major SMC works taken up. • The involvement of the Vana Samrakshana Samidi in various department activities has ensured a participatory approach to the protection and conservation of forests.

EXECUTIVE SUMMARY

The Forest (Conservation) Act 1980 was enforced to conserve and protect forest resources. The Act mandated that whenever forest land is diverted for non-forestry purposes usually the conditions relating to transfer, mutation and declaration as Reserve Forest/Protected Forest, the equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation etc., are to be imposed. Additional conditions such as maintaining a safety zone area, fencing and regeneration etc., are prescribed for mining purposes, and catchment area treatment plans are stipulated for big and medium irrigation projects. Further, the Act provided that the non-forest land for Compensatory Afforestation (CA) was to be identified contiguous to or close to Reserved Forest or Protected Forest. The funds for CA are received from the user agencies based on the rates fixed by the State Forest Department, which are site-specific and vary according to the species, type of forest and site. The fund received for compensatory afforestation, additional compensatory afforestation etc., has to be used as per site-specific schemes submitted by the state along with the approved proposals for diversion of forest land. After receipt of the fund, State Forest Department has to accomplish the afforestation for which money is deposited in the CA fund within a period of one year or two growing seasons.

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Kerala has been constituted with the objective of conservation, protection, regeneration and management of existing natural forests, wildlife and their habitat and raising site specific compensatory afforestation, penal compensatory afforestation etc. As per the provisions of CAMPA guidelines, the state CAMPA has been formulating Annual Plans of Operation (APO) since 2009-10.

The Government of India released **Rs. 7,18,64,000** for the period 2009-10 to 2013-14 to Kerala to implement the activities.

The Assignment

As a range of activities were taken up under CAMPA, a technical evaluation of the activities by a thirdparty was considered essential. ICFRE - IFGTB was identified to carry out third party monitoring of all the CAMPA interventions since 2009-10 (File No. FC5-1433/2021 dated 28.01.2022). The broad scope of evaluation comprised all the components and sub-components of CAMPA implementation in Kerala.

Study Area

The evaluation study covered 50 forest divisions of Kerala (25 territorial, 14 social forestry and 11 wildlife divisions) under 11 forest circles. In addition works plans and research divisions where CAMPA funds were utilised are also covered in the study.

Study Approach and Methodology

Various CAMPA interventions were evaluated using appropriate sampling criteria, data collection approaches and, in view of diversity, nature of component and stakeholders involved. The study approach and methodology have been adopted from the evaluation formats of the MoEF & CC, GoI.

Details of Data Collection

- Primary Data: First hand information was obtained using specifically designed formats for different components and subcomponents.
- Secondary Data: Secondary data relating to various activities undertaken in CAMPA were collected from the circle, division and range offices inpre-designed formats and checklists.
- Focussed Group Discussion (FGD): FGDs with the members of the Vana Samrakshana Samidi were conducted to evaluate peoples' perceptions and participation levels in implementing CAMPA activities in a given locality.
- Consultation with Forest Officials: Consultations were undertaken with a range of forest officers involved at various stages such as planning and decision making, implementation, monitoring and evaluation. This includes Divisional Forest Officers (DFOs), Forest Range Officers (FROs), Section Forest Officers, Forest Beat Officers (FBOs), etc.
- Field Observation: Data on survival, field measurements to assess growth in different plantations, condition of physical structures in SMC activities and weed density in plantation sites were collected. Notes were prepared on various activities under CAMPA implementation, which provides the basis for the entire evaluation process.

Performance of CAMPA during the period 2009-10 to 2013-14

- The total funds received from the adhoc CAMPA up to APO year 2013-14 stands at Rs. 7.18 crores and the expenditure ending March 2014 was 6.38 crores which is 88.73% of the funds received. The core activities undertaken with the CAMPA funds comprise plantations, creation of SMC structures, forest protection, wildlife management and assistance to tribal Vana Samrakshana Samidi .
- The non-core activities comprised biodiversity conservation, capacity building, infrastructure development, forest Information Technology, monitoring, evaluation and accounting.
- During the initial years of CAMPA APOs, assistance to tribal VSS, improving the infrastructure for protection of soil and moisture conservation activities were prioritised (70%). The VSS members were engaged in almost all the activities.
- Various SMC structures in CAMPA APOs includes check dams, contour trenches, gully plugging etc. SMC structures undertaken by frontline forest officers under CAMPA are site-specific as per the site requirement.
- Focus on eco-restoration, planting and silvicultural operations were minimal (undertaken only in two circles) in the initial years of CAMPA implementation. Most activities were done departmentally, in an economical and time-saving approach. River bank stabilisation, vegetation barrier creation and eradication of weeds were taken up in one site.
- Inclusion of Vana Samrakshana Samidi members in patrolling, fire break creation, developing infrastructure in interior forest areas, has encouraged their active participation in conservation activities.

- Training and capacity development programmes were taken under CAMPA includes theme based trainings, strengthening communication and plantation skill development.
- Under infrastructure development, efforts were taken to repair / improve dilapidated structures. The major construction activities undertaken with the help of CAMPA funds were antipoaching campsheds.

Recommendations & Suggestions

1. Species should be selected on the basis of floristic composition of the forest types and prevailing local soil conditions of the afforestation / plantation site.
2. De-centaralized local nurseries for production of forest type-specific planting stocks may be promoted.
3. Maintenance and watch and ward may be continued for 4 to 5 years for better establishment.
4. Number of watchers should be increased proportionate to the size of the plantation site.
5. There should be a provision in CAMPA APOs for the periodic maintenance of SMC structures as most SMC structures are subject to heavy wear and tear due to recurrent floods.
6. Buildings / structures constructed during this period needs to be repaired and maintained. In some cases, renovation / refurbishing may also be done based on a fixed schedule.
7. It is better to avoid plantations deep inside forests, with heavy movement of wildlife, as monitoring of the plantations is difficult. Instead,manual seeding may be done by adopting seed ball technology. Seeds to be broadcast should match the floristic composition of the respective forest types.
8. The frontline staff may be trained on seed handling and nursery technologies of native tree species.

Monitoring and Evaluation of CAMPA Plantations and Other Activities (2009-2014)

1. Introduction

1.1 Background

Forests in India comprise diverse forest types and reserved areas accounting for about 24.62% of the country's geographical area. Forest provides livelihood support to the people living in and neighborhood. Forests are the most significant natural carbon sinks and regulate water regimes. Given that the forest sector provides goods and services to humankind, forest land is diverted for developmental activities for non-forestry purposes, consequently leading to considerable shrinkage of forest cover.

Kerala is endowed with rich natural resources. The conducive tropical climate favours forests with rich biodiversity and endemism. The Western Ghats, one of the biodiversity hotspots, runs all along the eastern boundary of Kerala. Unfortunately, the increasing population and changing lifestyles exert tremendous pressure on forests. The greatest challenge today is to accommodate developmental needs by minimising the destruction of its pristine forests.

1.2 Forest Cover in Kerala

The forest cover in the state based on the interpretation of the Forest Survey of India (FSI, 2021) is 21,253.49 sq km which is 54.7% of the state's geographical area. Forest cover in the state has increased by 109 sq km compared to the previous assessment reported in ISFR 2019. Among forest canopy density classes, the state has 1944.32 sq km area under very dense forest, 9472 sq km area under moderately dense forest and 9837.17sq km area under open forest.

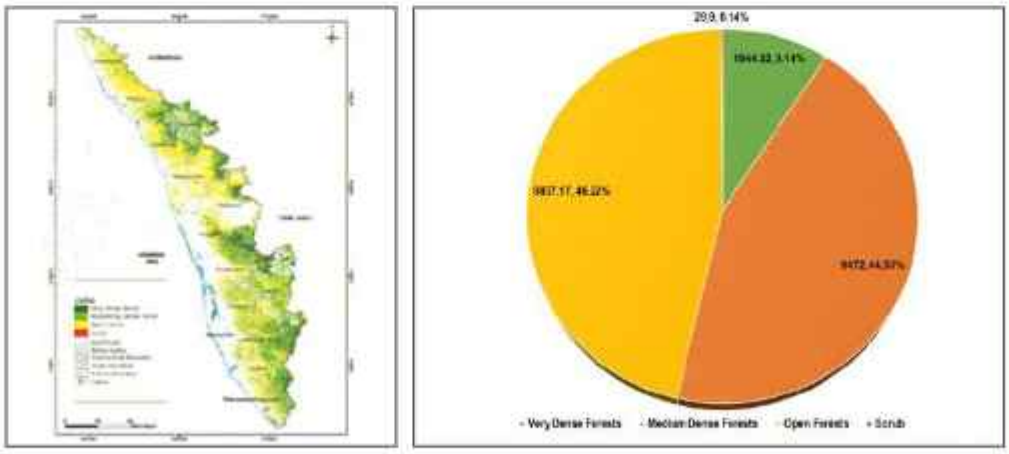
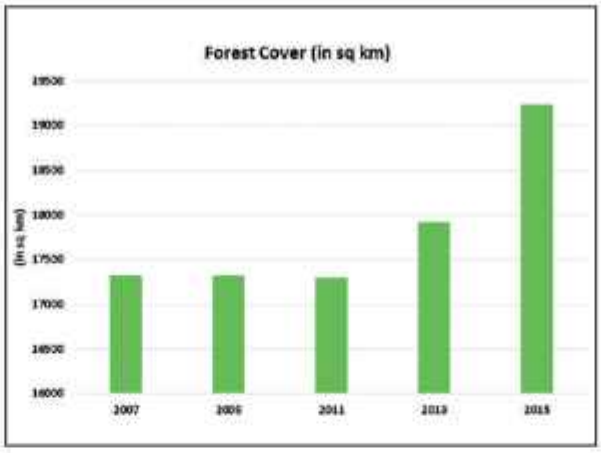


Fig. 1.1: Forest Distribution

Source: *ISFR, 2021*

1.3 Forest Cover In Kerala From 2007 To 2015

Forest cover in the state has been increasing over the years. Forest conservation and afforestation activities are the key reasons for the improvement.



1.4 District-wise Forest Coverage in Kerala

Table 1.1 provides the district-wise forest coverage in Kerala (Area in sq km), and the tree map at Fig 1.1 provides the distribution across districts.

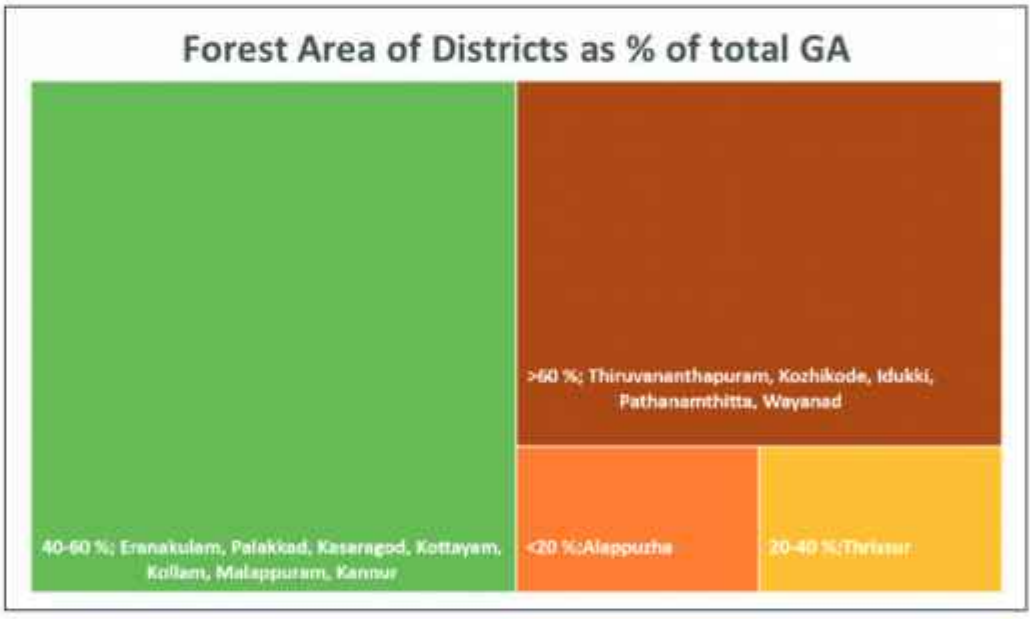


Table 1.1: District wise forest cover

District	Geo-graphical Area (GA)	VDF	MDF	OF	Total	%of GA	Scrub
Alappuzha	1415	0	27	53.54	80.54	5.69	0
Eranakulam	3063	165.52	614.4	604.56	1384.48	45.2	5.6
Idukki	4356	355.72	1783.33	1016.27	3155.32	72.44	2.51
Kannur	2961	58	489.63	1121.23	1668.86	56.36	0.18
Kasaragod	1989	1.9	288.7	692.97	983.57	49.45	0
Kollam	2483	104.4	656.88	572.5	1333.78	53.72	0
Kottayam	2206	11.31	525.73	562.01	1099.05	49.82	0

District	Geo-graphical Area (GA)	VDF	MDF	OF	Total	%of GA	Scrub
Kozhikode	2345	70.77	409.94	967.11	1447.82	61.74	0.8
Malappuram	3554	142.67	424.68	1416.32	1983.67	55.82	6.47
Palakkad	4482	402.14	637.77	1063.77	2103.68	46.94	12.71
Pathanamthitta	2652	164.92	1229.12	554.88	1948.92	73.49	0.51
Thiruvananthapuram	2189	59.12	702.42	555.5	1317.04	60.17	0.07
Thrissur	3027	218.86	477.79	469.6	1166.25	38.53	0.62
Wayanad	2130	188.99	1204.61	186.91	1580.51	74.2	0.43
Total	38852	1944.32	9472	9837.17	21253.5	54.7	29.9

Source: *Kerala ENVIS, 2022*

Comparing district-wise area cover in Kerala, Idukki has the largest forest cover (3155 sq km) in the state, followed by Palakkad (2104 sq km), Malappuram (1984 sq km), Pathanamthitta (1949 sq km) and Kannur (1669 sq km). In terms of percentage of forest cover concerning the total geographical area, Wayanad with 74.2% has the highest forest cover, followed by Pathanamthitta (73.49%), Idukki (72.44%), Kozhikode (61.74%) and Thiruvananthapuram (60.17%). The table reveals an increase in forest cover by 109 sq km compared to the previous assessment (in 2019).

Nearly 60 lakh ha of forest is degraded with less than 40% canopy density. This is the target area for the afforestation programmes. Forest plantations extend over 1.56 lakh ha, teak being the major species, covering almost 50% of the total plantation area, followed by mixed plantations and eucalypts. The natural forests, plantations and homestead gardens contribute to the state's green cover, and all these are required in forest management.

2. Project profile

Compensatory afforestation programmes in the state were initiated in 1993, and plantations were maintained until 2002-03. The Government of India notified the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in April, 2004. The state CAMPA receives funds collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980. Kerala state CAMPA was constituted in November 2009.

Kerala Forests & Wildlife Department (KFD) has been receiving funds since 2009 from CAMPA, MoEFCC, GoI for various developmental activities such as afforestation programs, soil and moisture conservation works, capacity building for staff and local communities, the establishment of civil structures, etc., in various forest divisions of Kerala. The funds were spent for compensatory afforestation, biodiversity conservation, soil and moisture conservation, etc. The Chief Executive Officer, CAMPA, Kerala, is responsible for preparing the schemes, Annual Plan of Operations (APO) for CAMPA, and getting it approved by the Executive Committee, Steering Committee and the Government of India, followed by implementation of the approved APO. After receiving the fund allotment under State CAMPA, the implementing officers, the District Forest

Officers (DFOs) execute the assigned activities as per the APO. Under each major heads, there are different subheads available, which vary according to site conditions and needs.

The total outlay of the CAMPA activities from 2009 to 2014 is Rs. **7.18** crores. The details of the Divisions, and the number of activities against different years are in Annexure-III.

3. Methodology

Physical Verification of Activities

I. Plantation - *Methodology*

- 10% plantation randomly selected from various divisions.
- Sampling intensity for evaluation - 10% for block plantations.
- For every hectare of the plantation, the evaluation was done on a 30 x 30 m plot.
- Each plot was marked on a map of the plantation area, and GPS co-ordinates of all such (30 x 30 m) plots were collected.
- In case of linear plantation, every 10th tree/planted sapling of each row was evaluated for 25% of its length per running km basis (5 intermittent line transects – each for 5% of length per running km).
- The evaluation was done on 0.1 ha by laying a 30x30 m plot based on random sampling.

II. Soil and water conservation measures

(a) The teams obtained the norms and expenditure of SMC activities taken up in the plantation site from the respective offices.
(b) The teams assessed the quantity/ present condition/ treatment plans of the different SMC works. 20% sampling was carried out.
(c) For civil works, 50% M&E was carried out, based on random selection from M-Books from various divisions.

III. Eradication of weeds

Density assessment - plot counts

- Three or more plots (quadrats) of size 10 x10 m (located randomly over the site) were marked, and the number of plants within the plots was counted.
- To get the actual number per hectare, multiplied the average number of plants in the plots by 100.

Plot transects

- Marked out 100m transects, keeping them parallel to one another (10m-50m apart). Using a 2 x 2 m plot frame (using a rope) plots were placed at intervals along the transect.
- The number of plants within the plot was counted. The values were converted to density measure by averaging the number of plants in each of the plots (i.e. individuals per hectare).

IV. Forest protection

- 10% of all firelines were evaluated in each division based on random selection from Measurement Books from various divisions.

V. Qualitative Aspects

Focussed group discussion (FGD): FGD was conducted for 10% of the villages in which CAMPA works were undertaken with at least 15 villagers in a commonplace within the village. The group comprised office bearers of Joint Forest Management Committee, Below Poverty Line households and village residents.

Ranking of individual projects

The criterion below was used to evaluate the project needs since the site parameters, species and inputs provided vary from site to site.

Site suitability	High	Medium	Low
Suitable area with favourable site condition rainfall, soil, etc.	7 to 10	>3 to<7	≤3
Medium quality forest sites	>5	2-5	≤2
Poor forest sites	> 4	2-4	≤2

Criteria for classifying a site into suitable site, medium site and poor site

(a) Suitable site: soil depth more than 61 cm, rainfall range between 1270 to 3810 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(b) Medium site: Soil depth ranges between 30.4 cm to 61 cm, rainfall ranges between 889 to 1270 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(c) Poor site: Soil depth less than 30.4 cm, rainfall less than 889 mm and excessive prevalence of mist and fog during monsoon, prevalence of adverse biotic factors and steep slopes.This approach involved aggregating the percentage of readings falling into the three higher ratings (3-5) under the 'satisfactory' heading and the two lower ratings (1-2) under 'unsatisfactory'. The introduction of these two broad categories allowed better tracking of performance trends.The ranking table is provided below.

Score	Assessment	Category
5	Highly satisfactory	Satisfactory
4	Satisfactory	
3	Moderately satisfactory	
2	Unsatisfactory	Unsatisfactory
1	Highly Unsatisfactory	

Physical verification

Each of the selected plots were visited by the monitoring team and the following details were documented in the field.

- Plot location with GPS co-ordinates and area
- Plantation type and design (wherever available)
- Year of establishment
- Number of saplings planted initially (species wise)
- Height of the saplings while planting
- Number of plants surviving at the time of monitoring

- Average height of surviving plants
- Species composition and distribution
- Protection measures and maintenance
- Anthropogenic pressure, etc.

Parameters considered during M&E

- **For plantations**

  a. **Qualitative** – site suitability (both climatic and edaphic factors), condition of the plantation, choice of species, etc.

  b. **Quantitative** - Total seedling/tree height, collar girth/GBH, survival percentage, etc.

  c. **Other parameters** – Management practices, biotic and abiotic factors, etc.

- **For civil constructions**

  a. Verification (sketch and dimensions) based on the original documents and 'M-book'.

Deliverables and time schedule

Work plan submission	One week after signing the agreement
Field Data Collection	Two - three months
Draft report submission	One month after field data collection
Final report submission	Two months after draft report submission
Total Duration	6 months

4. Evaluation Details of the Circles and Divisions

The details of various circles and divisions evaluated are presented below.

	Circles	Divisions
Territorial Circles and Divisions	Northern Circle, Kannur	Kannur, North Wayanad, South Wayanad and Kozhikode Forest Divisions
	Eastern Circle, Palakkad.	Nilambur North, Nilambur South, Mannarkkad, Palakkad and Nemmara Forest Divisions
	Central Circle, Thrissur.	Thrissur, Chalakkudy, Vazhachal and Malayattoor Forest Divisions
	High Range Circle, Kottayam.	Kothamangalam, Mankulam, Munnar, Marayoor and Kottayam Forest Divisions
	Southern Circle, Kollam.	Ranni, Konni, Punalur, Thenmala, Achenkovil and Thiruvananthapuram Forest Divisions
Wildlife Circles and Divisions	Wildlife, Palakkad.	Aralam, Wayanad, Parambikulam, Peechi and Silent Valley National Park Wildlife Divisions.
	Field Director Project Tiger, Kottayam.	Munnar, Idukki, Periyar Tiger Reserve East & Periyar Tiger West Wildlife Divisions.

	Circles	Divisions
	Agasthyavanam Biological Park, Thiruvananthapuram.	Shendurney and Thiruvananthapuram Wildlife Divisions.
Social Forestry Circles and Divisions	Social Forestry, Kozhikode	Kasargode, Kannur, Wayanad, Kozhikode and Malappuram Social Forestry Divisions.
	Social Forestry, Ernakulam	Palakkad, Thrissur, Ernakulam and Idukki Social Forestry Divisions.
	Social Forestry, Kollam	Alappuzha, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram Social Forestry Divisions.
Research Circles & Research Divisions	Working Plan & Research	Kozhikode, Palakkad, Munnar, Punalur and Kollam Working Plan Divisions as well as Research Division, Thrissur Research Division

Northern circle, Kannur (2009-2014)

The evaluation covered four forest divisions of the circle. They include

1. Kannur
2. Kozhikode
3. North Wayanad
4. South Wayanad

Twelve different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	South Wayanad
2.	Cairns and boundary consolidation	South Wayanad
3.	Compensation to victims	South Wayanad
4.	Compensatory afforestation	North Wayanad
5.	Construction and maintenance of campshed	South Wayanad
6.	Construction of check dam	Kannur, Kozhikode, North Wayanad, South Wayanad
7.	Construction of solar fencing	South Wayanad
8.	Elephant proof trench	South Wayanad
9.	Joint patrolling and raids	South Wayanad
10.	Protection campshed and ration	South Wayanad
11.	Purchase of equipment	South Wayanad
12.	Soil and moisture conservation	North Wayanad, South Wayanad

1. Assistance to Tribal Vana Samrakshana Samidi

The South Wayanad Division assisted the tribal VSS in the form of employment as mazdoor, fire watchers etc. The details pertaining to the payments were verified from records and found correct.

2. Cairns and boundary consolidation

This activity was completed in 2014-15 in three different locations, Bharanikkunnu (10), Attuvaikunnu (12) and Kottapady (12) sections. The records were verified and found correct.

3. Compensation to victims

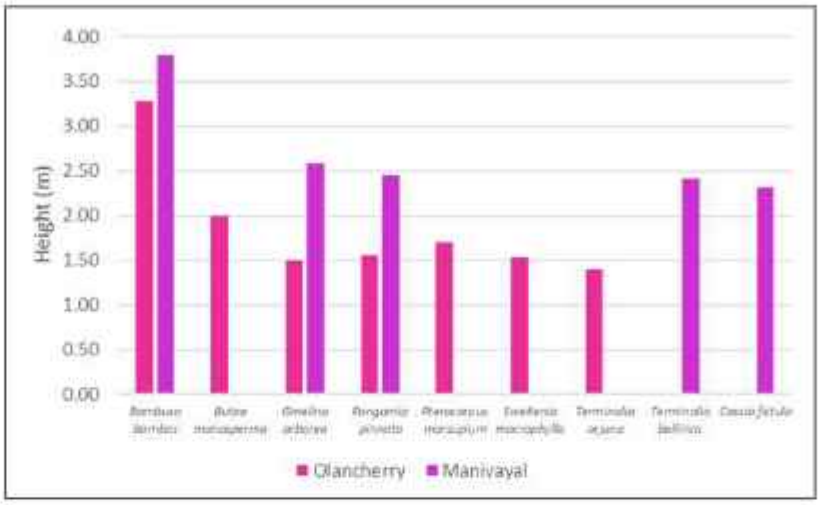
The documents were physically verified and found correct. It involves payments to victims of elephant infiltration into human settlements.

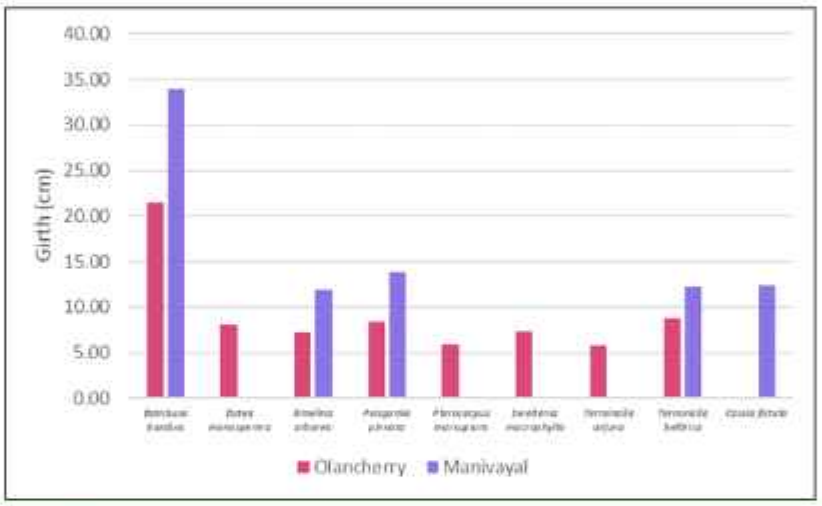
4. Compensatory afforestation

Compensatory afforestation was undertaken only in the North Wayanad Division in two locations.

Plant survival Rate: Plant survival rate varied between the two locations. Gap planting undertaken in Manivayal in Begur range showed the highest survival rates.

S. No.	Divisions	Area (ha)/ Planting	Species	Survival (%)	Remarks
1.	Olancherry	29.1 / Gap planting	*Bambusa bambos, Butea monosperma, Gmelina arborea, Pongamia pinnata, Pterocarpus marsupium Sweitenia macrophylla, Terminalia arjuna, Terminalia bellirica*	80	Maintained subsequently for four years. Hence plantation established well. *Pterocarpus marsupium* did not perform well.
2.	Manivayal	6 ha/ Gap planting	*Cassia fistula, Gmelina arborea, Pongamia pinnata, Terminalia bellirica*	86	All the species established well.





S.No.	*Species planted in compensatory afforestation programmes*
1.	*Bambusa bambos*
2.	*Butea monosperma*
3.	*Cassia fistula*
4.	*Gmelina arborea*
5.	*Pongamia pinnata*
6.	*Pterocarpus marsupium*
7.	*Sweitenia macrophylla*
8.	*Terminalia arjuna*
9.	*Terminalia bellirica*

5. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N11°45'43.93" E76°06'11.51"	2009-2010	7 x 2 x 6	The condition of the structure is good. The activity was completed in 2012-2013.

The works were evaluated for the physical existence and for the quality. The specifications were checked by verifying the old vouchers and the estimates. It is observed that, the building maintenance was found necessary in some cases and was very useful to the occupants.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, <3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Chedleth / Padiri / Ammani, Manalvayal	The shed is maintained well.	The shed is useful for the frontline staff.	7	High

6. Construction of check dam

The work is reported to be executed during 2013-2014. However, no physical verification could be done.

7. Construction of solar fencing

Location	Year	Remarks
Orkittammolla., Ammani	2013-14	The solar fencing was physically verified. There were minor damages to the fences. Records were verified and found correct.
Chakkitta, Ammani, Chedleth Range	2013-14	The solar fencing was physically verified. There were minor damages to the fences. Records were verified and found correct.

8. Elephant Proof Trench

Location	Year	Remarks
Punchakolly, Koodallor, Pambra Area	2013-14	The trenches were physically verified.
Maramala, Chedleth Range	2013-14	The trenches were physically verified.
Punchakolly, Chedleth Range	2013-14	The trenches were physically verified.
Maramala gate, Chedleth Range	2013-14	The trenches were physically verified.

9. Joint patrolling and raids

Vouchers, bills and payments made towards mazdoors for joint patrolling and raids were verified and found correct.

10. Protection campshed and Ration

The work is reported to be executed during 2013-2014.

11. Purchase of equipment

The fire fighting and fire protection equipment procured by the divisions were verified from records and found correct.

12. Soil and moisture conservation

S. No.	Asset /area details	Year	Volume (m^3)	Remarks
1.	Gully plugging / Nariyamthode, Sugandhagiri Section, Kalpetta Range	2013-14	5.27	The structure is in good condition
2.	Gully plugging / Kattimathode, Sugandhagiri Section, Kalpetta Range	2013-14	51.39	The structure is in good condition
3.	Pond digging / Tower kunu, Begur Range (N11° 52' 33.20", E76° 03' 44.42"; Elevation-917m)	2013-14	-	The pond stores water at half capacity.

Four activities were taken up during 2012-13; two during 2010-11 while just one activity was taken up during 2009-10 and 2011-12. The Cairns & Boundary Consolidation activity to be taken up in 2011-12 was taken up during 2013-14. Overall, an amount of Rs. 120.58 lakhs was allotted to the circle during the period of which 90 percent financial achievement was observed.

Eastern circle, Palakkad (2009-2014)

The evaluation covered five forest divisions of the circle. They include

1. Mannarkkad
2. Nenmara
3. Nilambur North
4. Nilambur South
5. Palakkad

Thirteen different activities have been undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Nenmara, Nilambur North
2.	Construction and maintenance of campshed	Nenmara, Palakkad
3.	Construction of check dam/ pond	Mannarkkad, Nenmara, Nilambur North, Nilambur South, Palakkad
4.	Contour bunds	Nenmara
5.	Elephant proof trench	Nenmara
6.	Improving connectivity	Mannarkkad
7.	Interior campshed and ration	Nenmara, Nilambur South, Palakkad
8.	Joint patrolling and raid	Nilambur North
9.	Planting	Nenmara
10.	Purchase of equipment	Nilambur South
11.	Soil and moisture conservation	Nenmara, Palakkad
12.	Soil and moisture Conservation dry rubble	Nenmara
13.	Vegetation barrier by grass	Nenmara

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with two Vana Samrakshana Samidi groups in Mangalam dam (Nenmara) and Nilambur on the implementation of CAMPA activities in the Divisions. Employment through maintenance of plantations under compensatory afforestation, fire watchers, ecotourism activities, and facilities such as provision of skinwood door, door fittings, and fixing of doors has been done for their households. Both divisions have good rapport with the tribals in their divisions.

2. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10^0 28' 23.24" E76^0 33' 11.85"	2010-11	4.0 x 6.0	The structure is in good condition.
2	N10^0 34' 31.29" E76^0 44' 31.19"	2012-13	6.0 x 3.7	The structure is in good condition. The activity was completed in 2014-15.

The camp sheds were evaluated for their physical existence and the quality of the assets. The specifications of the campsheds were checked by physical measurements and verifying the old vouchers and estimates.

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp shed / Alathur/ Kadappara	The structure is in good condition.	It is regularly used by the frontline staff.	7	High
2.	Contour Bund/ Kollengode / Kalliyampara	The structure is in good condition.	It is regularly used by the frontline staff.	7	High

3. Construction of Check Dam/ Pond

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1.	N11°0' 23.16" E76°31' 43.17"	2012-13	210.0	The structure is in good condition.
2.	N10°34' 11.69" E76°39'6.31"	2012-13	41.5	The structure is in good condition. The activity was completed in 2014-15.
3.	N 10°52'58.55" E 76°39'16.57"	2011-12	72	The structure is in good condition.

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
4.	N11°18' 57.97" E76°11'45.48"	2012-13	354.66	The structure is in good condition. The activity was completed in 2019-20.
5.	N11°18' 47.6" E76°21' 38.8"	2012-13	Plastering: 14.0 m^3; Earthwork: 107.0m^3; Foundation: 155.0m^3 RCC: 79 m^3	The structure is in good condition.

The works were evaluated for the physical existence and quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check Dam / Mannarkkad/ Vattappara	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	7	High

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
2.	Check Dam / Kollengode range Elavancheri	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	8	High
3.	Check Dam / Olavakkode range / Elival section / Velampotta	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	7	High
4.	Check Dam / Tharamattam/ Ottupalthodu	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	8	High
5.	Check Dam / Nilambur South/ Karulai/ Moochikkala	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	7	High

4. Contour Bunds

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°34'27.42" E76°44'14.26"	2014-15	-	The structure is in good condition.

The bunds have been physically verified and the specifications were checked by physical measurements and verifying the old vouchers and estimates.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Contour Bund/ Kollengode / Kalliyampara	The structure is in good condition.	It supports the soil stabilisation.	7	High

The works were evaluated for the physical existence and for the quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates.

5. Improving connectivity

Records pertaining to maintenance of Patrolling routes in Mannarkkad Division - Ayyappan thavalam under Singappara forest station in Agali range (N10° 58' 10.413"; E76° 37' 54.89") were verified and found correct.

6. Interior campshed and ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1.	N11°18'25.92" E76°26'31.92"	2009-10	72m^2	The structure is in good condition.
2.	N10°52'47.3" E76°48'09.0"	2011-12	72m^2	The structure is in good condition.

The works were evaluated for the physical existence and quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates.

Observations of the evaluation team

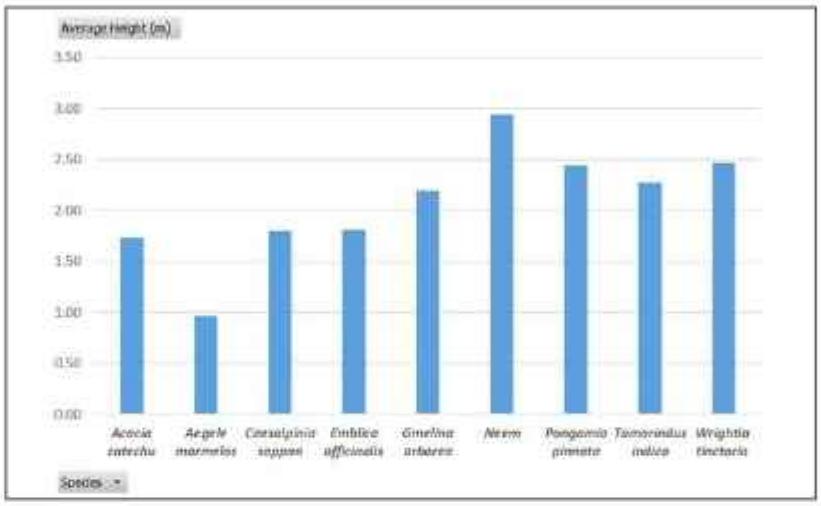
Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp shed / Nilambur South / Karulai / Panapuzha	Maintenance like tress work over the existing camp shed.	It is regularly used by the frontline staff.	7	High
2.	Camp shed/ Walayar	The structure is in good condition.	It is regularly used by the frontline staff.	7	High

7. Joint patrolling and raid

Joint patrolling activities were taken up in Edavanna, Vazhikkadavu ranges of Nilambur north division. The activities were verified through inspection of records and found correct.

8. Planting

Planting was envisaged in the APO 2012-2013 in Nenmara Division. However, the same could be achieved only during 2015-2016. Nine species were planted in Killimala in Kollengode, Nenmara division in 15 ha area. Plant survival rate was good but varies between species.



Growth performance of the different species in Killimala, Nenmara division

There was heavy undergrowth of grasses, and the field was completely infested with weeds such as Lantana and Eupatorium. The plantation was well stocked with a survival of 76 per cent.

9. Purchase of equipment

The records revealed that field equipment for antipoaching squad and watchers such as torches, emergency life saving equipments, solar charged lights were procured and distributed.

10. Soil and moisture conservation dry rubble

Gully plugging using dry rubble was carried out in Vellakkalthittu, Kollengode range in an area of 82.5 m^3 (N10°31'44.22",E76°37'59.40" and N10° 31'42.93" E76°37'59.31"). The gullies are in good condition.

Two activities were taken up during 2009-10 in the circle, four during 2010-11, five each during 2011-12 and 2012-13. The circle implemented all the activites listed in the APO. Spillovers were observed with regard to planting and construction of campshed. Overall, an amount of Rs. 93.81 lakhs was allotted to the circle during the period of which 70 percent financial achievement was observed.

Central circle, Thrissur (2009-2014)

The evaluation covered four forest divisions of the circle. They include

1. Chalakkudy
2. Malayattoor
3. Thrissur
4. Vazhachal

Nine different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Chalakkudy, Vazhachal
2.	Cairns and boundary consolidation	Chalakkudy, Thrissur
3.	Compensatory afforestation	Chalakkudy
4.	Construction and maintenance of campshed	Chalakkudy
5.	Construction of check Dam/ Pond	Chalakkudy, Malayattoor, Thrissur
6.	Eradication of exotic weeds	Vazhachal
7.	Interior campshed & Ration	Malayattoor
8.	Joint patrolling and raid	Vazhachal
9.	Soil and moisture conservation	Malayattoor

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with a Vana Samrakshana Samidi group on the implementation of CAMPA activities in Vazhachal Division. Employment through maintenance of plantations under compensatory afforestation, fire watchers, ecotourism activities, and skill development (tailoring units, honey processing) have been provided.

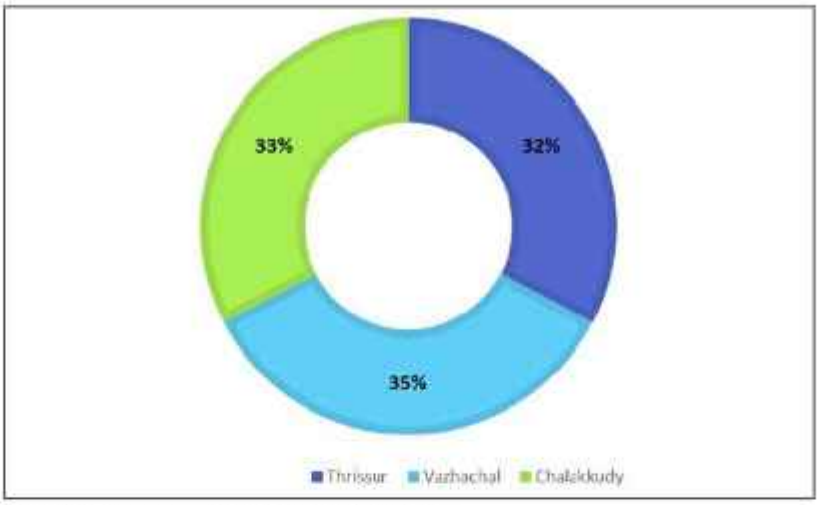
2. Cairns and boundary consolidation

The cairns at the boundary of forests in Mankuttipadam, Vellikulangara Range Chalakkudy were inspected and found damaged. This work was envisaged in 2011-12; however, it was completed in 2014-15.

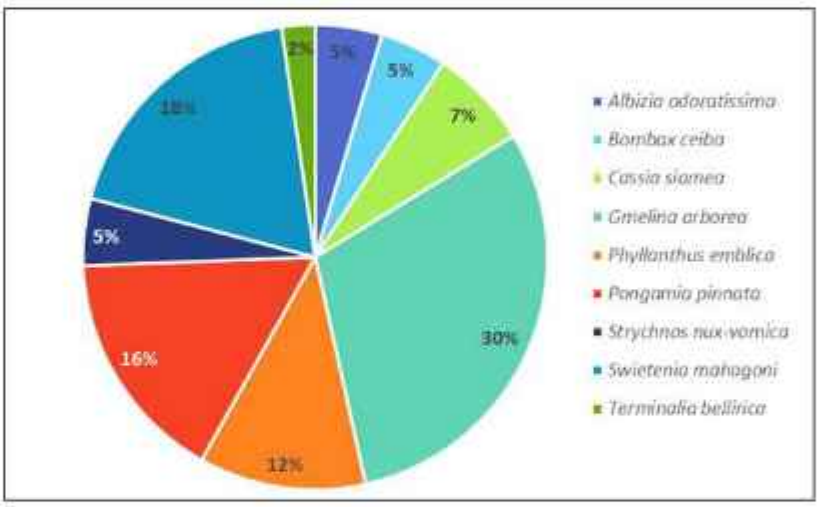
3. Compensatory afforestation

Plant survival Rate: Plant survival rates did not vary significantly between divisions; however, the species composition was different. *Gmelina arborea* was found to perform better in Thrissur and Vazhachal while *Artocarpus heterophyllus* survived better in Chalakudy.

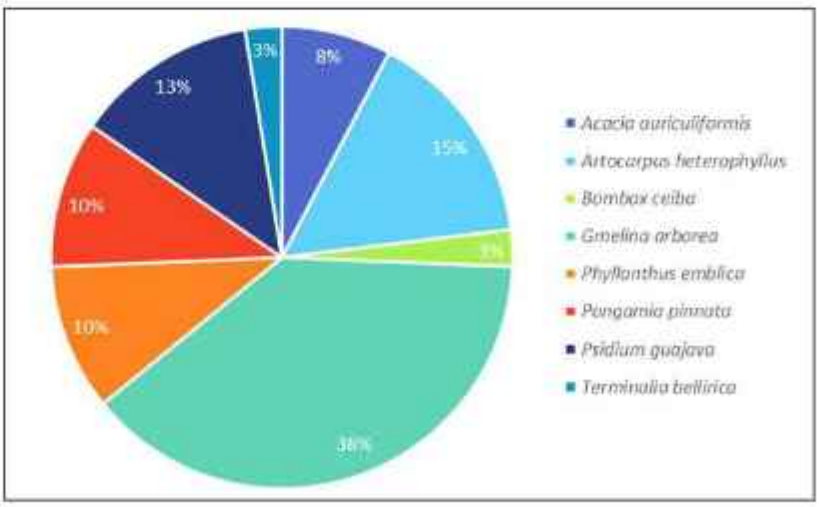
S. No.	Divisions	Area (ha)/ Planting	Species	Survival (%)	Remarks
1.	Thrissur	18.0 / Gap planting	*Albizia odoratissima, Bombax ceiba, Cassia siamea, Gmelina arborea, Phyllanthus emblica, Pongamia pinnata, Strychnos nux-vomica , Swietenia mahagoni, Terminalia bellirica*	80	Pest: Leaf Defoliator Insect: Pungam Gall formation on leaves Leaf *spot:* Pungam, Leaf blight: Pungam Leaf scorching: Ailanthus (Yellow discolouration of leaves)
2.	Vazhachal	10.0 / Gap planting	*Acacia auriculiformis, Artocarpus heterophyllus, Bombax ceiba, Gmelina arborea, Phyllanthus emblica, Pongamia pinnata, Psidium guajava, Terminalia bellirica*	85	Pest Leaf Defoliator Insect Pungam Gall formation on leaves Leaf spot Pungam, Algal leaf spot Guava Leaf spot: Jack fruit
3.	Chalakkudy	2.12/ Gap planting	*Ailanthus excelsa, Artocarpus heterophyllus, Artocarpus hirsutus, Azadirachta indica, Dalbergia latifolia, Dendrocalamus strictus, Pongamia pinnata, Terminalia bellirica , Terminalia paniculata, Wrightia tinctoria*	80	1. Emblica - Damaged by sambar deer andcaterpillar damage 2. Pungam -Leaf Gall



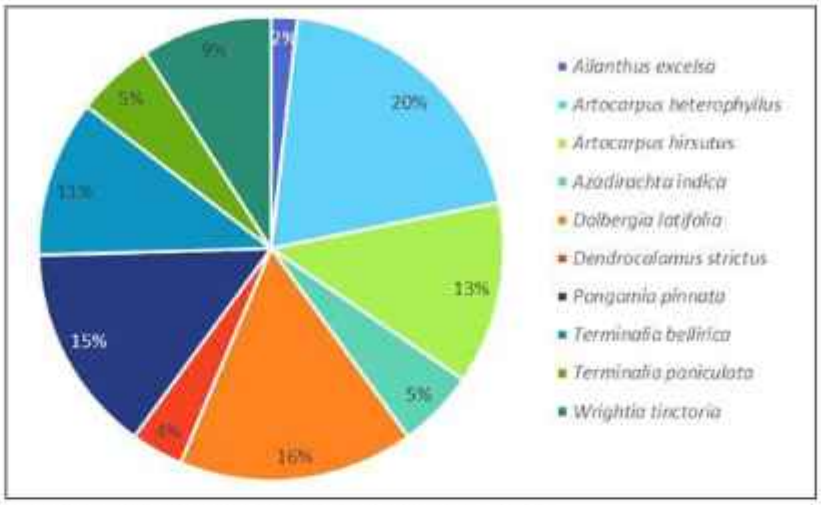
Overall survival rates (%) across divisions



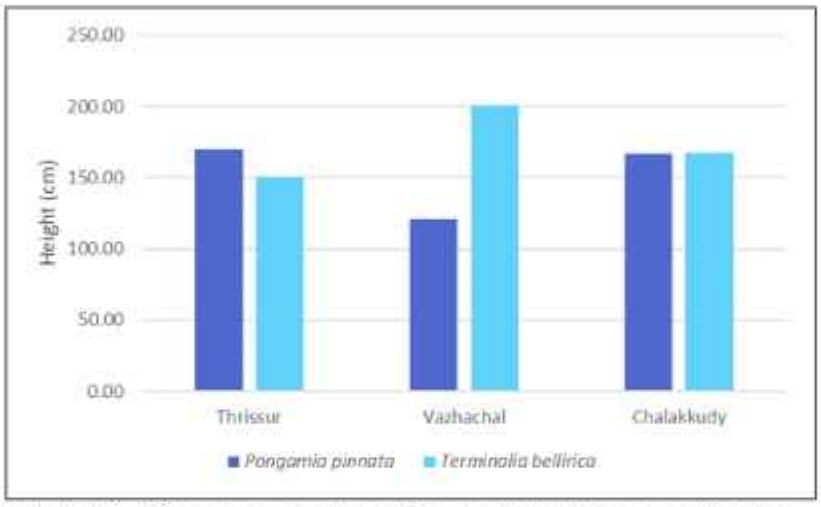
Survival pattern of species in Thrissur Division



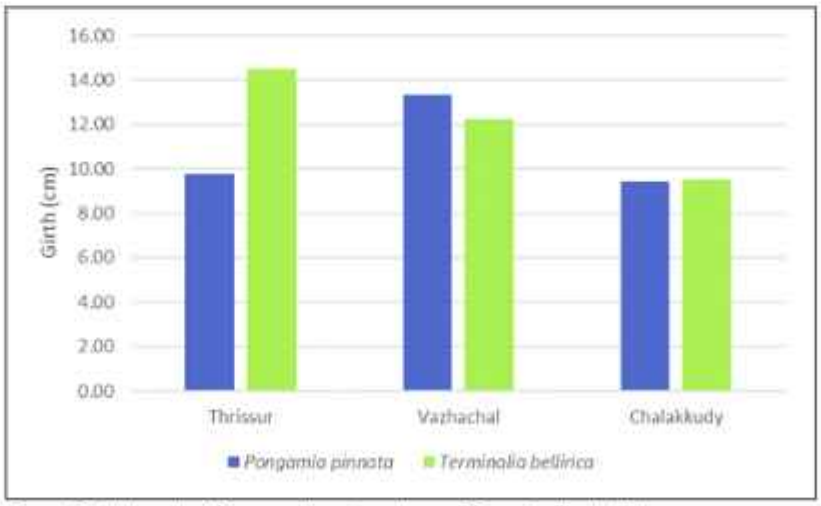
Survival pattern of species in Vazhachal Division



Survival pattern of species in Chalakkudy Division



Height (m) of Pongamia pinnata and *Terminalia bellirica* across divisions in Central Circle, Thrissur



Basal Girth (cm) of *Pongamia pinnata* and *Terminalia bellirica* across divisions in Central Circle,Thrissur

Plant Protection Measures: Different plant protection measures such as watch and ward, fire protection, weeding, etc have been taken in all the divisions to improve plant survival rate. In some cases, the VSS members were involved in maintaining the afforestation activities. Watch and ward was given priority over other protection measures.

Since these plantations were raised during the period 2009-2014, watch and ward provision was made for three years, excluding the plantation year. As a result, the survival rates are good. In the later stage, the site was covered under general monitoring and supervision. This could have led to a low stocking in some of the afforested sites.

Record maintenance: Different records / documents are maintained at the range office with respect to plantations and silvicultural activities. The site map, treatment map and data on survival and growth have been recorded meticulously in the journal. The records and bills related to the plantations are well maintained.

4. Construction and maintenance of campshed

The construction of collection shed at Chakkiparambu, Malambatty Colony of Palappilly Range was reported to be executed during 2013-2014. Records related to the work were verified.

5. Construction of check dam/ pond

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°33'43" E76°18'44"	2015	1.05 x 3.1x 33.45	The activity was envisaged in 2012-13. The check dam is in good condition.
2	N10°10" 41.88" E76°39' 55.72"	2015	0.8 x1.7 x 16.3	The activity was envisaged in 2012-13. The check dam is in good condition.
3	N10°11'46.9" E76°33'43.5"	2016	15.25 x 1.20 x 2	The activity was envisaged in 2012-13. The check dam wast is partially damaged.

The works were evaluated for the physical existence and for the quality. The specifications of all check dams were checked by verifying the old vouchers and the estimates. It is observed that, one of the check dams in Chalakudy was partially damaged.

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check Dam/ Pattathipara / Thrissur	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	7	High

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
2.	Check dam/ Chemminkuthu /Thundaththil/ Malayattoor	The check dam is maintained well and appears healthy	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	8	High
3.	Check dam/ Vettilappara/ Chalakudy	The check dam has been partially damaged.	The check dam requires maintenance to improve moisture retention in adjoining areas.	5	Medium

6. Eradication of exotic weeds

Eradication of Exotic weeds was undertaken in Vazhachal Division during 2014-15 against the APO 2011-2012, based on the records verified.

7. Interior campshed and ration

The work is reported to be executed during 2009-2010 in Malayatoor Division.

8. Joint patrolling and raid

Joint patrolling activities were taken up in Vazhachal division. The activities were verified through inspection of records and found correct.

9. Soil and moisture conservation

This activity was undertaken in the Malayattoor Division during 2014 -15 against the APO 2010-2011. The work is reported to be executed at Nediyapara in Pooyamkutty Forest Station, based on the records verified.

Four activities were planned during 2010-11 in the circle, two during 2011-12, one each during 2009-10, 2012-13 and 2013-14. Spillovers were observed in check dams, SMC activities. Overall, an amount of Rs. 54.81 lakhs was allotted to the circle during the period of which 97.8 percent financial achievement was observed.

High Range circle, Kottayam (2009-2014)

The evaluation covered five forest divisions of the circle. They include

1. Kothamangalam
2. Kottayam
3. Mankulam
4. Marayoor
5. Munnar

Seven different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to Tribal Vana Samrakshana Samidi	Kothamangalam, Munnar
2.	Construction and maintenance of campshed	Kothamangalam
3.	Construction of check dam/ pond	Kothamangalam, Kottayam, Mankulam, Marayoor, Munnar
4.	Interior campshed and ration	Kothamangalam
5.	Joint patrolling and raid	Marayur
6.	Purchase of equipment	Kothamangalam
7.	Soil and moisture conservation	Kothamangalam, Munnar

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with two Vana Samrakshana Samidi groups on the implementation of CAMPA activities in Kothamangalam and Munnar Divisions. The Tribal Vana Samrakshana Samidi were engaged in protection mazdoor, collection, protection and sale of MFP at Thommankuthu Eco- Tourism Centre in Neduvakkadu Section in Kaliyar Range.

2. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m^2)	Remarks
1	N09°91025° E76°88235° Elevation-569 m	2010 -2011	33.8	The work was carried out during 2013-2014 and completed in 2014-15.

Campshed completely destroyed by elephants

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Anti-Poaching Campshed/ Kothamangalam /Thodupuzha/ Keezhar	The campshed is completely destroyed by elephants.	Inconvenient for the anti-poaching squad.	Low	Low

3. Construction of check dam/ pond

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1	N10°02016° E76°7338° Elevation- 56 m	2012-2013	12.75; 4.08; 2.04; 12.0	Four check dams were assessed. The structures are in good condition.
2	N09°27.402' E76°55.342' Elevation- 147 m	2012-2013	2.4; 7.68; 2.52; 2.52	The structures are in good condition. The work was carried out during 2014-2015 and completed in 2015.
3	N10°14' 39.88" E77°10' 39.96" Elevation- 1023m	2012-2013	9.408	The structure is in good condition.
4.	N10°04' 48.79" E77°56' 12.75" Elevation- 1056m	2014-2015	Plastering: 58.75 Earthwork: 58.05 Foundation: 33.15 RCC: 26.1	The structure is in good condition. The work was carried out during 2014-2015.

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check Dam/ Kothamangalam / Mullaringad	Water is stored to half-capacity	The moisture content of surrounding areas improved, as evidenced by the dense vegetation growth.	9	High
2.	Check dam/ Kottayam/ Erumely/ Kalaketty Parathode	Water is stored to full capacity.	The moisture content of surrounding areas improved, as evidenced by the dense vegetation growth.	10	High
3.	Check dam/ Marayoor/ Kanakkayam /Kanthalloor	Water is stored to half-capacity	The moisture content of surrounding areas improved, as evidenced by the dense vegetation growth.	9	High
4.	Check Dam/ Mankulam/ Mankulam/ Kambany Kudy	Water is stored to half-capacity	The moisture content of surrounding areas improved, as evidenced by the dense vegetation growth.	9	High

4. Interior campshed and ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°01621" E76°78644" Elevation- 78 m	2009-2010	Room: 5.0 x 4.0 Toilet : 1.25 x 1.5	The camp shed was constructed with steel structure and covered with GI corrugated sheets. The work was carried out during 2012-2013.

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Kothamangalam / Mullaringad	The camp shed is maintained well and in use.	The shed is regularly used by the frontline staff.	10	High

5. Joint patrolling and raid

Joint patrolling activities were taken up in Marayoor division. The activities were verified through inspection of records and found correct.

6. Soil and moisture conservation

Gully plugginng was carried out in Marayoor Division.

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°15' 32.98" E77°08' 55.42" Elevation- 1018m	2012-2013	7.6x 2.57	The structure is in good condition.
2.	N10°15' 11.72" E77°08' 57.77" Elevation- 967m	2012-2013	7.6x 2.57	The structure is in good condition.

Present status of gully plugging at Pobson Oda Thodu at Marayoor

Present status of gully plugging at Kozhippanna Thodu at Marayoor

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, <3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully Plugging/ Marayoor/ Marayoor/ Nachivayal Sandal Reserve (NSR-II)/ Pobson Oda Thodu	The gully plugging structure is intact.	The gully plugs have enabled stabilisation of the soil to a large extent.	8	High
2.	Gully Plugging/ Marayoor/ Marayoor/ Nachivayal Sandal Reserve (NSR-II)/ Kozhippanna Thodu	Four gully pluggings undertaken in Kuppanodu Thodu, Pobson Oda Thodu, Kozhippanna Thodu and Eco Point Thodu are intact.	The gully plugs have enabled stabilisation of the soil to a large extent.	7	High

In Kottayam division, this work was carried out during 2017-18.

Two activities were taken up during 2009-10 in the circle, four during 2010-11, one during 2012-13. Construction of check dams was the major activity taken up in the Circle during the period. No new activities were taken up during 2013-14. Activites envisaged in 2012-13 were completed during this period. Check dam construction at Mankulam is reported to be executed during 2012-13 however, no physical verification was done. SMC works at Kothamangalam is reported to be executed during 2013-2014. The circle implemented all the activites listed in the APO. Overall, an amount of Rs. 43.5 lakhs was allotted to the circle during the period of which 92 percent financial achievement was observed.

Southern circle, Kollam (2009-2014)

The evaluation covered six forest divisions of the circle. They include

1. Achenkovil
2. Konni
3. Punalur
4. Ranni
5. Thenmala
6. Thiruvananthapuram

Nine different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Konni, Ranni
2.	Interior campshed and ration	Konni, Ranni
3.	Catchment area treatment	Ranni
4.	Compensatory afforestation	Konni, Ranni, Punalur, Thenmala
5.	Construction and maintenance of campshed	Achenkovil, Punalur
6.	Construction of check dam/ pond	Konni, Ranni
7.	Joint patrolling and raid	Konni, Ranni
8.	Purchase of equipment	Ranni
9.	Soil and moisture conservation	Achenkovil and Ranni

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with two Vana Samrakshana Samidi groups on the implementation of CAMPA activities in Konni and Ranni Divisions. Employment through maintenance of plantations under compensatory afforestation, fire watchers, ecotourism activities, and facilities such as gas connections, support for childrens' education, solar lights, skill development (tailoring units, hand made products) have been provided.

The Focussed Group Discussions revealed that the departmental interventions in these areas are in consultation with the people. In those areas, where there is scope for revenue from NTFPs, people have taken interest in the management and protection of the worked areas. The people have taken care to prevent fire and restrict grazing. In other areas, where usufructs are not forthcoming immediately, the people have not shown much interest about the management of the forest areas. The involvement of the Scheduled Tribes in the divisions was very evident. The department has taken sufficient care to address the interests of the Scheduled Tribes while developing management plans with sufficient flexibility.

2. Interior campshed and ration

Vouchers were verified and found correct. Ration was provided to Ranni and Konni division. The supply and items were verified through inspection of records and found correct.

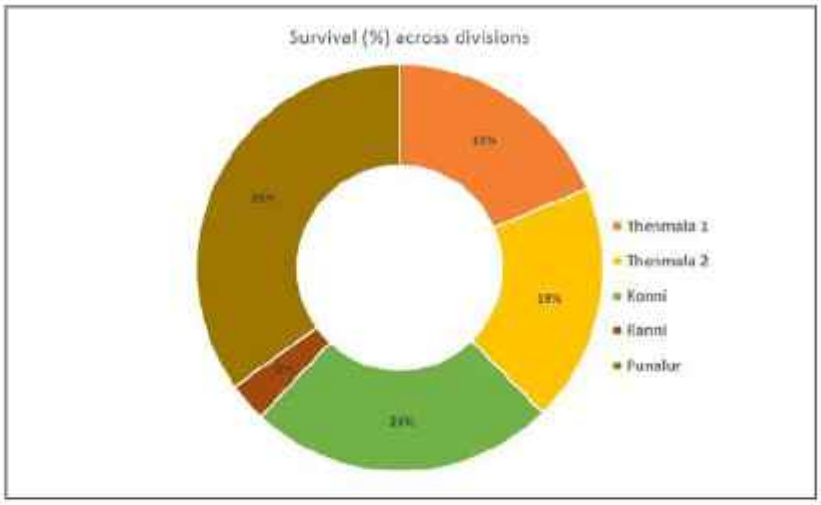
3. Catchment area treatment

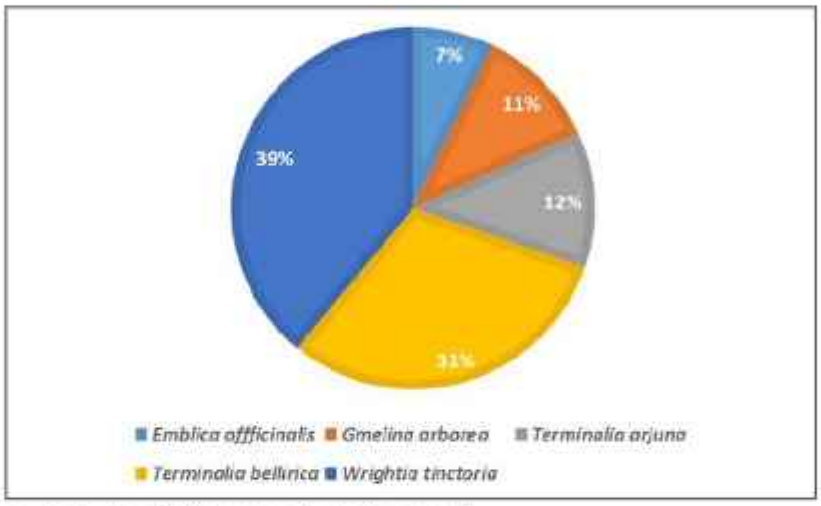
River bank stabilisation efforts were undertaken for a stretch of 2.5 km along the Kallar river. *Bambusa bambos* was planted as part of the stabilisation efforts, however, due to heavy and frequenting floods, most of the bamboos have been washed away. Natural vegetation has established in the area, acting as a vegetative cover.

4. Compensatory afforestation

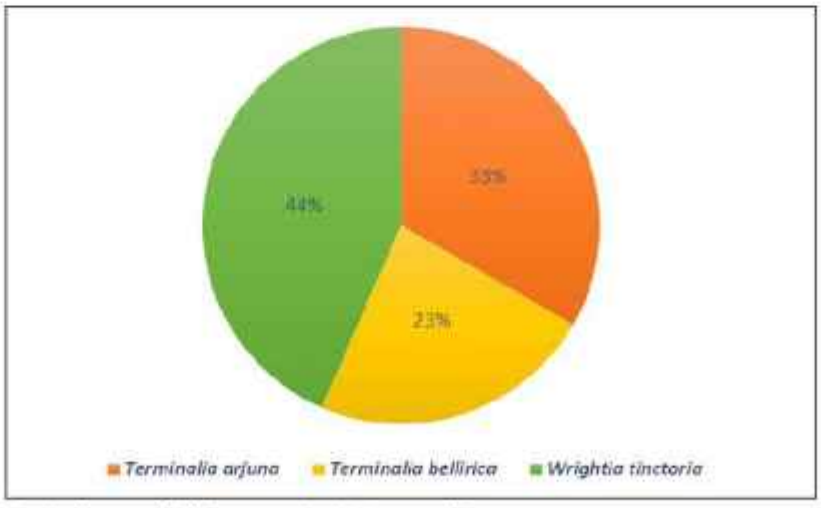
Plant survival Rate: Survival rate of different species varies between divisions. Within the same division (Thenmala), however, no differences were observed in the survival rate in two different sites. Gap planting undertaken in Punalur showed highest survival rates.

S. No.	Divisions	Area (ha)/ Planting	Species	Survival (%)	Remarks
1.	Konni	4.25 / Gap planting	*Terminalia eliptica, Terminalia paniculata, Xylia xylocarpa, Lagerstroemia microcarpa, Terminalia bellarica, Dalbergia latifolia, Grewia tiliifolia*	58	Maintained subsequently for 4 years. Hence plantation established well. *Lagerstroemia microcarpa was not* not recorded.
2.	Ranni	10/ Gap planting	*Hopea parviflora, Dysoxylum malabaricum, Cassia fistula, Atrocarpus hirsutus, Dalbergia latifolia, Schleichera oleosa, Terminalia bellarica, Phyllanthus emblica, Syzygium cumini*	7.0	Heavy infestation of the invasive - Kurinji (*Strobilanthes* sp.) which prevented establishment of the planted saplings. *Cassia fistula, Dalbergia latifolia and Artocarpus hirsutus* established well. Further, as the planting was within adense forest, wild animals such as elephants, bear, wild boar and deer prevented effective plantation. **Replanting has been attempted.**
3.	Punalur	5 / Gap planting	*Terminalia bellirica, Hopea parviflora, Xylia xylocarpa, Schleichera oleosa, Artocarpus hirsutus*	83.2	The site was well stocked due to subsequent maintenance. Most of the species established well. Natural regeneration of species such as bamboos and *Macaranga peltata* was observed.
4.	Thenmala	125 / Gap planting	*Wrightia tinctoria, Emblica offficinalis, Swietenia mahagoni, Gmelina arborea, Terminalia bellirica, Tamarindus indica*	45	*Emblica offficinalis, Swietenia mahagoni, Gmelina arborea, Tamarindus indica* did not survive in the plantations. Heavy loss of plants recorded due to elephant trampling.
5.	Thenmala	235 / Gap planting	*Swietenia mahagoni, Gmelina arborea, Wrightia tinctoria, Terminalia bellirica, Terminailia arjuna*	45	Damage to the plantation due to grazing, sambar deer and elephant.

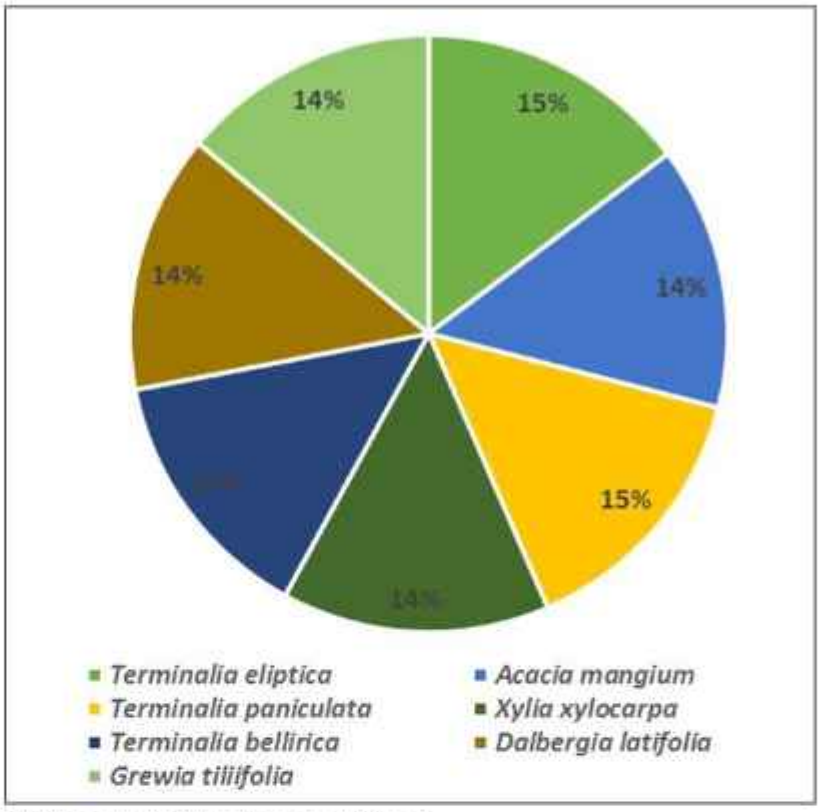




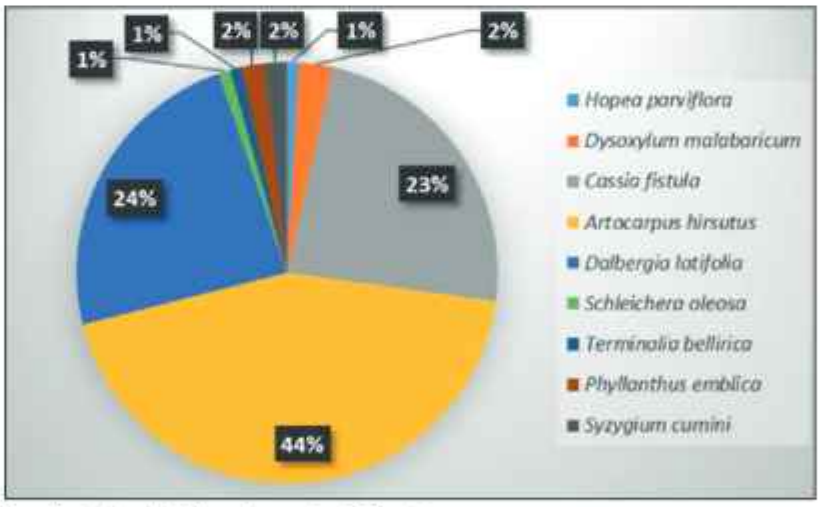
Survival rates of different species in Thenmala1



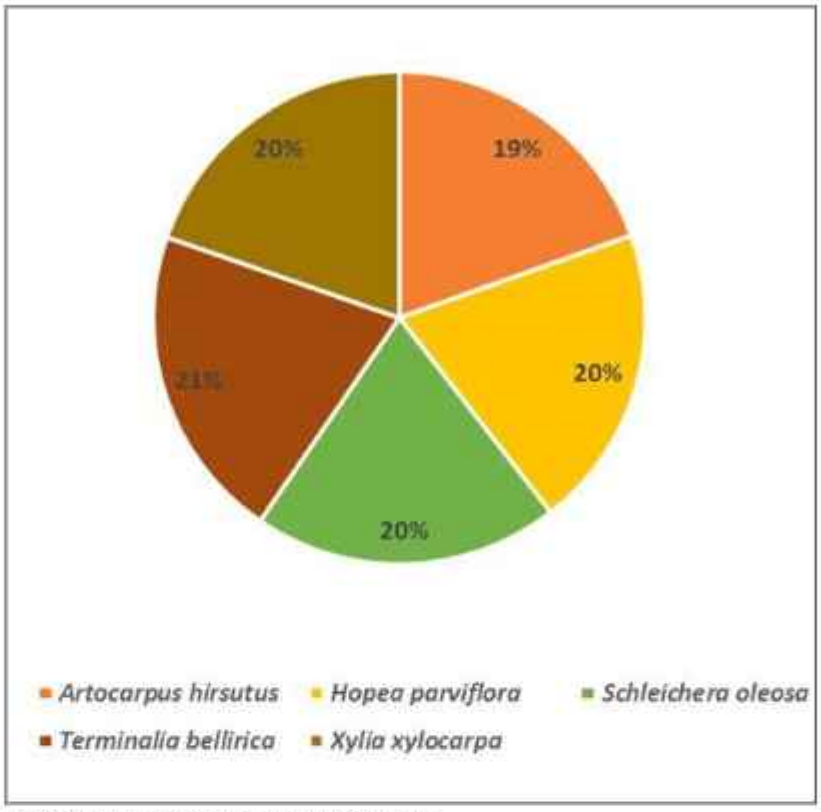
Survival rates of different species in Thenmala2



Survival rates of different species in Konni

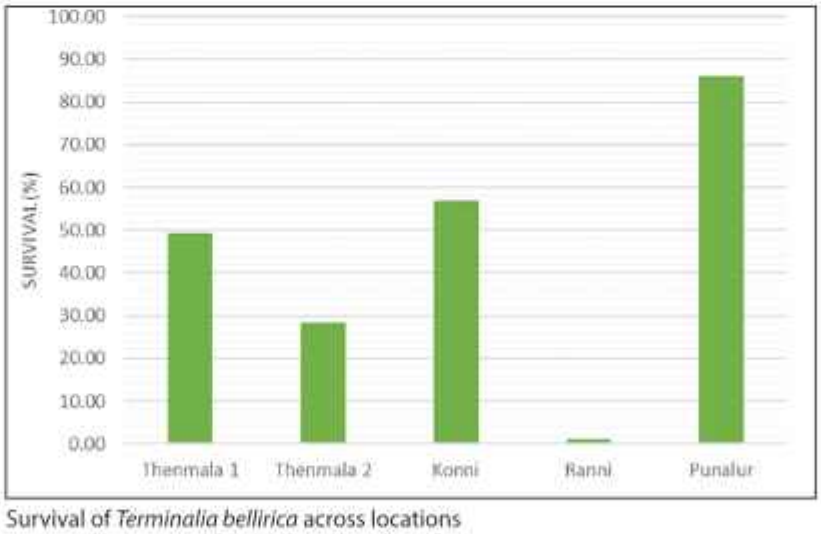


Survival rates of different species in Ranni

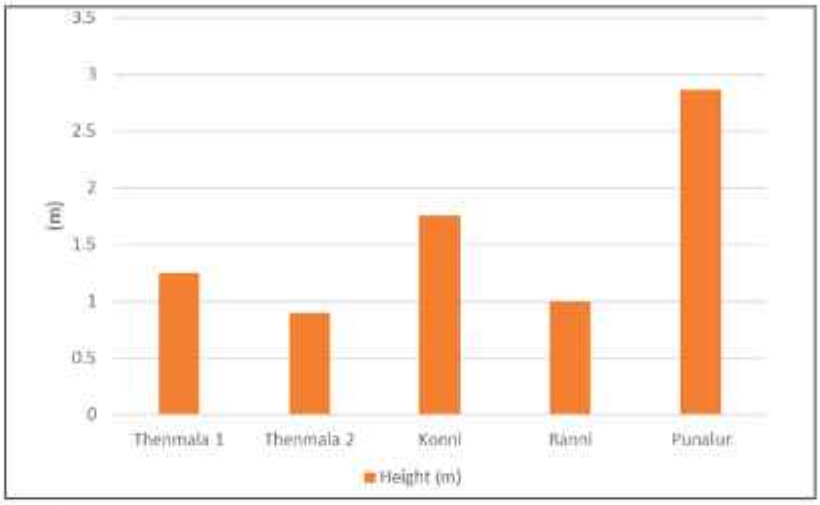


Survival rates of different species in Punalur

Terminalia bellirica was the only species planted across divisions. The species varied in survival and growth performance in different sites.



Survival of *Terminalia bellirica* across locations



Growth (Height in m) of *Terminalia bellirica* across divisions in SC Kollam

Plant Protection Measures: Different plant protection measures such as watch and ward, fire protection, weeding, etc have been taken in all the divisions to improve plant survival rate. In some cases, the VSS members were involved in maintaining the afforestation activities. Watch and ward was given priority over other protection measures.

Since these plantations were raised during the period 2009-2014, watch and ward provision was made for three years, excluding the plantation year. As a result, the survival rates are good. In the later stage, the site was covered under general monitoring and supervision. This could have led to a low stocking in some of the afforested sites.

Record maintenance: Different records / documents are maintained at the range office with respect to plantations and silvicultural activities. The site map, treatment map and data on survival and growth have been recorded meticulously in the journal. The records and bills related to the plantations are maintained well.

Remarks

- Indigenous tree species are selected for planting.
- Most of the plantation activities were carried out by frontline officials without additional labour. Hence, no additional expenses were incurred.
- Maintenance work was done by the VSS members.
- It was learnt from the forest officials that due to grazing by Sambar deer and elephant lot of casualties reported in this plantation.

Current status of compensatory afforestation plantation at Nedungalloor Pacha, Edamon section (2014)

Current status of compensatory afforestation plantation at Nedungalloor Pacha, Edamon section (2014)

Current status of compensatory afforestation plantation at Nedungalloor Pacha, Edamon section (2014)

Review team of compensatory afforestation plantation at Nedungalloor Pacha, Edamon section (2014)

Review team at Gap Planting site at Pinangathodu, Kokkathodu Forest Station, Naduvathumoozhy, Konni (2014)

S.No.	*Species Planted in Compensatory Afforestation Programmes*
1.	*Acacia mangium*
2.	*Artocarpus hirsutus*
3.	*Cassia fistula*
4.	*Dalbergia latifolia*
5.	*Dysoxylum malabaricum*
6.	*Emblica offficinalis*
7.	*Gmelina arborea*
8.	*Grewia tiliifolia*
9.	*Hopea parviflora*
10.	*Schleichera oleosa*
11.	*Syzygium cumini*
12.	*Terminalia arjuna*
13.	*Terminalia bellirica*
14.	*Terminalia eliptica*
15.	*Terminalia paniculata*
16.	*Wrightia tinctoria*
17.	*Xylia xylocarpa*

5. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m^2)	Remarks
1	N09°7'58.848" E77°11'55.518"	2010 -2011	120	The camp shed was constructed at Kattikuzhy for the convenience of the anti-poaching squad. The shed has an elephant trench of dimensions 20 x 3 x 2.5 m around it. Despite this, the camp shed has been damaged by elephants. The camp shed requires maintenance.
2	N08° 59' 47.48" E77° 03' 30.78"	2010 -2011	46.96	The camp shed constructed during 2010-2011 was damaged. It was refurbished later with funding from other sources.

The works were evaluated for the physical existence and for the quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates. It is observed that, the building maintenance was found necessary in Kattikuzhi, and is very useful to the frontline staff.

Camp Shed at Kattikuzhy with elephant trench

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	**Campshed/** Achenkovil/ Kattikuzhi	The campshed has been established at Kattikuzhy. Temporarily used by Anti-Poaching squad. Solar panel installed in the camp shed. Though there is a protective EPT, the campshed has been damaged and requires maintenance.	Temporarily used by Anti Poaching squad in transit.	5	Medium
2.	**Campshed/** Punalur/ Mambazhathara	The structure was damaged so it may demolished and rebuilt later using funds from other sources.	Presently in use by VSS.	8	High

6. Construction of check dam/ pond

It was reported that heavy and recurrent floods completely damaged the check dams.

7. Joint patrolling and raid

Joint patrolling activities were taken up in Konni division. The activities were verified through inspection of records and found correct.

8. Purchase of equipment

The records revealed that field equipment for antipoaching squad and watchers such as torches, emergency life saving equipments, solar charged lights were procured and distributed.

9. Soil and moisture conservation

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N09°7'26.58" E77°11'24.912"	2010 -2011	7.8 x 1.26 x 1.65; 6 x 1.00 x 1.5; 5 x 1.0 x 1.0; 4 x 0.5 x 0.5; 7.0 x 1.5 x 1.0; 4 x 1.2 x 1.6; 5.6 x 1.45 x 1.0	Inspected six gullies at Vazhaperiyar. They displayed minimal damage which the staff mentioned was due to washing away in floods.
2	N09°8'09.06" E77°12'0.006"	2010-2011	3.8 x 1.5 x 0.65; 13.33 x 1.37 x 0.73; 0.55 x 1.6 x 0.35	Inspected three gullies at Kattikuzhi. All the three gullies are in good condition. The frontline staff regularly inspect the gullies, as it is the breeding ground for endemic fishes.

Gully plugging at Kattikuzhi

Three gullies in line at Kattikuzhi

Gully Plugging at Vakkalar

Gully plugging at Goodrickal

Two activities were taken up during 2009-10 in the circle, four during 2010-11, two each during 2011-12, 2012-13 and 2013-14. The circle implemented all the activites listed in the APO. No spillovers were observed. Overall, an amount of Rs. 103.9 lakhs was allotted to the circle during the period of which 95 percent financial achievement was observed.

Wildlife circle, Palakkad (2009-2014)

The evaluation covered four divisions of the circle. They include

1. Peechi
2. Parambikulam
3. Silent Valley
4. Wayanad

Seventeen different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Parambikulam, Peechi
2.	Check dam	Wayanad, Parambikulam, Peechi
3.	Construction and maintenance of campshed	Silent valley, Wayanad
4.	Eco development	Peechi
5.	Eco-Tourism and training	Peechi
6.	Fire protection	Peechi
7.	Habitat improvement	Peechi
8.	Improving connectivity	Parambikulam, Peechi, Silent Valley, Wayanad
9.	Infrastructure development	Peechi
10.	Joint patrolling and raid	Silent valley
11.	Mitigation man-animal conflict	Peechi
12.	Protection and maintenance of antipoaching campshed	Parambikulam, Aaralam, Peechi, Silentvalley, Wayanad
13.	Protection campshed and ration	Silent Valley, Wayanad
14.	Publicity and awareness	Peechi
15.	Research and development	Peechi
16.	Road maintenance	Peechi
17.	Soil and moisture conservation	Peechi, Silent valley, Wayanad

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with two Vana Samrakshana Samidi groups on the implementation of CAMPA activities in Parambikulam and Peechi Divisions. The Tribal VSS were engaged in Protection Mazdoor, for collection, protection and sale of MFP at Parambikulam Eco-Tourism Centres.

2. Check dam

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°38654 E76°748424	2012-13	21 x 3 x 1	The activity was carried out during 2014-15.
2	N10°38654 E76°748424	2012-13	13 x 1.2 x 3	The activity was carried out during 2014-15.
3	N11°5'1.213" E76°28'50.35"	2013-14	13.50 x 1 x 3.2	The activity was carried out during 2014-15.
4	N11°3'5.4912" E76°30'52.121"	2013-14	7 x 1.5 x 0.5	The activity was carried out during 2014-15.

The works were evaluated for their physical existence and their quality. The specifications of all check dams were checked by verifying the old vouchers and the estimates. It is observed that, one of the check dams in Chorakulam were partially damaged.

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check dam/ Parambikulam WLS / Karimala / Chorakulam	The structure is partially damaged (~ 10 per cent) and requires renovation.	The check dam requires maintenance to improve moisture retention in the adjoining areas.	5	Medium
2.	Check dam/ Parambikulam WLS / Karimala / Chorakulam	The structure is in good condition.	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	8	High
3.	Check dam/ Silent Valley NP /Bhavani/ Panthanthod	The structure is in good condition.	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	8	High
4.	Check dam / Silent Valley NP /Bhavani/ Keeripara	The structure is in good condition.	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.		

3. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m^2)	Remarks
1	N11°3"5.4912" E76°30'52.181"	2009-2010	136.62	The work was carried out during 2013-2014.
2	N11°5'1.213" E76°28'50.35"	2013-2014	6.93	The work was carried out during 2014-2015.

The camp sheds were evaluated for their physical existence and quality. Vouchers and the estimates were verified and found correct.

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Silent Valley National Park/ Bhavani / Keeripara	Only maintenance activities were taken up – Repair of ceiling, basement, replacement of door and windows should be done / carried out.	The shed is regularly used by the frontline staff.	8	High
2.	Silent Valley National Park/ Silent Valley/ Panthanthode	Earthwork and excavation activities ertaining to maintenance were carried out.	The shed is regularly used by the frontline staff.	8	High

4. Eco-Tourism and Training

The activities were verified through inspection of records and found correct.

5. Fire protection

The activities undertaken between Mampara and Kotikattipura, and Chamipallam to Mampara were verified through inspection of records and found correct.

6. Improving connectivity

Patrolling routes were cleared and maintained in Parambikulam, Peechi, Silent Valley and Wayanad . The activities were verified through inspection of records and found correct.

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1.	N11°55'46.058" E75°51'23.063"	2011-12	Width: 3.2m Length: 2.5km	Trek path-Chullikandam
2.	N11°55'59.4474" E75°48'32.2303"	2011-12	Width: 3.2m Length: 5km	Trek path at Kariankappu Meenmutti

7. Infrastructure development

Improvements were made to the division office and inspection bungalow at Peechi. The activities were verified through inspection of records and found correct.

8. Joint patrolling and raid

Joint patrolling activities were taken up in Silent Valley division. The activities were verified through inspection of records and found correct.

9. Protection and maintenance of antipoaching campshed

The activities were verified through inspection of records and found correct.

10. Protection campshed and ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N11°09' 04.0" E76°31' 44.2"	2009-2010	4.0 x 6.0	The structure is in good condition.
2	N11°36' 28.1" E76°22' 52"	2009-2010	6.0 x 3.7	The structure is in good condition.

The protection campsheds were evaluated for their physical existence and the quality of the assets. The specifications of the campsheds were checked by physical measurements and verifying the old vouchers and estimates.

Camp shed at Thudukki

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Protection Camp shed / Thudukki/ Bhavani/Silent Valley	The structure is in good condition.	It is regularly used by the frontline staff.	7	High
2.	Protection Camp shed / Cheeradankolli / Muthanga/ Wayanad	The structure is in good condition.	It is regularly used by the frontline staff.	7	HIgh

11. Publicity and awareness

The activities carried out in Peechi were verified through inspection of records and found correct.

12. Road maintenance

It is reported that coupe road maintenance in Peechi-Vazhani WLS was taken up.

Coupe road in Peechi-Vazhani WLS

13. Soil and moisture conservation

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1.	N11°03' '29.48" E76°03"23.79"	2013-14	6.14	The activity was completed in 2015.
2.	N11v03"29.40" E76°03"27.97"	2013-14	6.85	The activity was completed in 2015.
3.	N11°03"29.46" E76°03'23.79"	2013-14	6.54	The activity was completed in 2015.
4.	N11°43'42.222" E76°21'17.514"	2013-14	124	The creation of bunds was completed in 2015.
5.	N11°38'31.2" E76°25'21.264"	2013-14	118	The creation of bunds was completed in 2015.
6.	N11°47'52.416" E76°13'43.492"	2013-14	440	Maintenance works were carried out.
7.	N11°46'11.002" E76°17'59.288"	2013-14	377.60	Maintenance works were carried out.
8.	N10°26'39.24" E76°27'27.828"	2013-14	9.8	The activity was completed in 2015.

The works were evaluated for the physical existence and for the quality. The specifications of all SMC activities were verified with measurement books and found correct.

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully pluggings/ Silent Valley NP/ Bhavani/ Keeripara	The gully is healthy	The gully has helped arrest soil erosion and rehabilitates surrounding areas	8	High
2.	Gully pluggings/ Silent Valley NP/ Bhavani/ Paalichola	The gully is healthy	The gully has helped arrest soil erosion and rehabilitates surrounding areas	8	High
3.	Gully pluggings/ Silent Valley NP/ Bhavani/ Paalichola	The gully is healthy	The gully has helped arrest soil erosion and rehabilitates surrounding areas	8	High
4.	Contour bunding & Earthern bunding / Wayanad / Kalavayal	The bunds are in good condition.	Helps slow down the run-off in the hilly terrain.	8	High
5.	Contour bunding & Earthern bunding / Wayanad/ Muthappan kuzhi	The bunds are in good condition.	Helps slow down the run-off in the hilly terrain.	8	High
6.	Contour bunding & Earthern bunding / Wayanad/ Charakullasi	The bunds are in good condition. Only maintenance works were taken up.	Helps slow down the run-off in the hilly terrain.	8	High
7.	Contour bunding & Earthern bunding / Wayanad / Golur	The bunds are in good condition. Only maintenance works were taken up.	Helps slow down the run-off in the hilly terrain.	8	High
8.	Pond Desiltation/ Peechi WLS/ Aiyappangundu	The pond area has increased by 25 per cent.	Helps collect water, and prevents run-off.	10	High

This circle undertook the highest number of activities during the period 2009-2014. Fourteen activities were carried out in Peechi. The circle implemented most activities listed in the APO. Spillovers were observed in many of the activites, ecpecially where structures were created / maintained. Overall, an amount of Rs. 148.85 lakhs was allotted to the circle during the period of which 81 percent financial achievement was observed.

Field director project tiger, Kottayam (2009-2014)

The evaluation covered four forest divisions of the circle. They include

1. Periyar East
2. Periyar West
3. Idukki Wildlife sanctuary (WLS)
4. Munnar Wildlife sanctuary (WLS)

Eight different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Anti poaching squad	Idukki WLS
2.	Assistance to tribal Vana Samrakshana Samidi	Periyar East Division, Periyar West
3.	Awareness and natural camp	Periyar West
4.	Construction and maintenance of campshed	Periyar West
5.	Construction of check dam	Idukki WL, Munnar WLS
6.	Improving connectivity	Periyar East
7.	Joint patrolling and raid	Periyar East
8.	Protection campshed and ration	Periyar West

1. Anti poaching squad

Provision of ration to the anti poaching squad was undertaken. The activities were verified through inspection of records and found correct.

2. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with two Vana Samrakshana Samidi groups on the implementation of CAMPA activities in East and West Periyar Divisions. The Tribal Vana Samrakshana Samidi were engaged in protection related activities, for collection and sale of MFP.

3. Awareness and natural camp

The staff informed that the activites pertaining to awareness have been completed. However, it could not be verified through records.

4. Construction of check dam

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°0745.35" E76°4458.25"	2011-12	12 x 1.2 x 1.5	The structure remains intact and in good condition.
2	N10°0739.10" E76°4509.56"	2013-14	11 x 0.8 x 1	The structure is in good condition.

The works were evaluated for the physical existence and for the quality. The specifications of check dams were verified from the old vouchers and the estimates.

Urulanthanni Check dam

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check dam/ Idukki WL/ TBS/ Vettuthandu/ Bharnikuzhi	The structure is in good condition. Water is stored in full capacity.	Water is made available to neighbouring villages.	9	High
2.	Check dam/ Idukki WL/ TBS/ Urulanthanni	The structure is in good condition. Water is stored in full capacity.	Water is made available to neighbouring villages.	9	High

5. Improving connectivity

Patrolling routes were cleared and maintained in Periyar East Division. The activities were verified through inspection of records and found correct.

6. Joint patrolling and raid

Joint patrolling activities were taken up in Periyar East Division. The activities were verified through inspection of records and found correct.

7. Protection campshed and Ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N09°27'51.22" E77°05'28.41"	2009-2010	5 x 4.8 x 5	Records verified for brick work, RCC Work roofing with AC, Flooring with concrete, engaging man mazdoor etc.

The works were evaluated for the physical existence and for the quality. The specifications of the camp sheds were checked by verifying the old vouchers and the estimates. It is observed that, the building maintenance was found necessary; the APC is very useful to the frontline staff.

Protection Campshed at Uppupara with Forest Deaprtment staff

Observations of the team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, <3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	APC/ PTR (West)/ Azhutha/ Uppupara	The campshed has been established at Uppupara. Used by Anti-Poaching squad. Good structure requires minimal maintenance.	Used by Anti Poaching squad during transit.	8	High

Four activities were taken up during 2009-10 in the circle, three during 2011-12, and one during 2012-13. No activities wer taken up in 2010-11 and 2013-14. The circle implemented all the activities listed in the APO. Overall, an amount of Rs. 26.60 lakhs was allotted to the circle during the period of which 99 percent financial achievement was observed.

Agasthyavanam biological park circle, Thiruvananthapuram (2009-2014)

The evaluation covered both Shendurney and Thiruvananthapuram Wildlife Divisions of the circle. Three different activities were undertaken in the circle.

1. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N08° 32' 48.1" E77° 13' 03.5"	2013 - 2014	5 x 4.8 x 5	The camp shed was constructed during the financial year 2013 – 2014 using wooden poles, GI sheets and foundation was made with rocks. The walls and the roof are covered with GI sheets. Also, a watch tower has been constructed near it.
2	N08° 31' 38.9" E77° 13' 38.5"	2010 -2011	5 x 4.8 x 5	The camp shed was constructed during the financial year 2013 – 2014 using wooden poles, GI sheets over a foundation made with rocks. Four walls and the roof were covered with GI sheets. The structure was damaged so it should demolished and rebuilt later under using funds from other source.
3	N08° 52'22.517" E77° 7' 6.832"	2010 -2011	2.6 x 1.55 x 2.5; 2.6 x 1.55 x 2.10	The bathroom was constructed near the Rockwood camp shed site in the Rockwood estate using bricks and cement. The roof is covered with GI sheets. The interior is tiled and has water connection. The condition of the bathroom is excellent.
4	N08° 55'59.346" E77° 7' 35.6"	2010 -2011	4.5 x 4.5 x 3	There are two campsheds on the site and both are well maintained.

The works were evaluated for the physical existence and for the quality. The specifications were checked by verifying the old vouchers and the estimates. It is observed that, the building maintenance was found necessary in some cases and was very useful to the occupants.

Campshed at Site 1

Campshed at Site 2

Debris of the Damaged structure at Site 2

Campshed at Site 3

Campshed at Site 4

Check Dam at Site 5

2. Construction of check dam

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N08°33'35" E77°10'19"	2012 -2013	8 x 1 x 0.90	The check dam is well maintained and we could observe soil moisture and good vegetation in the surrounding areas.

3. Joint patrolling and raid

Joint patrolling activities were taken up in both the wildlife divisions. The activities were verified through inspection of records and found correct.

Observations of the Evaluation Team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	**Campshed/** Thiruvanatha-puram Wildlife/ Neyyar, Kottoor section/ Uttaramkayam	The campshed has been established near the Aayiramkaal tribal settlement. Also, a watch tower has been constructed near it.	Presently supports the tribals.	5	Medium
2.	**Campshed/** Thiruvanatha-puram Wildlife/ Neyyar, Klamala-I section/ Valliyar	The structure was damaged so it was demolished and rebuilt later under using funds from other source	Presently in use.	8	High
3.	**Campshed/** Shenduruney Wildlife / Shenduruney Kalluvaranbu section / Rockwood estate	The bathroom was repaired.	Well maintained.	8	High
4.	**Campshed/** Shenduruney Wildlife / Shenduruney Wildlife Kalamkunnu section / Idimu-zhanganpara	Two camp sheds are present.	Both camp sheds are well maintained and used.	8	High
5.	**Check dam/** Thiruvanatha-puram Wildlife/ Agasthyavanam Biological Park Range Kottoor / Kadakamvetty	The check dam constructed in 2012-13 is well maintained. Due to silt deposition the depth of the check dam got reduced.	Enhanced soil moisture and good vegetation are observed in the area.	5	Medium

Three activities were taken up during 2010-11 in the circle, while just one activity (check dam construction) was taken up during 2012-13. One camp shed which was to be constructed in 2010-11 was taken up only during 2013-14. Overall, an amount of Rs. 10.00 lakhs was allotted to the circle during the period of which 75 percent financial achievement was observed.

Social Forestry, Ernakulam, Kozhikode and Kollam (2009-2014)

The social forestry wing has three circles operating at Ernakulam, Kozhikode and Kollam. During the period, Extension & Campaign activities were undertaken.

1. Extension and campaign activities

The staff report that the social forestrywing at Kollam carried out these activites at Thenmala division. Hence, no records were available in social forestry Kollam division. Similarly no records were available with the social forestry , Ernakulam division also.

The social forestry wing at Kozhikode conducted extension and campaign activities in five districts. Activities such as fire awareness camp, one-day classes on fire awareness nature camp, Seminar on World Water Day, Sea Turtle and Marine Bio-Diversity Conservation etc., were conducted. The evaluation team verified all the related documents such as vouchers and photographs.

Extension and campaign activities

Sl. No.	Location/District	Activities carried out	Proof of verification
1.	Thirunelli (Wayanad)	Fire awareness classes / camp.	✓ Expenditure vouchers tallied.
2.	Janaklkkad (Kozhikode)	One day nature camp and Fire awareness classes / camp.	✓ Physical verification of each site and item purchased are verified.
3.	Hosdurg (Kasaragod)	Fire awareness classes / camp.	✓ Verified related images / documents.
4.	Kasargod town (Kasaragod)	Fire awareness classes / camp.	
5.	Thariyode (Wayanad)	One day nature camp, participated approx. 150 students and VSS members	
6.	Kadalundi town (Kozhikode)	Two nature camp and Fire awareness classes / camp.	
7.	Perinthalmanna (Malappuram)	Nature camp for the students of the ISS college of teacher education.	
8.	S N College (Kannur)	One day seminar in connection with and World Water Day.	
9.	Thalaserry town (Kannur)	One day seminar on World Forest Day.	

Sl. No.	Location/District	Activities carried out	Proof of verification
10.	Malappuram town (Malappuram)	Members of Yuva Sakthi under Kerala state youth welfare board organised half day nature awareness camp.	
11.	Thanur (Malappuram)	One day seminar on turtle and marine diversity conservation.	

The work carried out under CAMPA was satisfactory. Overall, an amount of Rs. 3.00 lakhs was allotted to the wing during the period of which 98 percent financial achievement was observed.

Forest headquarters, Thiruvananthapuram

At the Forest Headquarters, the interests generated from the funds of the CAMPA account were utilised for secretarial assistance at the office of the nodal officer to support works related to monitoring and evaluating the implementation of APOs. Under the Net Present Value (NPV) of the Forest Land Fund, 23 vehicles were purchased within the budget allotted against orders No. P3-5666/2011/03/11 dated 4/5/11 and P3-5666/2012/03/12 dated 3/5/12. The allotment orders, purchase orders, bank statements, utilisation certificates, cheque issue register and bills were verified and found correct. The Headquarters allocated funds to purchase equipment and minor implements for plantation work to different divisions. The details of fund utilisation, details of Items, quantity and rates of minor implements for forestry works, are with the concerned divisions.

Recommendations and suggestions

The proposed evaluation had multiple objectives. *Inter alia*, this evaluation examined the impact of various activities in terms of increase in vegetation spread, soil and water conservation measures, infrastructure development, capacity building and the extent to which the objectives of CAMPA were achieved. The qualitative data were used to support further analysis of variations across regions and categories. The following are the recommendations and suggestions arising out of this present monitoring and evaluation of CAMPA activities in Kerala

(a) The success rate of the plantations was high overall and species-wise survival rates with progressing age across theregions revealed suitability of certain species over others. Some of the species though were slow growing, had established well despite minimal or no maintenance. These species could be used in future planting programmes, subject to the fact that the species selected could be matching with floristic composition of the respective forest types. A striking feature was the involvement of the local communities in the selection of the species, especially in the fringe areas, followed by planting and watch and ward. In most cases, gap planting has been taken up, with contour trenches established in the sites. This has facilitated natural regeneration of many species. In some sites, very poor establishment were observed. The major reasons includes (i) heavy infestation of the invasives which prevents establishment of the planted saplings (ii) trampling of saplings by wild animals such as elephants, bear, wild boar and deer. Regular maintenance enables better establishment. A provision of watch and ward

provision for 4 to 5 years, excluding the plantation year would ensure good survival rates and better stocking in afforested sites.

(b) Composition of species was observed to differ between divisions and within sites a division too. The number of species selected for planting in each site was also low. Though, efforts have been taken to match the species with sites, a larger native species mix would improve success rates, and enable better planning for future plantings. Proper assessment of soil quality and climate condition, would be very helpful for establishment of the saplings. All planting sites require at least 5 years of maintenance. This investment must be done to ensure success of the plantations. In areas of high biotic interference, 8 years of maintenance is desirable.

(c) Enrichment planting in the forest areas by involving local communities, field staff of SFDs, forestry research institutions, NGOs and other stakeholders.

(d) Technical support can be obtained from forestry research institutions for transferring/developing seed handling techniques and nursery technologies for indigenous species prioritized for Afforestation / Enrichment planting.

(e) In remote locations and in locations with high damages to the planted seedlings by wild animals, manual seeding of indigenous species using seed ball technologies can be attempted.

(f) Maintenance costs should be linked to survival rates and strict guidelines should be framed regarding replanting in failed sites.

(g) Protection measures were not effective in many places. It is essential to provide maintenance provisions for five years so that the purpose is well achieved.

(h) Fodder plantations should be prioritied in elephant corridors which would act as deterrents to their entry into human-habitation.

(I) Most SWC works carried out in the forest areas are effective. The SMC activities, in most places have increased the vegetation, indicating the moisture retention impacts. However, certain SWC structures are very crucial as they connect different ranges within a division. Such chappaths deserve special attention. Due to frequent flooding, heavy wear and tear is observed in most chappaths. The depth and width of rivers has increased in many sections. Such chappaths need to be replaced with concrete structures with the support of the PWD. Some of the water-holding structures are old, and not capable of holding water to the designed potential. Such structures may be abandoned.

(j) Anti-Poaching Camps (APC) have been established throughout the state in almost all divisions.The APCs are sufficienfly equipped with staff and modern equipment for protection activities. There is a need to regularly support the staff with protective gears and field survival kits.

(k) GIS-based forest survey monitoring has been attempted in the state. The staff reported that this has helped prevent, contain and douse forest fires in many places. All staff have to be provided basic training in the use of advanced methods of monitoring for protection. The procedures of fire management / fire protection can be extended to the forest fringe area inhabitants in addition to school/ college students.

(l) Provisions need to be made in the budget for procuring more field vehicles, as a dearth in availability of these was observed.

(m) In almost all divisions, the maintenance of buildings, roads, SMCs are taken up regulalry. A fixed cycle could be adopted for maintenance and repair of civil works, rather than taking a routine annual maintenance.

(n) A decentralised allotment to the social forestry wings may be considered of, to meet the local needs for each division.

(o) Encourage more research on development of artificial breeding or incubation units for sea turtles. In addition to census, research on habitat, feeding, breeding and migratory patterns will help in the management of key stone faunal species. It will also help the managers in identifying in appropriate conservation related works.

(p) Incentives to temporary staff associated with the department's activities for more than ten years.

(q) Digitisation of records would enable easy access to information.

(r) Internal evaluation needs to be strengthened and a database must be established to monitor the changes. This would enable regular assessment of seasonal works like protection camps, fire protection works etc. Further, this report should also be made available during third party monitoring and evaluation.

(s) Timely fund release is viewed to be more helpful for executing the plantation activities in the respective APO execution years.

(t) Permanent structures created should be acknowledged through suitable markings to ensure proper visibility of CAMPA-funded activities.

ANNEXURES

Annexure I

Minutes of meeting

Third Party Evaluation of State CAMPA Activities in Kerala

23rd November 2021

Venue: VC Hall, IFGTB

Participants:

IFGTB	Kerala Forest Department
Dr. C. Kunhikannan, Director IFGTB	Shri. Rajeesh Ravindran IFS, CEO
Dr. R. Yasodha, Scientist G & GCR	CAMPA & APCCF
Dr. JP Jacob, Scientist G – *on leave*	Ms P. T. Sreelekha, ACF, SA&NO,
Shri. Rajesh Gopalan IFS - *online*	CAMPA
Dr. C. Buvaneswaran, Scientist F	
Dr. Kannan CS Warrier, Scientist F	
Dr. A. Karthikeyan, Scientist F	
Dr. D.R.S. Sekar, Scientist F – *not attended*	
Dr. Rekha R Warrier, Scientist F	
Dr. S. Saravanan, Scientist F	
Dr. A. Rajasekaran, Scientist F	

An online meeting was held on 23rd November 2021 at 10.00 am to discuss the modalities of third party evaluation of CAMPA-related works undertaken in Kerala by Kerala Forest Department.

Under CAMPA, various activities have been taken up to accelerate preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works.

Shri Rajesh Ravindran, CEO-CAMPA listed the different circles where CAMPA activities have been taken up. He sought evaluation of different protection activities, labour deployed for watch and ward, fire protection, and site suitability, especially regarding

ecorestoration of monoculture plantations, the species planted and their performance, etc.

Dr. S. Saravanan, Scientist F, presented the need for third-party evaluation to assess the various activities taken under State CAMPA. He elaborated on the requirements of the National CAMPA Authority concerning the monitoring while carrying out the evaluation.He also detailed the methodology for the evaluation process and the extent of sampling for the different activities taken under CAMPA based on the guidelines provided by the IIFM, Bhopal with necessary modifications. He also informed that IFGTB has experience working towards the evaluation of NAP of the NAEB in Kerala and providing consultancies to various industries. A team has been formed for the execution of the work.

This was followed by a discussion on the modalities for execution of the evaluation. The following points emerged.

1. An MoU would be signed between the Kerala Forest Department and IFGTB towards the activity. IFGTB would complete the evaluation within a period of six months from the date of release of funds.
2. State CAMPA would provide information, plantation journals, maps, measurement books, and all relevant records pertaining to the CAMPA works from 2009 to the present. Co-ordination in the state, local travel, lodging, and field support of personnel would also be provided by the Department.
3. The Department looks forward to APO-wise reports. Thus, six reports are envisaged at the end of the evaluation.
4. The sampling intensity was agreed upon.
5. A proposal including financial requirements and draft MoU would be sent to the CEO-CAMPA for perusal.
6. The CEO-CAMPA would visit IFGTB during the last week of November, 2021 for a detailed discussion and finalising the proposal.

Annexure II

Timelines of the Evaluation

Milestone	Activity
September 2021	Identification of ICFRE - IFGTB for third party monitoring
November 2021	Finalisation of activities under the third Party monitoring
January 2022	Acceptance of project proposal of ICFRE - IFGTB for monitoring and evaluation of CAMPA activities in Kerala. Approval of the MoU.
March 2022	Signing of the MoU and release of the first instalment
April to June 2022	Field works
July to September 2022	Report preparation
September 2022	Release of the second instalment
October 2022	Submission of final report

Annexure III

APO-wise components implemented in various Circles

Year	Component
2009-10	Assistance to tribal Vana Samrakshana Samidi
	Construction and maintenance of campshed
	Extension and campaign activities
	Monitoring and evaluation of implementation of APOs
	Interior campshed and ration
	Joint patrolling and raid
	Purchase of vehicle and maintenance
	Protection campshed and ration
	Purchase of equipment
	Purchase of equipments and machinary for protection works
2010-11	Assistance to tribal Vana Samrakshana Samidi
	Compensatory afforestation
	Construction and maintenance of campshed
	Joint patrolling and raid
	Soil and moisture conservation
2011-12	Anti poaching squad
	Awareness and natural camp
	Cairns and boundary consolidation
	Compensation to victims
	Compensatory afforestation
	Construction of cairns and boundary consolidation
	Construction of check dam/ pond
	Construction of solar fencing
	Elephant proof trench
	Eradication of exotic weeds
	Improvement of patrolling routes
	Interior campshed and ration
	Protection and maintenance of anti poaching campshed
	Soil and moisture conservation
2012-13	Check dam
	Compensatory afforestation
	Construction of checkdam/ pond
	Contour bunds
	Planting
	Soil and moisture conservation dry rubble

Year	Component
	Vegetation barrier by grass
2013-14	Catchment area treatment
	Compensatory afforestation
	Eco development
	Eco tourism and training
	Fire protection
	Habitat improvement
	Infrastructure development
	Mitigation man - animal conflict
	Protection and maintenance of anti poaching campshed
	Publicity and awareness
	Research and development
	Road maintenance

S.No.	***Species Planted in Compensatory Afforestation Programmes***
1.	*Bambusa bambos*
2.	*Butea monosperma*
3.	*Cassia fistula*
4.	*Gmelina arborea*
5.	*Pongamia pinnata*
6.	*Pterocarpus marsupium*
7.	*Sweitenia macrophylla*
8.	*Terminalia arjuna*
9.	*Terminalia bellirica*

APOs	Divisions implemented
APO 2009-10	29
APO 2010-11	29
APO 2011-12	29
APO 2012-13	29
APO 2013-14	29

Annexure IV

Monitoring and evaluation teams

Teams **Region**	**1** **Southern Circle, Kollam (1)**	**2** **Southern Circle, Kollam (2)**	**3** **High Range Circle, Kottayam (1)**	**4** **High Range Circle, Kottayam (2)**	**5** **FD PT,** **Kottayam (1)**
Team Co-ordinators (Dr/Mr/Ms)	C. Buvaneswaran	Rekha R Warrier	Kannan CS Warrier	K. Murali Shankar	S. Saravanan
Team Leaders (Dr/Mr/Ms)	A. Balasubra-manian	R. Sumathi	K. Gireesan	A. Mayavel	S.P.Subramani
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Member	V. Mareeswaran	S. Sudha	K. Gopalakrishnan	P. Vignesh	M. Suryaprakash
Member	S.S. Abijith	R.G. Anitha	T. Pradeep	K.R. Shankar	R.Ariharasuthan
Member			C. Muthumanikam	M. Vishnu	M. Mahalingam
Team Co-ordinator (KFD)	Fen Antony, ACF	Fen Antony, ACF	KS Subash, ACF	Subash, ACF	Sandeep.S, ACF

Teams **Region**	**6** **FD PT, Kottayam (2)**	**7** **Agasthyavanam biological park Circle**	**8** **Social Forestry, Southern Region, Kollam**	**9** **Central Circle, Thrissur**	**10** **Social Forestry, Central Region, Thrissur**
Team Co-ordinators (Dr/Mr/Ms)	N.V. Mathish	A. Rajasekaran	A.C. Surya Prabha	D. Raja Suguna Sekar	J. Sriram
Team Leaders (Dr/Mr/Ms)	S.P.Subramani	Muhammad Ali Noushad	P. Chandrasekar	B. Deeparaj	A. Mayavel
Member	K. Senthil	P. Manoharan	J. Soosairaj	P. Malliga	R. Abinaya
Member	M. Suryaprakash	L. Mahalingam	P. Vignesh	S. Pragadeesh	C.V. Vijayam
Member	R.Ariharasuthan	S. Selvakumar	K.R. Shankar	R. Kalaiselvi	R. Sathishkumar
Member	M. Mahalingam	N. Vijayanand	M. Vishnu	C. Thamotharan	Rudranath, V.R.
Team Co-ordinator (KFD)	Sandeep.S, ACF	Ajith.N , ACF	Rohini. GR, ACF	V.P. Jayaprakash, ACF	Chinnu Janardhanan, ACF

Teams Region	11 Social Forestry, Northern Region, Kannur	12 Northern Circle, Kannur	13 Eastern Circle, Palakkad	14 Wildlife Circle, Palakkad	15 Research Division N and S, & Head quarters
Team Co-ordinators (Dr/Mr/Ms)	Madhavraj G. R	A. Karthikeyan	Rekha R Warrier	Rekha R Warrier	JP Jacob
Team Leaders (Dr/Mr/Ms)	K.N. Ashirth	R. Archana	S.Lalitha	A. Shanthi	K. Shanthi & Muhammad Ali Noushad
Member	Srijita Ganguly	C. Rajesh	M. Ganesan	R. Velumani	M.V.Vineetha
Member	M. Jeyakumar	S.M. Paulraj	N. Sudha	A. Sathish	P. Vipin
Member	V. Abirami	Remya T Radhan	Mishra Avinash	K. Rajasekaran	C. Kandasamy
Member	C.K. Suresh	M. Manikandan	S. Ajay		T. Govindaraj
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Dr C. Buvaneswaran, Scientist G

Editorial Assistance

Mrs N. Sudha

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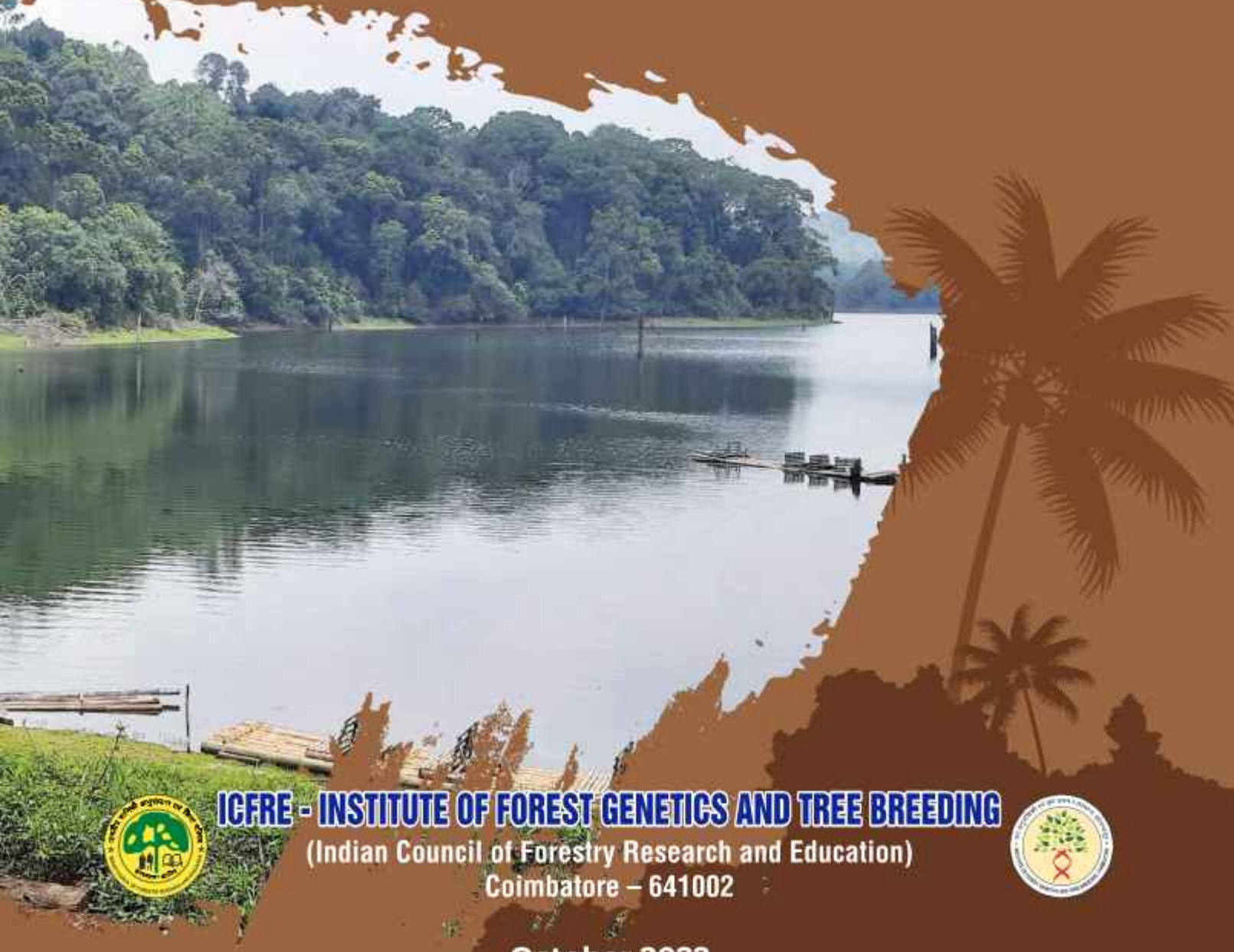
Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

for the period
2014-2016

Submitted to
Kerala Forests & Wildlife Department (CAMPA)



ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
(Indian Council of Forestry Research and Education)
Coimbatore – 641002

October 2022

Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

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Coimbatore – 641002

October 2022

वन आनुवंशिकी एवं वृक्ष प्रजनन संस्थान
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निदेशक
Dr. C. Kunhikannan
Director

Preface

The State of Kerala established the Compensatory Afforestation Management and Planning Authority (CAMPA) Scheme in 2009 to encourage afforestation, reforestation and restoration/regeneration activities to compensate for forest land diverted for non-forest purposes, and enhance the state's forest cover. The Kerala Forests & Wildlife Department prepared the Annual Plan of Operations (APO) for the years 2014-2015 and 2015-16, which the MoEFCC, GoI approved. As per the APOs, the state planned various activities, including compensatory afforestation, soil and moisture conservation, biodiversity conservation, awareness campaigns on forests, wildlife and the environment, eradication of invasive alien weeds, river bank stabilisation, protection of research plots and seed production areas, creation of fire breaks and other essential maintenance activities towards forest conservation. All these activities were spread across the forest divisions of the state, including wildlife sanctuaries. The success and sustainability of these CAMPA activities, including structures established and plantations raised in terms of planning, implementation, the quantity of inputs, condition of health and survival, and outcomes, need to be evaluated and documented for monitoring purposes by an independent agency. Accordingly, ICFRE - IFGTB, Coimbatore, which was awarded the monitoring of CAMPA activities, have been involved in the work since March 2022. The sampling methodology approved by MoEFCC was broadly followed, and a detailed survey, monitoring and evaluation exercises were conducted to represent all the forest circles and plantation models adopted in a given year. Overall the CAMPA activities undertaken during 2014-16 supported the forests and contributed to enhancing forest health in Kerala. I gratefully acknowledge the Kerala Forests & Wildlife Department for their support and assistance in bringing out this document in a comprehensive manner.

(C. Kunhikannan)

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We acknowledge the Kerala Forests & Wildlife Department for identifying ICFRE - IFGTB, Coimbatore, to evaluate the CAMPA activities carried out from 2014 to 2016. We sincerely thank the PCCF & Head of Forest Force for facilitating this special assignment. We would like to express our gratitude to Shri. Rajesh Ravindran IFS, APCCF & Chief Executive Officer CAMPA, Kerala, for facilitating the evaluation work and extending valuable guidance in finalising the formats for assessment of different CAMPA activities in the state. We express our sincere thanks to all the Divisional Forest Officers, Range Forest Officers, Frontline Field Staff and Vana Samrakshana Samidi members for their assistance in providing the assessment teams with the essential logistics and information during the on-site evaluation.

ICFRE - IFGTB

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FACT SHEET

S. No.	Item	Details
1.	Scope of evaluation	Third-party monitoring and evaluation of the CAMPA Activities of Kerala Forests and Wildlife Department (2014-2016).
2.	Period of evaluation work	Signing of MoU – March 2022. Field works – April to June 2022. Report preparation – July to October 2022.
3.	Focus	Quality of conservation and development works. Assessment of compensatory afforestation activities. Public awareness campaigns.
4.	Number of evaluation teams	15 Evaluation Teams and one editorial team.
5.	Objectives	• To evaluate different plantations established under CAMPA in different forest divisions of Kerala. • To evaluate the civil structures (buildings and soil & water conservation structures) established under CAMPA in different forest divisions of Kerala. • To suggest for improvement in quality of plantations for future.
6.	Area covered	25 territorial forest divisions. 14 social forestry divisions. 11 wildlife divisions.
7.	Sample size	**Plantation:** 20% plantation randomly selected from various divisions. Sampling intensity for evaluation is nearly 10% for block plantations. For every hectare (ha) of plantation, the evaluation to be done on a 30 x 30 m plot. In the case of a linear plantation, evaluation of every 10th tree/planted sapling of each row for 25% of its length per running km basis. **Soil and Moisture Conservation(SMC) activities:** 20% of SMC works evaluated in each division based on random selection from measurement book (Mbook). **Eradication of weeds:** Density assessment and plot transects. **Forest protection:** 10% of all firelines evaluated in each division.
8.	Findings	• The average survival rate in ecorestoration activities is 45%. *Wrightia tinctoria* and *Hopea ponga* recorded more than 60 per cent survival in various locations. • The quality of other departmental works was rated as high (86%) • Check-dams and gullies are the major SMC works taken up. • The involvement of the Vana Samrakshana Samidi in various department activities has ensured a participatory approach to the protection and conservation of forests.

EXECUTIVE SUMMARY

The Forest (Conservation) Act 1980 was enforced to conserve and protect forest resources. The Act mandated that whenever forest land is diverted for non-forestry purposes usually the conditions relating to transfer, mutation and declaration as Reserve Forest/Protected Forest, the equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation etc., are to be imposed. Additional conditions such as maintaining a safety zone area, fencing and regeneration etc., are prescribed for mining purposes, and catchment area treatment plans are stipulated for big and medium irrigation projects. Further, the Act provided that the non-forest land for Compensatory Afforestation (CA) was to be identified contiguous to or close to Reserved Forest or Protected Forest. The funds for CA are received from the user agencies based on the rates fixed by the State Forest Department, which are site-specific and vary according to the species, type of forest and site. The fund received for compensatory afforestation, additional compensatory afforestation etc., has to be used as per site-specific schemes submitted by the state along with the approved proposals for diversion of forest land. After receipt of the fund, State Forest Department has to accomplish the afforestation for which money is deposited in the CA fund within a period of one year or two growing seasons.

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Kerala has been constituted with the objective of conservation, protection, regeneration and management of existing natural forests, wildlife and their habitat and raising site specific compensatory afforestation, penal compensatory afforestation etc. As per the provisions of CAMPA guidelines, the state CAMPA has been formulating Annual Plans of Operation (APO) since 2009-10. The APO for the period 2014-15 to 2015-16 were approved vide No. 15-2(18)/2017-CAMPA dated 18.12.2017.

The Government of India released **Rs. 14,65,00,000** for 2014- to 2016 to Kerala to implement the activities.

The Assignment

As a range of activities were taken up under CAMPA, a technical evaluation of the activities by a third party was considered essential. ICFRE - IFGTB was identified to carry out third party monitoring of all the CAMPA interventions since 2009-10 (File No. FC5-1433/2021 dated 28.01.2022). The broad scope of evaluation comprised all the components and sub-components of CAMPA implementation in Kerala.

Study Area

The evaluation study covered 50 forest divisions of Kerala (25 territorial, 14 social forestry and 11 wildlife divisions) under 11 forest circles. In addition works places and research divisions where CAMPA funds were utilised are also covered in the study.

Study Approach and Methodology

Various CAMPA interventions were evaluated using appropriate sampling criteria, data collection approaches and, in view of diversity, nature of component and stakeholders involved. The study approach and methodology have been adopted from the evaluation formats of the MoEFCC, GoI.

Details of Data Collection

- **Primary Data:** First hand information was obtained using specifically designed formats for different components and subcomponents.
- **Secondary Data:** Secondary data relating to various activities undertaken in CAMPA were collected from the circle, division and range offices in pre-designed formats and checklists.
- **Focussed Group Discussion (FGD):** FGDs with the members of the Vana Samrakshana Samidi were conducted to evaluate peoples' perceptions and participation levels in implementing CAMPA activities in a given locality.
- **Consultation with Forest Officials:** Consultations were undertaken with a range of forest officers involved at various stages such as planning and decision making, implementation, monitoring and evaluation. This includes Divisional Forest Officers (DFOs), Forest Range Officers (FROs), Forest Beat Officers (FBOs), Foresters, Forest Guards, etc.
- **Field Observation:** Data on survival, field measurements to assess growth in different plantations, condition of physical structures in SMC activities and weed density in plantation sites were collected. Notes were prepared on various activities under CAMPA implementation, which provides the basis for the entire evaluation process.

Performance of CAMPA during the period 2014 to 2016

- The total funds received from the adhoc CAMPA forthe APO years 2014-16 stands at Rs. 14.65 crores, and the expenditure ending March 2016 was 12.04 crores which is 82.18% of the funds received. The core activities undertaken with the CAMPA funds comprise plantations, the creation of SMC structures, forest protection, wildlife management and assistance to tribal VSS.
- The non-core activities comprised biodiversity conservation, capacity building, infrastructure development, forest information technology, monitoring, evaluation and accounting.
- During the initial years of CAMPA APOs, assistance to tribal VSS, improving the infrastructure for protection, soil and moisture conservation activities and capacity building were prioritised (80%).
- Various SMC structures in CAMPA APOs included check dams, contour trenches, gully plugging etc. SMC structures undertaken by frontline forest officers under CAMPA are site-specific as per the site requirement.
- Focus on ecorestoration, planting and silvicultural operations were higher than the initial years of CAMPA implementation. Most activities were done departmentally, an economical and time-saving approach. River bank stabilisation was taken up in one site.
- Turtle conservation and monitoring and use of microchip reader for captive elephant management was introduced during this period.

- This period witnessed many capacity development programmes for staff and VSS, including theme-based trainings, strengthening communication and plantation skill development. This has enabled inclusion of VSS members in patrolling, fire break creation, and developing infrastructure in interior forest areas, encouraging and ensuring their active participation in conservation activities.
- Under infrastructure development, efforts was taken to repair/improve dilapidated structures. The major construction activities undertaken with the help of CAMPA funds were antipoaching campsheds.
- Efforts were also taken to improve connectivity through roads, footbridges and culverts.

Recommendations & Suggestions

1. Species should be selected on the basis of floristic composition of the forest types and prevailing local soil condition of the afforestation / plantation site.
2. De-centaralized local nurseries for production of forest type-specific planting stocks may be promoted.
3. Maintenance and watch and ward may be continued for 4 to 5 years for better establishment.
4. Number of watchers should be increased proportionate to the size of the plantation site.
5. There should be a provision in CAMPA APOs for the periodic maintenance of SMC structures as most SMC structures are subject to heavy wear and tear due to recurrent floods.
6. Buildings / structures constructed during this period needs to be repaired and maintained. In some cases, renovation / refurbishing may also be done based on a fixed schedule.
7. It is better to avoid plantations deep inside forests, with heavy movement of wildlife, as monitoring of the plantations are difficult. Instead, manual seeding may be done by adopting seed ball technology. Seeds to be broadcast should match the floristic composition of the respective forest types.
8. The front line staff may be trained on seed handling and nursery technologies of native tree species.

Monitoring and Evaluation of CAMPA Plantations and Other Activities (2014 – 2016)

1. Introduction

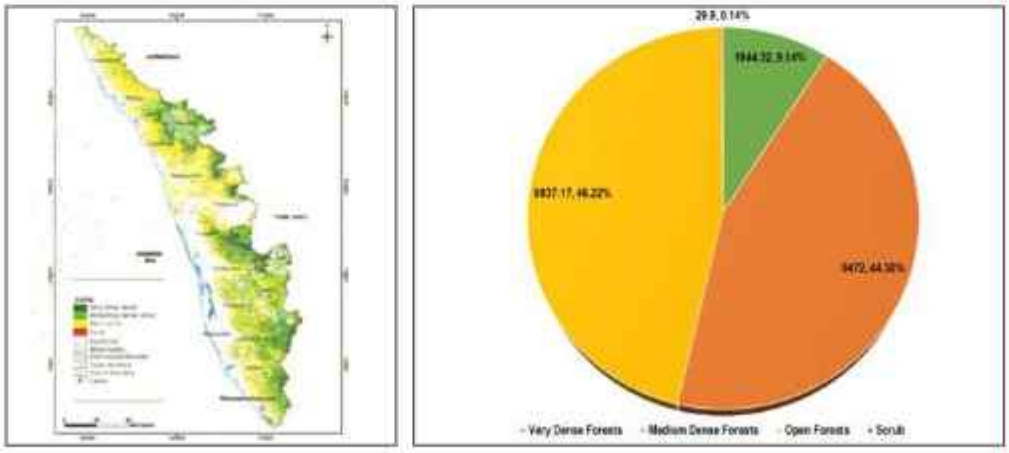
1.1 Background

Forests in India comprise diverse forest types and reserved areas accounting for about 24.62% of the country's geographical area. Forest provides livelihood support to the people living in and neighborhood. Forests are the most significant natural carbon sinks and regulate water regimes. Given that the forest sector provides goods and services to humankind, forest land is diverted for developmental activities for non-forestry purposes, consequently leading to considerable shrinkage of forest cover.

Kerala is endowed with rich natural resources. The conducive tropical climate favours forests with rich biodiversity and endemism. The Western Ghats, one of the biodiversity hotspots, runs all along the eastern boundary of Kerala. Unfortunately, the increasing population and changing lifestyles exert tremendous pressure on forests. The greatest challenge today is to accommodate developmental needs by minimising the destruction of its pristine forests.

1.2 Forest Cover in Kerala

The forest cover in the state based on the interpretation of the Forest Survey of India (FSI) 2021 is 21,253.49 sq km which is 54.7% of the state's geographical area. Forest cover in the state has increased by 109 sq km compared to the previous assessment reported in ISFR 2019. Among forest canopy density classes, the state has 1944.32 sq km area under very dense forest, 9472 sq km area under moderately dense forest and 9837.17 sq km area under open forest.



Source: *ISFR, 2021*

1.3 Forest Cover In Kerala From 2007 To 2015

Forest cover in the state has been increasing over the years. Forest conservation and afforestation activities are the key reasons for the improvement.

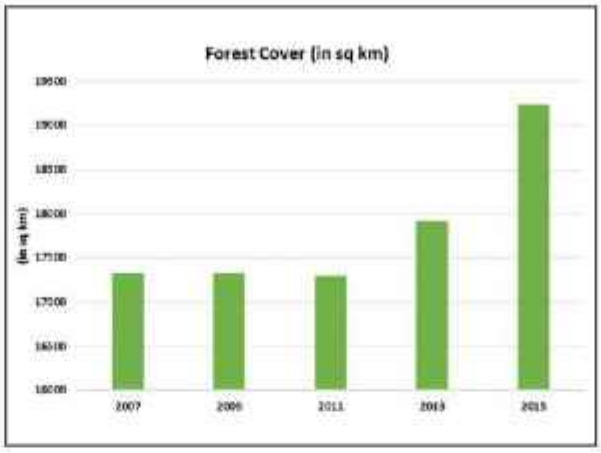


Figure 1.1 Forest Cover In Kerala From 2007 To 2015

1.4 District-wise Forest Coverage in Kerala

Table 1.1 provides the district-wise forest coverage in Kerala (Area in sq km), and the tree map at Fig 1.2 provides the distribution across districts.

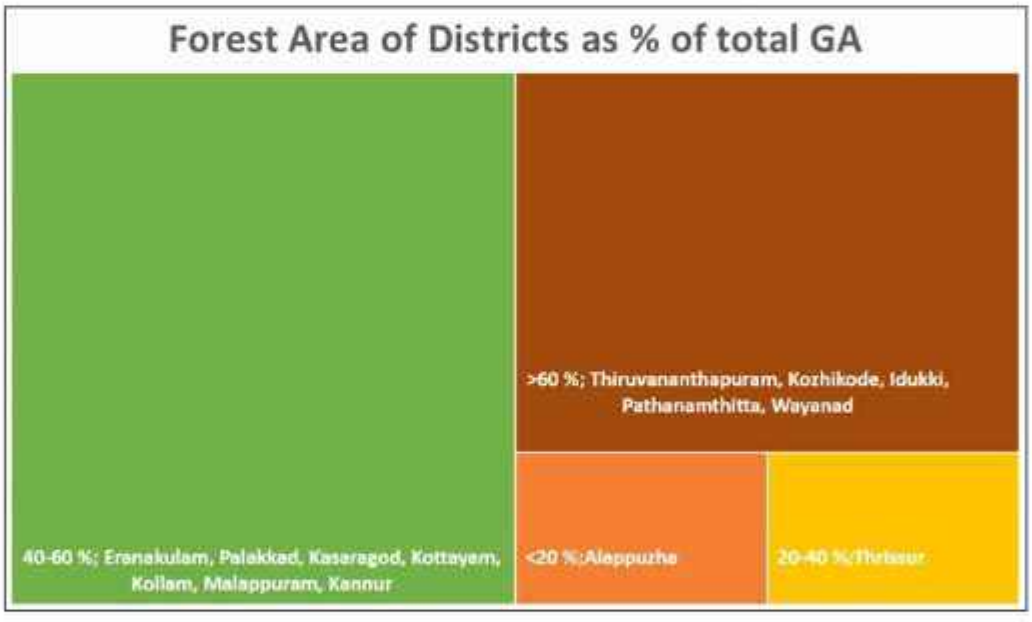


Figure 1.2 Forest area of districts in Kerala

Table 1.1 District-wise forest coverage in Kerala (Area in sq km)

District	Geo-graphical Area (GA)	VDF	MDF	OF	Total	%of GA	Scrub
Alappuzha	1415	0	27	53.54	80.54	5.69	0
Eranakulam	3063	165.52	614.4	604.56	1384.48	45.2	5.6
Idukki	4356	355.72	1783.33	1016.27	3155.32	72.44	2.51
Kannur	2961	58	489.63	1121.23	1668.86	56.36	0.18
Kasaragode	1989	1.9	288.7	692.97	983.57	49.45	0
Kollam	2483	104.4	656.88	572.5	1333.78	53.72	0

District	Geo-graphical Area (GA)	VDF	MDF	OF	Total	%of GA	Scrub
Kottayam	2206	11.31	525.73	562.01	1099.05	49.82	0
Kozhikode	2345	70.77	409.94	967.11	1447.82	61.74	0.8
Malappuram	3554	142.67	424.68	1416.32	1983.67	55.82	6.47
Palakkad	4482	402.14	637.77	1063.77	2103.68	46.94	12.71
Pathanamthitta	2652	164.92	1229.12	554.88	1948.92	73.49	0.51
Thiruvananthapuram	2189	59.12	702.42	555.5	1317.04	60.17	0.07
Thrissur	3027	218.86	477.79	469.6	1166.25	38.53	0.62
Wayanad	2130	188.99	1204.61	186.91	1580.51	74.2	0.43
Total	38852	1944.32	9472	9837.17	21253.5	54.7	29.9

Source: *Kerala ENVIS, 2022*

Comparing district-wise area cover in Kerala, Idukki has the largest forest cover (3155 sq km) in the state, followed by Palakkad (2104 sq km), Malappuram (1984 sq km), Pathanamthitta (1949 sq km) and Kannur (1669 sq km). In terms of percentage of forest cover concerning the total geographical area, Wayanad with 74.2% has the highest forest cover, followed by Pathanamthitta (73.49%), Idukki (72.44%), Kozhikode (61.74%) and Thiruvananthapuram (60.17%). The table reveals an increase in forest cover by 109 sq km compared to the previous assessment (in 2019).

Nearly 60 lakh ha of forest is degraded with less than 40% canopy density. This is the target area for the afforestation programmes. Forest plantations extend over 1.56 lakh ha, teak being the major species, covering almost 50% of the total plantation area, followed by mixed plantations and eucalypts. The natural forests, plantations and homestead gardens contribute to the state's green cover, and all these are required in forest management.

2. Project profile

Compensatory afforestation programmes in the state were initiated in 1993, and plantations were maintained until 2002-03. The Government of India notified the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in April, 2004. The state CAMPA receives funds collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980. Kerala state CAMPA was constituted in November 2009.

Kerala Forests & Wildlife Department (KFD) has been receiving funds since 2009 from CAMPA, MoEFCC, GoI for various developmental activities such as afforestation programs, soil and moisture conservation works, capacity building for staff and local communities, the establishment of civil structures, etc., in various forest divisions of Kerala. The funds were spent for compensatory afforestation, biodiversity conservation, soil and moisture conservation, etc. The Chief Executive Officer, CAMPA, Kerala, is responsible for preparing the schemes, Annual Plan of Operations (APO) for CAMPA, and getting it approved by the Executive Committee, Steering Committee and the Government of India,

followed by implementation of the approved APO. After receiving the fund allotment under State CAMPA, the implementing officers, the DFOs execute the assigned activities as per the APO. Under each major heads, there are different subheads available, which vary according to site conditions and needs.

The total outlay of the CAMPA activities from 2014 to 2016 is Rs. **14.65** crores. The details of the divisions, and the number of activities against different years are in Annexure-III.

3. Methodology

Physical Verification of Activities

I. Plantation - *Methodology*

- 10% plantation randomly selected from various divisions.
- Sampling intensity for evaluation - 10% for block plantations.
- For every hectare of the plantation, the evaluation was done on a 30 x 30 m plot.
- Each plot was marked on a map of the plantation area, and GPS co-ordinates of all such (30 x 30 m) plots were collected.
- In case of linear plantation, every 10th tree/planted sapling of each row was evaluated for 25% of its length per running km basis (5 intermittent line transects – each for 5% of length per running km).
- The evaluation was done on 0.1 ha by laying a 30 x 30 m plot based on random sampling.

II. Soil and water conservation measures

(a) The teams obtained the norms and expenditure of SMC activities taken up in the plantation site from the respective offices.

(b) The teams assessed the quantity/ present condition/ treatment plans of the different SMC works. 20% sampling was carried out.

(c) For civil works, 50% M & E was carried out, based on random selection from measurement M-books from various divisions.

III. Eradication of weeds

Density assessment - plot counts

- Three or more plots (quadrats) of size 10 x 10 m (located randomly over the site) were marked, and the number of plants within the plots was counted.
- To get the actual number per ha, multiplied the average number of plants in the plots by 100.

Plot transects

- Marked out 100 m transects, keeping them parallel to one another (10m-50 m apart). Using a 2 x 2 m plot frame (using a rope) plots were placed at intervals along the transect.

- The number of plants within the plot was counted. The values were converted to density measure by averaging the number of plants in each of the plots (i.e. individuals per ha)

IV. Forest protection

- 10% of all firelines were evaluated in each division based on random selection from M-books from various divisions.

V. Qualitative Aspects

Focussed group discussion : FGD was conducted for 10% of the villages in which CAMPA works were undertaken with at least 15 villagers in a commonplace within the village. The group comprised office bearers of Joint Forest Management Committee, Below Poverty Line households, and village residents.

Ranking of individual projects

The criterion below was used to evaluate the project needs since the site parameters, species and inputs provided vary from site to site.

Site suitability	High	Medium	Low
Suitable area with favourable site condition rainfall, soil, etc.	7 to 10	>3 to<7	≤3
Medium quality forest sites	>5	2-5	≤2
Poor forest sites	> 4	2-4	≤2

Criteria for classifying a site into suitable site, medium site and poor site

(a) **Suitable site:** soil depth more than 61 cm, rainfall range between 1270 to 3810 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(b) **Medium site:** Soil depth ranges between 30.4 cm to 61 cm, rainfall ranges between 889 to 1270 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(c) **Poor site:** Soil depth less than 30.4 cm, rainfall less than 889 mm and excessive prevalence of mist and fog during monsoon, prevalence of adverse biotic factors and steep slopes.

This approach involved aggregating the percentage of readings falling into the three higher ratings (3-5) under the 'satisfactory' and the two lower ratings (1-2) under 'unsatisfactory'. The introduction of these two broad categories allowed better tracking of performance trends. The ranking table is provided below

Score	Assessment	Category
5	Highly satisfactory	Satisfactory
4	Satisfactory	
3	Moderately satisfactory	
2	Unsatisfactory	Unsatisfactory
1	Highly Unsatisfactory	

Physical verification

Each of the selected plots were visited by the monitoring team and the following details documented in the field.

- Plot location with GPS co-ordinates and area
- Plantation type and design (wherever available)
- Year of establishment
- Number of saplings planted initially (species wise)
- Height of the saplings when planted
- Number of plants surviving at the time of monitoring
- Average height of surviving plants
- Species composition and distribution
- Protection measures and maintenance
- Anthropogenic pressure, etc.

Parameters considered during M&E

- **For plantations**

a. **Qualitative** – site suitability (both climatic and edaphic factors), condition of the plantation, choice of species, etc.

b. **Quantitative** - Total seedling/tree height, collar girth/GBH, survival percentage, etc.

c. **Other parameters** – Management practices, biotic and abiotic factors, etc.

- **For civil constructions**

a. Verification (sketch and dimensions) based on the original documents and M-book.

Deliverables and time schedule

Work plan submission	One week after signing the agreement
Field Data Collection	Two - three months
Draft report submission	One month after field Data Collection
Final report submission	Two months after draft report submission
Total Duration	6 months

4. Evaluation Details of the Circles and Divisions

The details of various circles and divisions evaluated are presented below.

	Circles	Divisions
Territorial Circles and Divisions	Northern Circle, Kannur	Kannur, North Wayanad, South Wayanad and Kozhikode Forest Divisions
	Eastern Circle, Palakkad	Nilambur North, Nilambur South, Mannarkkad, Palakkad and Nenmara Forest Divisions
	Central Circle, Thrissur	Thrissur, Chalakkudy, Vazhachal and Malayattoor Forest Divisions

	Circles	Divisions
	High Range Circle, Kottayam	Kothamangalam, Mankulam, Munnar, Marayoor and Kottayam Forest Divisions
	Southern Circle, Kollam	Ranni, Konni, Punalur, Thenmala, Achenkovil and Thiruvananthapuram Forest Divisions
Wildlife Circles and Divisions	Wildlife, Palakkad	Aralam, Wayanad, Parambikulam, Peechi and Silent Valley National Park Wildlife Divisions
	Field Director Project Tiger, Kottayam	Munnar, Idukki, Periyar Tiger Reserve East & Periyar Tiger West Wildlife Divisions
	Agasthyavanam Biological Park, Thiruvananthapuram	Shendurney and Thiruvananthapuram Wildlife Divisions
Social Forestry Circles and Divisions	Social Forestry, Kozhikode	Kasargode, Kannur, Wayanad, Kozhikode and Malappuram Social Forestry Divisions
	Social Forestry, Ernakulam	Palakkad, Thrissur, Ernakulam and Idukki Social Forestry Divisions
	Social Forestry, Kollam	Alappuzha, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram Social Forestry Divisions
Research Circles & Research Divisions	Working Plan & Research	Kozhikode, Palakkad, Munnar, Punalur and Kollam Working Plan Divisions as well as Research Division, Thrissur Research Division

Eastern Circle, Palakkad (2014-2016)

The evaluation covered five forest divisions of the circle. They include

1. Mannarkkad
2. Nenmara
3. Nilambur North
4. Nilambur South
5. Palakkad

Five different activities have been undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	**Assistance to tribal VSS**	Nilambur, Nenmara , Mannarkkad and Palakkad
2.	**Construction & maintenance of campshed**	Nilambur, Nenmara , Mannarkkad
3.	**Improving connectivity**	Nilambur, Nenmara , Mannarkkad and Palakkad
4.	**Purchase of equipment**	Nilambur and Nenmara
5.	**Training to staff**	Nilambur, Nenmara , Mannarkkad and Palakkad

1. Assistance to tribal Vana Samrakshana Samidi

Tribal VSS were engaged as fire mazdoors during 2014-15 and 2015-16 in Forest stations of Kalikavu, Karulai ranges of Nilambur South; Alathur, Nelliampathy, Kollengode ranges of Nenmara and Nilambur North. The activities include effectively laying fire lines and fire control measures. In addition, basic infrastructure, including LPG connection,has been provided to the tribal families in Nilambur, Palakkad and Mannarkad. Solar street lights were provided to the tribal settlements in Mannarkad, Agali and Attapadi ranges. The records were verified and found correct.

LPG Cylinder provided at Nilambur and Solar lights at Attapadi

2. Construction & maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
Kozhippara, Edavanna range/Nilambur North	N11°4'25.0" E76°04' 28.0"	2014-15	12x5x5	Physically verified the structure and the condition is good. Painting works were undertaken during the period.
Panapuzha/Karulai/ Nilambur South	N11°4'19" E76°4'26.0"	2014-15	7x5x3	Physically verified the structure and the condition of the structure is good. A water tank was fixed during the period.
Kadappara/Alathur/ Nenmara	N10°28'23.24" E76°33'11.84"	2014-15	6.0x 4.0	Physically verified the structure. It is in good condition.

Interior Campshed at Mezhukkumpara

The works were evaluated for physical existence and quality. The specifications of the camp sheds were checked with M-books and vouchers and verified the expenditure. At Mezhukkumpara in Mannarkkad range, the amount was used for consumables related to the shed.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp Shed/ Kozhippara, Edavanna range	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
2.	Panapuzha/ Karulai Nilambur South	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
3.	Kadappara/ Alathur/ Nenmara	The shed is maintained well.	The shed is useful for the frontline staff.	7	High

3. Purchase of equipment

During the evaluation period, the equipment procured by the divisions was physically verified, and records checked and found correct.

S. No.	Location / Range / Division	Items procured	Numbers	Present Status
1	Nilambur South	Steel cage	1	Good condition
2	Nilambur North	Snake catching equipment	2	Good condition
3	Nenmara	Snake catching equipment	4	Good condition
4	Mannarkad	Emergency life-saving equipment – mask, jackets and life-buoys	4	Good condition

Snake catching equipment

4. Improving connectivity

Trek paths were cleared and maintained well at Pudur in Attapady range of Mannarkkad division which is being regularly used by frontline staffs.

Location / Range / Division	GPS Location	Year of Construction	Dimensions
Pudur/ Attappady/ Mannarkkad (Aralikkonam to Edavani)	N11° 09' 46.38" E76° 35' 38.14"	2014-15	Width- 3.2 m, Distance- 6 kms

The activities were verified through inspection of records and found correct.

Trek paths at Pudur

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1	Trek path/ Pudur, Attappadi	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High

5. Training to protective staff

Trainings were imparted to staff in batches in the Nilambur and Mannarkad divisions during the period of the report. The vouchers were verified and found correct.

Five activities were taken up during 2014-16 as per the APO and all of them were completed. An amount of Rs. 47.41 lakhs was allotted to the circle during the period and100% financial achievement was observed.

Northern Circle, Kannur (2014-2016)

The evaluation covered four forest divisions of the circle. They include

1. Kannur
2. Kozhikode
3. North Wayanad
4. South Wayanad

Eight different activities were envisaged in the circle

1. Assistance to tribal Vana Samrakshana Samidi
2. Awareness programme
3. Compensatory afforestation works
4. Conducting nature camps
5. Construction, cleaning, desiltation of pond
6. Purchase of equipment
7. Soil and moisture conservation
8. Training to protective staff

Cairns & boundary consolidation

This activity, a spillover from 2009-14 was completed in 2014-15 in three different locations, Bharanikkunnu (10), Attuvaikunnu (12) and Kottapady (12) sections. The records were verified and found correct.

On perusal of records, it was observed that due to the delay in the release of funds, most activities were shifted to 2018-19.

The major activity taken up during 2014-16 was cairns and boundary consolidation, a spill over from 2009-2014 period. An amount of Rs. 65.44 lakhs was allotted to the circle during the period and 98% financial achievement was observed.

Central circle, Thrissur (2014-2016)

The evaluation covered four forest divisions of the circle. They include

1. Chalakkudy
2. Malayattoor
3. Thrissur
4. Vazhachal

Five different activities were undertaken in the circle based on the APO. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal VSS	Vazhachal
2.	Awareness programme	Vazhachal
3.	Compensatory afforestation works	Chalakkudy, Thrissur and Vazhachal
4.	Eradication of exotic weeds	Vazhachal
5.	Training to protective staff	Thrissur, Chalakkudy, Vazhachal, Malayattoor

In addition to the works mentioned in the APO, the circle also undertook spillover activities planned during 2009-2014. They include the construction & maintenance of campshed, SMC activities and cairns & boundary consolidation.

1. Assistance to tribal Vana Samrakshana Samidi

The Vazhachal Division assisted the tribal VSS in the form of employment through planting, maintenance of plantations under compensatory afforestation, fire watchers, ecotourism activities, and skill development (tailoring units, honey processing) have been provided.

The VSS group at Vazhachal involved in honey processing

2. Cairns & boundary consolidation

Id.No.	GPS Location	Year of Construction	Remarks
512	N10° 40'56.3" E 076° 14' 30.1"	2014 - 2015	This work was envisaged in 2011-12; however, it was completed in 2014-15.
513	N10° 40'56.5" E76° 14' 29.4"		
501	N10° 40'55.8" E76° 14' 38.4"		
503	N10° 40'56.0" E76° 14' 36.7"		

The cairns at the boundary of forests in Chalakudy were inspected and found damaged in some portions.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Construction of Cairns / Mullukara / Wadakencherry	The cairns are in good condition.	The boundary delineation is helpful to the frontline staff.	8	High
2.	Construction of Cairns / Mankuttipadam/ Vellikulangara	The cairns were in spected and found damaged.	The boundary delineation would be helpful to the frontline staff, if set right.	4	Medium

Cairns at Mankuttipadam

3. Construction & maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
Palapilly	N10° 22'49" E 76° 20' 73.1"	2014-2015	6.6 x 7.3	This work was envisaged in 2010-2011; however, it was completed in 2014-15.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp Shed/ Chalakudy / Palapilly	The shed is maintained well.	The shed is useful for the frontline staff.	7	High

The camp shed was evaluated for its physical existence and the quality of the asset. The specifications of the camp shed was checked by physical measurements and verifying the old vouchers and estimates. The camp shed is well maintained which is useful for the frontline staff.

4. Soil and Moisture Conservation activities

Sites	GPS Location	Year of Construction	Dimensions (cm)	Remarks
Mankuttipadam	N10° 22' 0.84" E76°22' 15.60"	2015	Bottom: 120 x 120 Top: 60 x 60 Height: 120	This work was envisaged in 2011-12; however, it was completed in 2014-15.
Kavanad	N10° 28' 20.42" E76°26' 33.65"	2015	Bottom: 120 x 120 Top: 60 x 60 Height: 120	This work was envisaged in 2011-12; however, it was completed in 2014-15.
Elicode	N10° 22'49" E76°20' 73.1"	2015	Bottom: 120 x 120 Top: 60 x 60 Height: 120	This work was envisaged in 2011-12; however, it was completed in 2014-15.

Observations of the Evaluation Team

Sl. No.	Type of Assets/ Division / Range /Place	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Contour bunding/ Chalakudy / Vellikulangara / Mankuttipadam	Damaged due to floods	Delivers 90 % of the envisaged effect.	7	Good
2.	Contour bunding/ Chalakudy / Vellikulangara / Kavanad	Damaged due to floods. Needs repairs.	Delivers 50 % of the envisaged effect.	5	Medium
3.	Contour bunding/ Chalakudy / Palappilly / Parakkadavu / Elicode	Damaged due to floods. Needs repairs.	Delivers 60 % of the envisaged effect.	5	Medium

The bunds have been physically verified and the specifications were checked by physical measurements and verifying the old vouchers and estimates. The bunds were damaged due to flood and needs repairs.

5. Compensatory Afforestation Works

Site/Divisions	GPS Coordinates of site	Activities carried out	Status (Verified / Not verified)
Chelur Porassery kunnu / Kandanchira / Poongodu / Wadakkanchery	N10°43' 24.0" E76°11' 24.1" N10°43' 24.0" E76°11' 24.1" N10°43' 24.0" E76°11' 24.1"	Initiated Preparatory work in 18 ha	Verified
Poringalkuthu/ Vazhachal	N10°18' 52.2" E76°37' 47.8"	Initiated Preparatory work in 10 ha	Verified
Chattilampadam / Vellikulangara	N10°22' 049" E76°20' 73.1" N10°22' 04.2" E76°20' 73.2"	Initiated Preparatory work in 2.12 ha	Verified
Areswaram/ Vellikulangara	N10°22' 023" E76°21' 0.89" N10°21' 86.7" E76°21' 33.5"	Maintenance of 2014 CA Plantation	Verified

The preparatory work for compensatory afforestation were verified from the records.

6. Eradication of exotic weeds

Based on the records verified, this activity was undertaken in Vazhachal Division during 2014-15 against the APO 2011-2012.

Five activities were planned during 2014-16 in the circle, while three of them were spillover activities of 2011-12. Overall, an amount of Rs. 15.55 lakhs was allotted to the circle during the period of which 92.66 percent financial achievement was observed.

High Range Circle, Kottayam (2014-2016)

The evaluation covered five forest divisions of the circle. They include

1. Kothamangalam
2. Kottayam
3. Mankulam
4. Marayoor
5. Munnar

Eight different activities were envisaged in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Kottayam, Mankulam, Marayoor
2.	Compensatory afforestation works	Munnar
3.	Construction, cleaning, desiltation of Pond	Munnar

S. No.	Activity	Divisions
4.	Fire watch stations	Kothamangalam
5.	Improving Connectivity	Marayoor
6.	Purchase of Equipment	Kottayam, Mankulam, Marayoor, Munnar, Kothamangalam
7.	Soil & Moisture Conservation	Kottayam, Mankulam, Marayoor, Munnar, Kothamangalam
8.	Training to protective staff	Kottayam, Mankulam, Marayoor, Munnar, Kothamangalam

In most divisions, no funds were allocated during these years; hence, the activities were shifted to the subsequent years. SMC was the only one activity taken up in Munnar division.

1. Gully Plugging / Check Dam

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1	N10°04'48.79" E77°56'12.75" Elevation - 1056m	2014-2015	Plastering: 58.75 Earthwork: 58.05 Foundation: 33.15 RCC: 26.1	The structure is intact.
2	N10°19'57.38" E77°12' 52.62" Elevation - 513m	2014-2015	9.95	The structure is intact.
3	N10°20' 52.35" E77°13' 06.42" Elevation - 485m	2014-2015	10.12	The structure is intact.

Under this activity, check dams were created in 4 sites. These activities were verified physically and dimensions were measured and confirmed with the vouchers/records. All the structures were in healthy conditions and useful in soil moisture conservation as is evident from the lush green vegetation.

Check Dam at Kambany Kudy

Observations of the Evaluation Team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check Dam / Kambany Kudy/ Mankulam / Mankulam	For water storage	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	9	High
2.	Check Dam / Olimala Oda / Munnar WLS / Chinnar	For water storage	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	6	Medium
3.	Check Dam / Karakkadu-matha / Munnar WLS / Chinnar	For water storage	The moisture content in surrounding areas is improved, as evidenced by the green vegetation.	6	Medium

Though eight activities were envisaged, only SMC activities were taken up due to delay in fund release. Overall, an amount of Rs. 36.88 lakhs was allotted to the circle during the period of which 90.6 percent financial achievement was observed.

Southern circle, Kollam (2014-2016)

The evaluation covered six forest divisions of the circle. They include

1. Achenkovil
2. Konni
3. Punalur
4. Ranni
5. Thenmala
6. Thiruvananthapuram

Eight different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Ranni, Trivandrum, Achencoil, Punalur, Thenmala
2.	Compensatory afforestation works	Thenmala, Ranni, Punalur
3.	Conducting nature camps	Konni
4.	Engaging fire gangs	Ranni, Trivandrum, Achencoil, Punalur, Thenmala
5.	Purchase of equipment	Ranni
6.	River bank stabilization/protection	
7.	Soil and moisture conservation	Ranni, Trivandrum, Achencoil, Punalur, Thenmala, Konni
8.	Training to protective staff	Ranni, Trivandrum, Achencoil, Punalur, Thenmala, Konni

1. Assistance to tribal Vana Samrakshana Samidi

1. The Focussed Group discussions with tribal VSS group on the implementation of CAMPA activities revealed that the departmental interventions in these areas are in consultation with the people and their involvement was very evident. The department has taken sufficient care to address the interests of the Scheduled Tribes while developing management plans. They have taken interest in the management and protection of the worked areas where there is scope for revenue from NTFPs and not in the areas where usufructs are not forthcoming immediately.

2. Tribal VSS were engaged as fire mazdoors, laying fire lines, laying solar fencing, laying fire break, watchers, effective fire control measures, removal of alien exotic weeds, gap planting and construction of staggered trenches in Ranni, Trivandrum, Achencoil, Punalur and Thenmala divisions. Basic infrastructure and LPG connections were provided to the tribal families in Ranni Division.

2. Compensatory Afforestation

Plant survival Rate: All activities were carried out in Thenmala Division. Plant survival rates varied with locations.

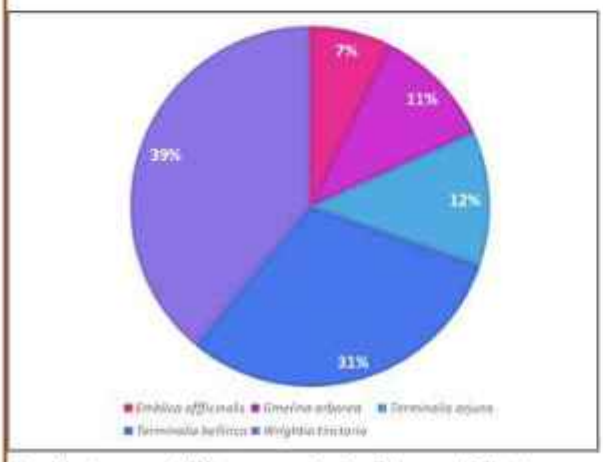
S. No.	Site	Year	Area of plantation (ha)	Plantation Model	Species	Remarks
1	Edamon	2014	35	Gap planting	*Emblica offficinalis, Gmelina arborea, Terminalia arjuna, Terminalia bellirica, Wrightia tinctoria*	✦ Plantation journal, records and bills are maintained well. ✦ Indigenous tree species that suitable for the plantation site are selected for planting.
						✦ It was learnt from the forest officials that this plantation activities were done only with the help of forest frontline officials without any

S. No.	Site	Year	Area of plantation (ha)	Plantation Model	Species	Remarks
						additional labour cost. Thereby no additional expenses were made for plantation activities under CAMPA fund. ✦ 1st year maintenance work was done with the help of VSS members. ✦ It was learnt from the forest officials that due to grazing by Sambar deer and elephant lot of casualties reported in this plantation.
2	Edamon	2014	25	Gap planting	*Terminalia arjuna, Terminalia bellirica, Wrightia tinctoria*	✦ Plantation journal, records and bills are maintained well. ✦ Indigenous tree species that suitable for the plantation site are selected for planting. ✦ It was learnt from the forest officials that this plantation activities were done only with the help of forest frontline officials without any additional labour cost. Thereby no additional expenses were made for plantation activities under CAMPA fund. ✦ 1st year maintenance work was done with the help of VSS members. ✦ It was learnt from the forest officials that due to grazing elephant lot of casualties reported in this plantation.
3	Nagamala	2014	25.2	Gap planting	*Emblica officinalis, Hopea ponga, Wrightia tinctoria*	✦ Plantation journal, records and bills are maintained well.

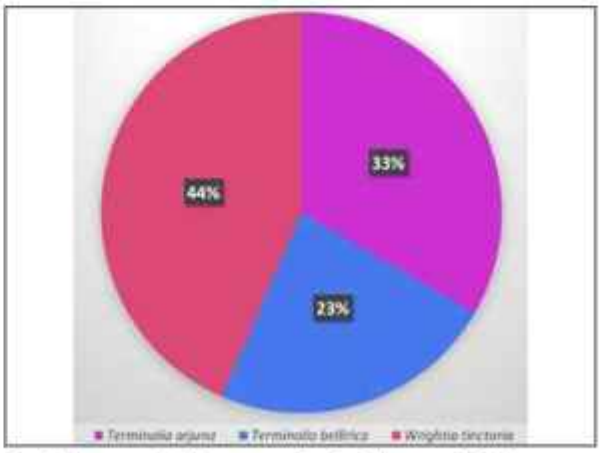
S. No.	Site	Year	Area of plantation (ha)	Plantation Model	Species	Remarks
						✦ Indigenous tree species suitable for the site is selected for plantation. ✦ Source of the seedlings are from Kulathupuzha central nursery, Kerala. ✦ It was learnt from the forest officials that this plantation activities were done only with the help of forest frontline officials without any additional labour or cost. Thereby no additional expenses were made for plantation activities under CAMPA fund. ✦ 1st year maintenance work was done with the help of VSS members. ✦ It was learnt from the forest officials that due to grassing elephant lot of casualties reported in this plantation.
4	Kaduva pallam	2015	36.53	Gap planting	*Caesalpinia sappan, Hopea ponga, Pongamia pinnata, Terminalia arjuna, Terminalia bellirica, Wrightia tinctoria*	✦ Plantation journal, records and bills are maintained well. ✦ Indigenous tree species suitable for the site is selected for plantation. ✦ Source of the seedlings are from Kulathupuzha central nursery, Kerala. ✦ It was learnt from the forest officials that this plantation activities were done only with the help of forest frontline officials without any additional labour or cost. Thereby no

S. No.	Site	Year	Area of plantation (ha)	Plantation Model	Species	Remarks
						additional expenses were made for plantation activities under CAMPA fund. ✦ 1st year maintenance work was done with the help of VSS members.
5	Ranni/ Vakkalar	Resche duled	30.0	Gap planting	-	✦ Approved in APO 2014 -15 & 15-16 scheduled for 2021-2022.
6	Punalur / Kulathu-rapacha	2014-16	*50.0*	Preparatory work	-	✦ Wages paid for raising plantation in 50 Ha. Vouchers and records verified and found correct.

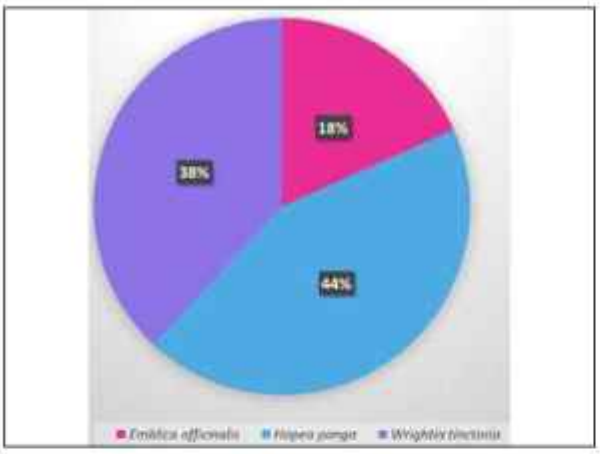
Survival percentage of species across sites



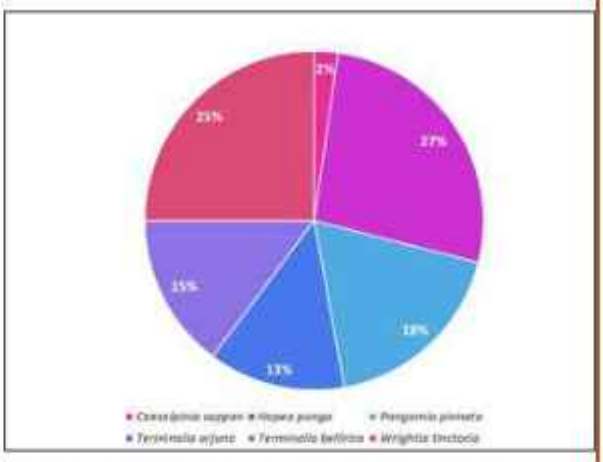
Survival rates of different species in Edamon (35 ha), Thenmala Forest Division



Survival rates of different species in Edamon (25 ha), Thenmala Forest Division

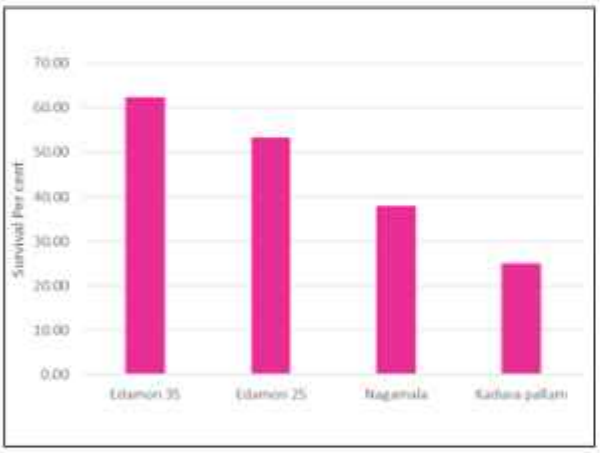


Survival rates of different species in Nagamala, Thenmala Forest Division

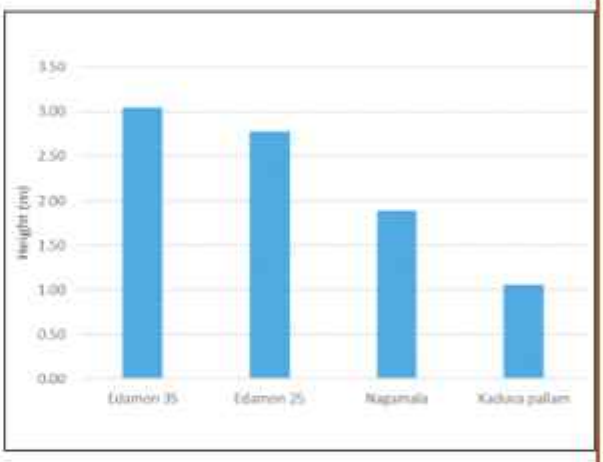


Survival rates of different species in Kaduva pallam, Thenmala, Thenmala Forest Division

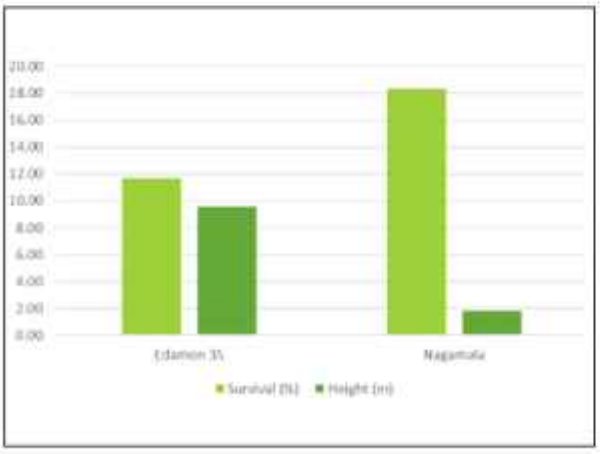
Wrightia tinctoria was the only species planted across divisions. The species varied in survival and growth performance in different sites.



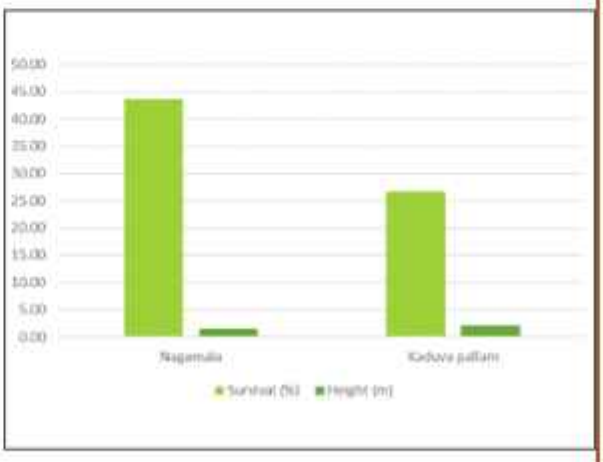
Wrightia tinctoria survival across the four sites



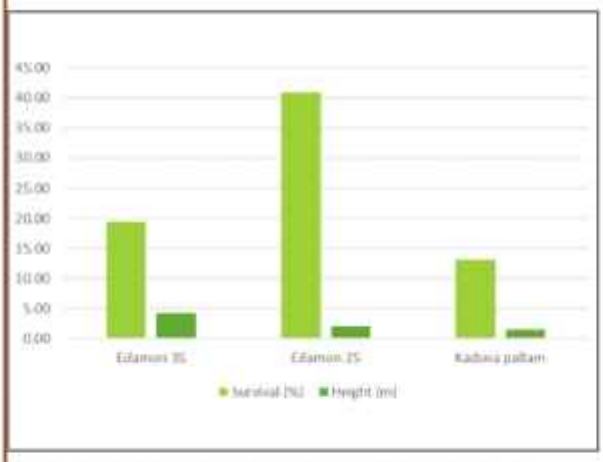
Performance of *Wrightia tinctoria* across the four sites



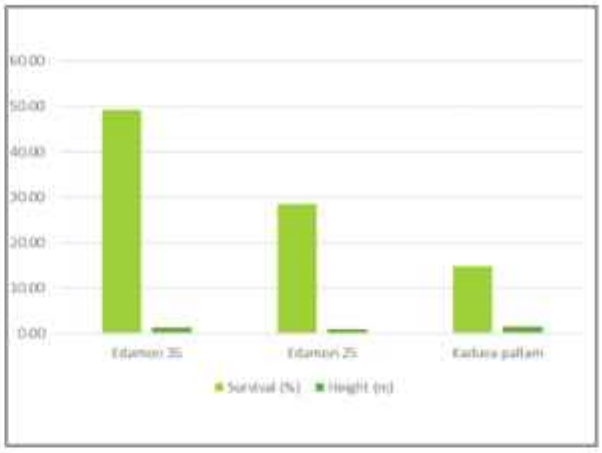
Performance of *Emblica officinalis* across two sites



Performance of *Hopea ponga* across two sites



Performance of *Terminalia arjuna* across three sites



Performance of *T. bellirica* across three sites

Current status of the Compensatory Afforestation 2015-16 activities at Thenmala Forest Division

Current status of the Compensatory Afforestation 2015-16 activities at Thenmala Forest Division

Expert team in evaluation of Compensatory Afforestation 2015-16 activities under CAMPA fund at Thenmala Forest Division

Plant protection measures: Different plant protection measures such as watch and ward, fire protection, weeding, etc have been taken in all the divisions to improve plant survival rate. In some cases, the VSS members were involved in maintaining the afforestation activities. Watch and ward was given priority over other protection measures. These plantations were raised during the period 2014-15; watch and ward provision has been made. As a result, the survival rates are good. In the later stage, the site was covered under general monitoring and supervision. This could have led to a low stocking in some of the afforested sites.

Record maintenance: Different records / documents are maintained at the range office with respect to plantations and silvicultural activities. The site map, treatment map and data on survival and growth have been recorded meticulously in the journal. The records and bills related to the plantations are maintained well.

Remarks

- Indigenous tree species are selected for planting.
- Most plantation activities were carried out by frontline officials without additional labour. Hence, no additional expenses were incurred.
- Maintenance work was done by the VSS members.
- It was learnt from the forest officials that due to elephant trampling, casualties were reported in Kaduva palam and Nagamala.

S.No.	*Species Planted in Compensatory Afforestation Programmes*
1.	*Caesalpinia sappan*
2.	*Emblica offficinalis*
3.	*Gmelina arborea*
4.	*Hopea ponga*
5.	*Pongamia pinnata*
6.	*Terminalia arjuna*
7.	*Terminalia bellirica*
8.	*Wrightia tinctoria*
9.	*Xylia xylocarpa*

3. Engaging Fire gang

S. No.	Location	Year	Remarks
1.	Palode Forest range, TVPM Division	2014-15 & 2015-16	✦ It was learnt from the members, president and secretary of the Vana Samrakshana Samidi, Palode that the forest officials are visiting VSS and discuss regarding the fire gang activities every week. ✦ VSS members meet once in every month to discuss about forest protection activities. ✦ VSS conducts Honey collection training programs. ✦ Human animal conflict is the major issue in Palode. ✦ VSS requested for increase the salary for the members engaged in fire gang activities.

S. No.	Location	Year	Remarks
			✦ VSS requested a campshed with all basic facilities, elephant trench and fire gang equipment ✦ VSS suggested restricting trespassers into forest areas during summer to avoid chance of forest fire.
2.	Arayankavu, Thenmala Forest Division	2014-15 & 2015-16	✦ It was learnt from the members, president and secretary of the Vana Samrakshana Samidi, Arayankavu Forest range that the forest officials are visiting VSS and discuss regarding the fire gang activities every week. ✦ Standard operating Protocol (SOP) for fire gang activities are being followed at Arayankavu Forest range, Thenmala Forest Division. ✦ VSS members meet once in every month to discuss about forest protection activities. ✦ VSS suggested restricting trespassers into forest areas during summer to avoid chance of forest fire. ✦ VSS members were happy and satisfied with the activities carried out under CAMPA fund.
3.	Paruthipally, TVPM Forest Division	2014-15 & 2015-16	✦ It was learnt from the members, president and secretary of the Vana Samrakshana Samidi, Pottankulichapara that the forest officials are visiting VSS and discuss regarding the fire gang activities every week. ✦ Human animal conflict is the major issue in Pottankulichapara. ✦ A camp shed with all basic facilities, elephant trench and fire gang equipment may be considered.

4. Gully Plugging / Chappath

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N09°8'09.06" E77°12'0.006"	2015 -2016	3.8 x 1.5 x 0.65 2.55 x 1.6 x 0.35 13.33 x 1.37 x 0.73	All gullies are healthy
2	N09.3634° N, E76.9881° E	2015 -2016	5 x 2 x 2	30% damaged due to heavy floods
3	N09°10'37.43" E76°55'32.483	2015 -2016	10 x 5 x 2	The structure is intact
4	N09°5'21.888" E77°7'55.47"	2015-2016	60 x 6 x 3	50% of the structure has been washed away.

Observations of the Evaluation Team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully plugging / Kattikuzhy/ Achenkoil.	Three healthy gullies which harbour the famous fresh water Masheer breeding ground. The department takes extra efforts for the conservation of the species also.	The moisture content of surrounding areas improved, as is evident from the dense vegetation growth. The fish population is also high.	7	High
2.	Gully plugging / Naduvathu-moozhy/ Konni	Due to frequent floods 4 chappaths were totally damaged which restricts the transport, damages the gullies and trek paths established.	The floods have widened the expanse of streams leading to erosions.	4	Medium
3.	Gully plugging / Goodrikal/ Ranni	Inspected three gullies at Goodrikal, Ranni division and found good.	The moisture content of surrounding areas improved, as is evident from the dense vegetation growth.	7	High
4.	Chappath / Muthalathodu/ Achenkovil	Damage to the structure cuts off access to 3 ranges. Hence efforts to be made to create a more robust structure.	Heavy erosion along the sides.	3	Low

Gully plugging and chappath works were inspected as per records and for their quality and observed that gullies were in good condition except at Naduvathumoozhy, Konni. Damages were also observed at the chappaths at Muthalathodu,Achenkovil,which require special attention as heavy rains and floods cut off access to 3 ranges.

5. Training to protective staff

Awareness programmes and training programs were arranged in Punalur and Thiruvananthapuram.

Four out of eight activities were taken up during the evaluation period in the circle. Overall, an amount of Rs. 68.48 lakhs was allotted to the circle during the period of which 97.78 percent financial achievement was observed.

Gully at Konni Division

Wildlife circle Palakkad (2014-16)

The evaluation covered four divisions of the circle. They include

1. Peechi
2. Parambikulam
3. Silent Valley
4. Wayanad

Seven different activities were envisaged in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to Tribal Vana Samrakshana Samidi	Silent Valley
2.	Construction & maintenance of Campshed	Parambikulam, Peechi, Aralum, Silent Valley
3.	Construction of solar fencing	Peechi, Silent Valley
4.	Interior campshed & ration	Parambikulam, Peechi, Aralum
5.	Purchase of equipment	Wayanad
6.	Eradication of exotic weeds	Peechi
7.	Soil & moisture conservation	Peechi, Wayanad

1. Assistance to tribal Vana Samrakshana Samidi

Discussion with the tribal VSS revealed that regular meetings with forest officials were made and, maintained the register at at Anapodi Division Office. Provided protection from wild animals in the tribal villages.

2. Construction & maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°35'73.12" E76°81'36.35"	2014-15	5.5x5.5x6.5	The condition of the structure is good.
2	N10°37'65.48" E76°69'04.20"	2014-15	6.5x5.3x2.0	The condition of the structure is good.
3	N10°27'12.7" E76°29'35.26"	2014-15	9x6x1	The condition of the structure is good.
4	N10°49'73.9" E76°47'07.87"	2014-15	4x5x3	The condition of the structure is good.
5.	N11°55'43.85" E75°52'35.17"	2015-16	4x3.5x2	The condition of the structure is good.
6.	N11°5'1.21" E76°28'50.3"	2015-16	11.25x3x5	The condition of the structure is good.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp Shed/ Parambikulam/ Karimala	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
2.	Camp Shed/ Parambikulam/ Karimala	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
3.	Camp Shed/ Peechi/ Chimmony	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
4.	Camp Shed/ Peechi/ Chimmony	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
5.	Camp Shed/ Aralum/ Aralum	The shed is maintained well.	The shed is useful for the frontline staff.	8	High
6.	Camp Shed/ Silent Valley/ Bhavani	The shed is maintained well.	The shed is useful for the frontline staff.	9	High

The works were evaluated for their physical existence and for quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates. The condition of the campsheds are good and maintained well.

3. Construction of solar fencing

S. No.	Location	Year	Remarks
1.	Kakkinikkad, Chimony /Peechi	2014-15	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
2.	Mankuchy, Chimony /Peechi	2015-16	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
3.	Podhuvapadam, Silent Valley	2014-15	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
4.	Karadiyodu, Silent valley	2015-16	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.

The solar fencings were evaluated for the physical existence and for the quality. The specifications were checked by verifying the vouchers and estimates.

4. Elephant proof trench

S. No.	Location	Year	Remarks
1.	Anaporu, Chimmony / Peechi	2015-16	The trenches were physically verified and found intact.
2.	Mangalamgera, Chimmony / Peechi	2014-15	The trenches were physically verified and found intact.

The trenches were evaluated for the physical existence and for the quality. The specifications of both the trenches were checked by verifying the vouchers and estimates.

5. Interior campshed & ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°35'73.12" E76°81'36.35"	2014-15	5.5x5.5x6.5	The condition of the structure is good.
2.	N10°37'65.48" E76°69'04.20"	2014-15	6.5x5.3x2.0	The condition of the structure is good.
3.	N10°27'12.7" E76°29'35.26"	2014-15	9x6x1	The condition of the structure is good.
4.	N10°49'73.9" E76°47'07.87"	2014-15	4x5x3	The condition of the structure is good.
5.	N11°55'43.85" E75°52'35.17"	2015-16	4x3.5x2	The condition of the structure is good.

The works were evaluated for the physical existence and for the quality. The specifications of all the camp sheds were checked by verifying the old vouchers and the estimates.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Parambikulam/ Karimala	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
2.	Campshed/ Parambikulam/ Karimala	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
3.	Campshed/ Peechi/ Chimmony	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
4.	Campshed/ Peechi/ Chimmony	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
5.	Campshed/ Aralum/ Aralum	The shed is maintained well.	The shed is useful for the frontline staff.	8	High

6. Purchase of equipment

Sl. No.	Location / Range / Division	Items procured	Numbers	Present Status
1.	Naiketty/Sulthan bathery / Wayanad	1. Snake catching unit 2. Tiger protection kit 3. Shield 4. Fire beater 5. Masks and helmets	2 4 2 5 5	All the equipment are in good condition to use.

The equipment purchased were evaluated for the physical existence and for the quality. They were checked by verifying the vouchers and observed all equipment are in good condition.

7. Eradication of exotic weeds

Eradication of exotic weeds was undertaken in Peechi Division during 2014-15 against the APO 2011-2012, based on the records verified. An area of 263.1 ha was worked. The major weed removed was *Senna spectablis*.

8. Soil and moisture conservation

A. Gully Plugging: This activity was carried out in Peechi Division.

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N10°34'44.5" E76° 24'33.9" N10°24'46.3' E76° 27'30.1" N10°25'3842" E76° 28'31.6"	2014-2016	8.19 x 1.73 x 0.73 5.5 x 1.63 x 0.685 6.53 x 1.34 x 0.6	The structures are in good condition.

Gully Plugging at Chimmony

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully Plugging/ Peechi Division/ Chimony Range.	The gullies were constructed in 2014-16. They are in good condition.	The gully plugs have enabled stabilisation of the soil to a large extent.	7	High

The gullies were evaluated for the physical existence and for the quality. The specifications of the gullies were checked by verifying the vouchers and estimates.

B. Contour bunding: This activity was carried out in Wayanad Division.

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1.	N11°43'42" E76° 21'17"	2015 -2016	17.5 x 10 x 25	The structure is intact
2.	N11°38'3.7" E76° 24'22.59"	2014-2015	5 x 25	The structure is intact

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Earthern bunding/ Wayanad / Sulthan battery	The Earthern bunding constructed in 2015-16 is good.	Earthern bunding facilitates water storage.	7	High
2.	Earthern bunding/ Wayanad / Muthanga	The Earthern bunding is good	Earthern bunding facilitates water storage.	7	High

The bunds were evaluated for their physical existence and quality. The specifications of the bunds were checked by verifying the vouchers and estimates.

All the seven activities envisaged were completed during 2014-16 in the circle. No activities were kept pending. Additionally, elephant proof trenches were also made. Overall, an amount of Rs. 79.85 lakhs was allotted to the circle during the period of which 98.21 percent financial achievement was observed.

Field director project tiger, Kottayam (2014-2016)

The evaluation covered four forest divisions of the circle. They include

1. Periyar East
2. Periyar West
3. Idukki Wildlife
4. Munnar Wildlife

Nine different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Periyar East Division, Periyar West Division, Idukki WL, Munnar WL
2.	Awareness & nature camp	Periyar West Division, Idukki WL
3.	Construction, cleaning, desiltation of pond	Munnar WL
4.	Eradication of exotic weeds	Periyar East Division, Idukki WL, Munnar WL
5.	Improving connectivity	Periyar East Division, Periyar West Division
6.	Interior campshed & ration	Periyar East Division, Periyar West Division, Idukki WL, Munnar WL
7.	Purchase of equipment	Periyar East Division, Periyar West Division, Idukki WL, Munnar WL
8.	Soil and moisture conservation	Idukki WL
9.	Training to protective staff	Periyar East Division, Periyar West Division, Idukki WL, Munnar WL

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with VSS groups on the implementation of CAMPA activities in the circle. The Tribal VSS were engaged in protection related activities, for collection and sale of MFP.

2. Awareness & natural camp

The staff informed that the activites pertaining to awareness have been completed. The details were verified through records.

3. Construction, cleaning, desiltation of pond

Sites	GPS Location	Year of Construction/ Maintenance	Dimensions (m)	Remarks
Paliyanpara, Nellikampetty section	N09°35'05.45" E77°12'57.97"	2014-2015	14.5 x 12.5 x 2.5	The asset is maintained well.
Kokkarakandam II Bit	N09°36'06.60" E77°11'02.20"	2014-2015	14.5 x 12.5 x 2.5	The asset is maintained well.
Kokkarakandam III Bit	N09°35'57.96" E77°11'05.50"	2014-2015	26.0 x 19.5 x 4.0	The asset is maintained well.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Pond/ Paliyanpara/ Thekkady/ Iddukki	Clearing of ground level vegetation grasses and weeds, earth work for excavation, wood fencing surrounding the pond, concrete working has been carried out.	This pond mostly used by domestic animals and wild animals for drinking purpose, water level maintained throughout the year.	7	High
2.	Pond/ Kokkarakandam II Bit /Thekkady/ Iddukki	Clearing of ground level vegetation grasses and weeds, earth work for excavation, wood fencing surrounding the pond, concrete working has been carried out.	This pond mostly used by domestic animals and wild animals for drinking purpose, water level maintained throughout the year.	7	High
3.	Pond/ Kokkarakandam III Bit /Thekkady / Iddukki	Clearing of ground level vegetation grasses and weeds, earth work for excavation, wood fencing surrounding the pond, concrete working has been carried out.	This pond mostly used by domestic animals and wild animals for drinking purpose, water level maintained throughout the year.	7	High

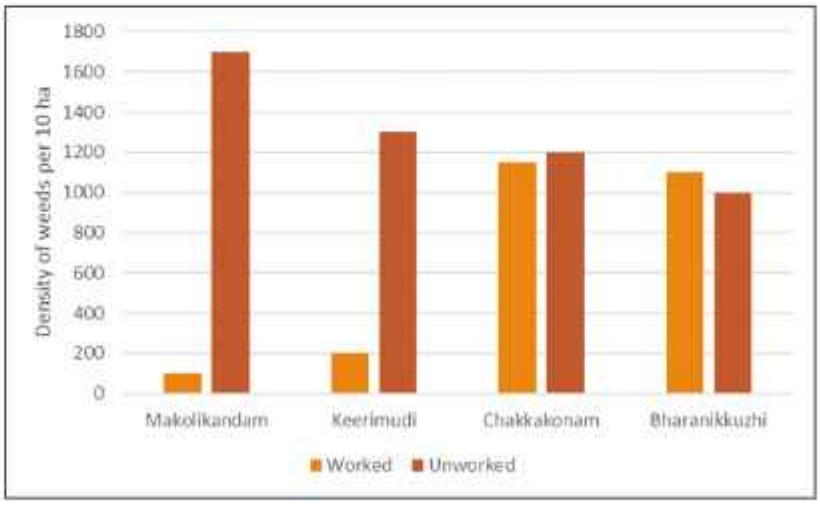
The ponds were evaluated for their physical existence and quality. The specifications of the ponds were checked by verifying the vouchers and estimates.

Desiltation of pond

4. Eradication of exotic weeds

Site	GPS Location of worked plot	Density of weeds in worked plot (per ha)	GPS Location of unworked plot	Density of weeds in unworked plot (per ha)	Effectiveness of work
Makolikandam/ Idukki WLS	N9°49'35.25" E76°58'52.80"	9612	N 09°48'30.47" E 76°59'42.80'	42889	22.42% Eradication was effective.
Keerimudi/ Idukki WLS	N9°49'15.47" E76°58.12.54"	15611	N 09°48'45.75" E 76°59.16.83"	30890	50.54% Very effective.
Chakkakonam/ Idukki WLS	N9°45'26.81" E76°58.31.06"	27057	N 09°46'31.08" E 76°59.35.01"	19334	- 39.94%;
Bharanikkuzhi/ Idukki WLS	N10°07'42.52" E76°45.03.01"	20483	N 09°46'31.08" E 76°59.35.01"	8482	- 41.49 %.
Anakkoodu/ Thekkady/ Iddukki	N09°35'30.01" E77°10'27.03"	-	-	-	-
Sakunthalakadu/ Thekkady/ Iddukki	N 09°35'44.02" E 77°10'04.01"	-	-	-	-

In Chakkakonam and Bharanikkuzhi, the density of weed infestation was higher in the worked plot due to higher exotic weed density. Wild animals regularly graze the palatable species; as a result,high density of weed infestation in the worked plot. A comparison of the density of *Lantana camara* in the four sites is presented below.



Weed growth assessment in Chakkonam

In Anakkoodu, 350 sandal plants have been protected in an area of 10 ha and in Sakunthalakadu, 741 sandal plants are protected in a 12 ha area. Every tree is numbered and trees with good girth (>10 cm) are protected with iron guards. Regular annual weeding mainly enable the natural regeneration of sandal. Grazing/browsing and mortality due to water logging is observed.

Sandal wood trees at Sakunthalakadu

Numbering of the trees in the sandalwwod plot

5. Improving connectivity

Trek paths, partolling routes and vistalines were cleared and maintained in the circle in PTR and Idukki WLS.

Location / Range / Division	GPS Location	Dimensions
Mannakkudi to Thondiyar	N09°35'57.2" E77°09'25.05"	7.5 ha Length -3.5km Width – 11 m
Anavachal to Anchuruli	N09°35'47.1" E77°09'20.04"	5 ha Length -3.5km Width – 11m
Entrance check post to Boat landing	N09°34'40.08" E77°10'49.06"	3 ha Length -3.0km Width – 10.5m
Karadikkavala to Methakanam	N09°34'25.56" E77°14'58.19"	9 ha Length -9km Width - 10m
Karadikkavala to Mangaladevi	N09°35'55.09" E77°13'17.21"	3 ha Length -6km Width - 10m
Azhutha	N09°29'43.58" E77°07'28.54"	10 km

The activities were verified through inspection of records and found correct except in Azutha.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Vistaline clearance/ Edapalayam / Thekkady/ Iddukki	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
2.	Vistaline clearance/ Anchuruli APC Campshed / Thekkady/ Iddukki	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
3.	Vistaline clearance/ Thekkady/ Iddukki	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
4.	Vistaline clearance/ Karadikkavala / Thekkady/ Iddukki	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
5.	Vistaline clearance/ Karadikkavala / Thekkady/ Iddukki	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
6.	Uppupara / Azhutha/ Iddukki	-	-	-	-

Vistaline clearance in Azhutha

Tribal VSS were engaged in maintaining the vistalines to avoid fire incidence and also involved in clearing jungle growth, weeds, grasses without felling trees. Due to uncertainties in fund release, this activity is currently taken up with funds from other fund sources.

6. Interior campshed & ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
Arackapadam campshed	N09°47 41.4" E76°59 09.4"	2014	-	The structure is in good condition.
Pachakkanam campshed	N09°23 07.27" E77°08.58.91"	2015-16	-	The activity was approved during 2009-2010

The works were evaluated for physical existence and quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Interior Campshed/ Idukki WL/ Idukki WLS	Camp shed is made of metal sheet, houses 3 rooms including kitchen and is equipped with utensils, vessels, and solar power.	The shed is maintained well. The shed is used by the watchers and forest official during patrolling duty.	9	High
2.	Renovation of building/ Pachakkanam station/ Pampaa/ Iddukki	Renovation of rest room in Duplex quarters at pachakanam section was seen. It was provided with wall tiles and shutters, doors, water closets.	The station is maintained well. The shed is used by the watchers and forest officials.	9	High

Duplex quarters at Pachakanam

7. Purchase of equipment

Sl. No.	Location / Range / Division	Items procured	Numbers	Present Status
1.	Peermed/Azhutha/ Iddukki	Snake tongs, trap cages Tiger and leopard trap cage (122 x 153 x 214 cm) Monkey trap cages (15 x 80 x 75 cm)	4 2 2	All the equipment are in good condition to use.

The equipment procured was evaluated for physical existence and quality and checked by verifying the old vouchers and the estimates.

8. Soil and moisture conservation

Sites	GPS Location	Year of Construction/ Maintenance	Dimensions (m)	Remarks
Kizhukkanam	N09°44'42.8" E76°59'09.2"	2014-16	11.5 x 2 x 2 12 x 2 x 3 10 x 2 x 3 7 x 1.6 x 1.1 10 x 2 x 2.5 14 x 2 x 3	Inspected six(6) gullies at Kizhukkanam. Floods have weakened them and needs strengthening and maintenance

Sites	GPS Location	Year of Construction/ Maintenance	Dimensions (m)	Remarks
Kathithappan kettuchira	N09°44 26.095" E77°00 04.41"	2014-16	12 x 2 x 3 10 x 1.5 x 2 10 x 2 x 3 12 x 3 x 4.5	Inspected Four(4) gullies at kathithappan kettuchira. Floods have weakened them and needs strengthening and maintenance.
Vagavanam	N09°43'24.06" E76°57'23.3"	2014-16	10 x 2 x 2 11 x 2 x 2.5 8.5 x 1.6 x 2.5 9 x 1.5 x 3	Inspected Four(4) gullies at Vagavanam. They displayed minimal damage. Floods have weakened them and needs strengthening and maintenance.
Vanmavu	N09°44'31.09" E76°59'09.6"	2014-16	8 x 2 x 3 10 x 1.5 x 3 8.5 x 1.8 x 2.8 10 x 1.6 x 3	Inspected Four(4) gullies at Vanmavu. Two gullies are damaged and others need some strengthening work.
Kallekkulam area	N09°43'29.08" E76°56'35.3"	2014-16	9 x 1.5 x 1.2 15 x 2 x 3 11 x 1.5 x 2 8 x 2 x 3	Inspected Four(4) gullies at Kallekkulam area. Floods have weakened them and needs strengthening and maintenance
Vettilapara	N09°48'16.3" E77°00'14.2"	2014-16	10 x 1.5 x 3 8.5 x 1.8 x 2.8 10 x 1.6 x 3 11 x 1.6 x 4 9 x 1.5 x 8	Inspected Five(5) gullies at Vettilapara. Floods have weakened them and needs strengthening and maintenance.
Matnai	N10°08'29.07" E76°40'47.25"	2014-16	10 x 1.3 x 1.5 7 x 2 x 1.5 8 x 1.3 x 1.2 10 x 1.3 x 1.25 10 x 1.25 x 1.25 10 x 1.3 x 1.25 8 x -1.3 x 1.25 7 x 1 x 1 7 x 1 x 1 7 x 1 x 1	Inspected Ten(10) gullies at Matnai. They displayed minimal damage. Floods have weakened them and needs strengthening and maintenance.
Chettipally	N10°07 26.60" E76°42 18.68"	2014-16	12 x 2 x 3 10 x 1.5 x 2 10 x 2 x 3 12 x 3 x 4.5 5 x 1.2 x 1 6 x 1.5 x 1.3 12 x 1.5 x 1	Inspected six(6) gullies at Chettipally. They displayed minimal damage which the staff mentioned was due to washing away in floods.

Sites	GPS Location	Year of Construction/ Maintenance	Dimensions (m)	Remarks
Anjilithandu	N09°49'03.09" E76°57'25.5"	2014-16	8 x 1.5 x 1.5 7 x 1.5 x 1.3 7 x 1.3 x 1.5	Inspected three(3) gullies at Anjilithandu. Although they are intact, they have been weakened due to floods.

The specifications of the gullies were checked by verifying the old vouchers and the estimates.

Gully Plugging at Idukki WLS

9. Training to protective staff

Training was provided during the period to protective staff of all four divisions. Expenditure vouchers were verified.

This circle undertook the highest number of activities during the period 2014-2016. The circle implemented most activities listed in the APO. Spillovers of earlier years were also taken up during this period. Overall, an amount of Rs. 50.75 lakhs was allotted to the circle during the period of which 98.4 percent financial achievement was observed.

Observations of the evaluation team

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low,≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully Plugging/ Idukki WL/ Idukki WLS/ Idukki/ Kizhukkanam, Kathithappan kettuchira, Vagavanam, Vanmavu, Kallekkulam area,Vettilapara, Matnai, Chettipally, Anjilithandu.	The gullies were constructed in 2014-16. They have weakened due to floods. Water retention is poor.	The gully needs to be strengthened. Presently it is able to deliver 75 % of the envisaged impacts	6	Medium

Agasthyavanam biological park circle, Thiruvananthapuram (2014-2016)

The evaluation covered both Shendurney and Thiruvananthapuram Wildlife Divisions of the circle. Six different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activities	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Shendurney, Thiruvananthapuram
2.	Construction, cleaning, desiltation of pond	Shendurney
3.	Eradication of exotic weeds	Shendurney
4.	Improving connectivity	Shendurney
5.	Purchase of equipment	Shendurney, Thiruvananthapuram
6.	Training to protective staff	Shendurney, Thiruvananthapuram

Due to paucity of funds in the period 2014-2016, the activities were carried out during 2017-2018

Social forestry, central circle, Eranakulam (2014-2016)

Though the APO listed eight activities for the period, only two were undertaken. They include the Fire Awareness Campaign in Idukki, Ernakulam, Thrissur and Palakkadand training to protect staff. Microchip Reader for captive elephant management in Social Forestry Division, Ernakulam, was procured. The evaluation team verified all the related documents, such as expenditure vouchers and photographs.

Social forestry, southern circle, Kollam (2014-2016)

Though Fire Awareness Campaign was envisaged in Malappuram, Kozhikode, Wayanad, Kannur and Kasaragode, funds were received only in 2017-2018; hence, no activity was carried out during the evaluation period.

Social forestry, northern circle, Kozhikode (2014-2016)

During the years 2014-2015 and 2015-2016, under CAMPA, several activities had been conducted such as fire awareness rally (walk, cycle, bike etc., camps, plantations, plastic waste management etc., in different districts (Kasaragode, Kannur Wayanad, Kozhikode and Malappuram) of Northern Kerala.The evaluation team verified all the related documents such as expenditure vouchers and photographs and observed 88.7 % financial achievement.

Forest headquarters, Thiruvananthapuram (2014-16)

At the Forest Headquarters, the interests generated from the funds of the CAMPA account were utilised for secretarial assistance at the office of the nodal officer to support works related to monitoring and evaluating the implementation of APOs. Under the Net Present Value (NPV) of the forest land fund, sixteen 4-wheel-drive vehicles were purchased, for field officers / Rangers/Forest Stations, well within the budget. The allotment orders, purchase orders, bank statements, utilisation certificates, cheque issue register and bills were verified and found correct. The Headquarters also allocated funds to purchase customised vehicle for crisis management for rapid response teams to all districts.The fund allotted was fully utilised for the activities mentioned above.

4. Recommendations and suggestions

The proposed evaluation had multiple objectives. *Inter alia*, this evaluation examined the impact of various activities in terms of increase in vegetation spread, soil and water conservation measures , infrastructure development, capacity building and the extent to which the objectives of CAMPA were achieved. The qualitative data were used to support further analysis of variations across regions and categories. The following are the recommendations and suggestions arising out of this present monitoring and evaluation of CAMPA activities in Kerala

(a) The success rate of the plantations was high overall and species-wise survival rates with progressing age across the regions revealed suitability of certain species over others. Some of the species though were slow growing, had established well despite minimal or no maintenance. These species could be used in future planting programmes, subject to the fact that the species selected could be matching with floristic composition of the respective forest types. A striking feature was the involvement of the local communities in the selection of the species, especially in the fringe areas, followed by planting and watch and ward. In most cases, gap planting has been taken up, with contour trenches established in the sites. This has facilitated natural regeneration of many species. In some sites, very poor establishment was observed. The major reasons include (i) heavy infestation of the invasives which prevented establishment of the planted saplings (ii) trampling of saplings by wild animals such as elephants, bear, wild boar and deer. Regular maintenance enables better establishment. A provision of watch and ward

provision for 4 to 5 years, excluding the plantation year would ensure good survival rates and better stocking in afforested sites.

(b) Composition of species was observed to differ between divisions and within sites in a division too. The number of species selected for planting in each site was also low. Though efforts have been taken to match the species with sites, a larger native species mix would improve success rates, and enable better planning for future plantings. Proper assessment of soil quality and climate conditions, would be very helpful for establishment of the saplings. All planting sites require at least 5 years of maintenance. This investment must be done to ensure success of the plantations. In areas of high biotic interference, 8 years of maintenance is desirable.

(c) Regional and state level workshops could be organized for prioritation of species for afforestation / enrichment planting in the forest areas by involving local communities, field staff of SFDs, forestry research institutions, NGOs and other stakeholders.

(d) Technical support can be obtained from forestry research institutions for transferring/developing seed handling techniques and nursery technologies for indigenous species prioritized for afforestation / enrichment planting.

(e) In remote locations and in locations with high damages to the planted seedlings by wild animals, manual seeding of indigenous species using "seed ball technologies" can be attempted.

(f) Maintenance costs should be linked to survival rates and strict guidelines should be framed regarding replanting in failed sites.

(g) Protection measures were not effective in many places. It is essential to provide maintenance provisions for five years so that the purpose is well achieved.

(h) Fodder plantations should be prioritied in elephant corridors which would act as deterrents to their entry into human-habitation.

(I) Most SWC works carried out in the forest areas are effective. The SMC activities, in most places, have increased the vegetation, indicating the moisture retention impacts. However, certain SWC structures are very crucial as they connect different ranges within a division. Such chappaths deserve special attention. Due to frequent flooding, heavy wear and tear is observed in most chappaths. The depth and width of rivers has increased in many sections. Such chappaths need to be replaced with concrete structures with the support of the PWD. Some of the water-holding structures are old, and not capable of holding water to the designed potential. Such structures may be abandoned.

(j) Anti-Poaching Camps (APC) have been established throughout the state in almost all divisions. The APCs are sufficienfly equipped with staff and modern equipment for protection activities. There is a need to regularly support the staff with protective gears and field survival kits.

(k) GIS-based forest survey monitoring has been attempted in the state. The staff report that this has helped prevent, contain and douse forest fires in many places. All staff have to be provided basic training in the use of advanced methods of monitoring for protection. The procedures of fire management / fire protection can be extended to the forest fringe area inhabitants in addition to school/ college students.

(l) Provisions need to be made in the budget for procuring more field vehicles, as a dearth in availability of these was observed.

(m) In almost all divisions, the maintenance of buildings, roads, SMCs are taken up regulalry. A fixed cycle could be adopted for maintenance and repair of civil works, rather than taking a routine annual maintenance.

(n) A decentralised allotment to the social forestry wings may be considered, to meet the local needs for each division.

(o) Encourage more research on development of artificial breeding or incubation units for sea turtles. In addition to census, research on habitat, feeding, breeding and migratory patterns will help in the management of key stone faunal species. It will also help the managers in identifying appropriate conservation related works.

(p) Incentives to temporary staff associated with the department's activities may be provided for more than ten years.

(q) Digitisation of records would enable easy access to information.

(r) Internal evaluation needs to be strengthened and a database must be established to monitor the changes. This would enable regular assessment of seasonal works like protection camps, fire protection works etc. Further, this report should also be made available during third party monitoring and evaluation.

(s) Timely fund release is viewed to be more helpful for executing the plantation activities in the respective APO execution years.

(t) Permanent structures created should be acknowledged through suitable markings to ensure proper visibility of CAMPA-funded activities.

Annexure I

Minutes of meeting

Third Party Evaluation of State CAMPA Activities in Kerala

23rd November 2021

Venue: VC Hall, IFGTB

Participants:

IFGTB	Kerala Forest Department
Dr. C. Kunhikannan, Director IFGTB	Shri. Rajeesh Ravindran IFS, CEO
Dr. R. Yasodha, Scientist G & GCR	CAMPA & APCCF
Dr. JP Jacob, Scientist G – *on leave*	Ms P. T. Sreelekha, ACF, SA&NO,
Shri. Rajesh Gopalan IFS - *online*	CAMPA
Dr. C. Buvaneswaran, Scientist F	
Dr. Kannan CS Warrier, Scientist F	
Dr. A. Karthikeyan, Scientist F	
Dr. D.R.S. Sekar, Scientist F – *not attended*	
Dr. Rekha R Warrier, Scientist F	
Dr. S. Saravanan, Scientist F	
Dr. A. Rajasekaran, Scientist F	

An online meeting was held on 23rd November 2021 at 10.00 am to discuss the modalities of third party evaluation of CAMPA-related works undertaken in Kerala by Kerala Forest Department.

Under CAMPA, various activities have been taken up to accelerate preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works.

Shri Rajesh Ravindran, CEO-CAMPA listed the different circles where CAMPA activities have been taken up. He sought evaluation of different protection activities, labour deployed for watch and ward, fire protection, and site suitability, especially regarding

ecorestoration of monoculture plantations, the species planted and their performance, etc.

Dr. S. Saravanan, Scientist F, presented the need for third-party evaluation to assess the various activities taken under State CAMPA. He elaborated on the requirements of the National CAMPA Authority concerning the monitoring while carrying out the evaluation.He also detailed the methodology for the evaluation process and the extent of sampling for the different activities taken under CAMPA based on the guidelines provided by the IIFM, Bhopal with necessary modifications. He also informed that IFGTB has experience working towards the evaluation of NAP of the NAEB in Kerala and providing consultancies to various industries. A team has been formed for the execution of the work.

This was followed by a discussion on the modalities for execution of the evaluation. The following points emerged.

1. An MoU would be signed between the Kerala Forest Department and IFGTB towards the activity. IFGTB would complete the evaluation within a period of six months from the date of release of funds.
2. State CAMPA would provide information, plantation journals, maps, measurement books, and all relevant records pertaining to the CAMPA works from 2009 to the present. Co-ordination in the state, local travel, lodging, and field support of personnel would also be provided by the Department.
3. The Department looks forward to APO-wise reports. Thus, six reports are envisaged at the end of the evaluation.
4. The sampling intensity was agreed upon.
5. A proposal including financial requirements and draft MoU would be sent to the CEO-CAMPA for perusal.
6. The CEO-CAMPA would visit IFGTB during the last week of November, 2021 for a detailed discussion and finalising the proposal.

Annexure II

Timelines of the Evaluation

Milestone	Activity
September 2021	Identification of ICFRE - IFGTB for third party monitoring
November 2021	Finalisation of activities under the third party monitoring
January 2022	Acceptance of project proposal of ICFRE - IFGTB for monitoring & evaluation of CAMPA activities in Kerala. Approval of the MoU.
March 2022	Signing of the MoU and release of the first instalment
April to June 2022	Field works
July to September 2022	Report preparation
September 2022	Release of the second instalment
October 2022	Submission of final report

Annexure III

APO-wise components implemented in various Circles

Component	Circle
Assistance to tribal Vana Samrakshana Samidi	Agasthyavanam biological park circle, Thiruvananthapuram Central circle, Thrissur Eastern circle, Palakkad Field director project tiger, Kottayam High range circle, Kottayam Northern circle, Kannur Social forestry, central circle, Eranakulam Southern circle, Kollam Wildlife circle, Palakkad
Awareness programme	Central circle, Thrissur Northern circle, Kannur Southern circle, Kollam Wildlife circle, Palakkad
Better connectivity includes culverts/foot bridges, roads Compensatory Afforestation Works	Wildlife circle, Palakkad Central circle, Thrissur High range circle, Kottayam Northern circle, Kannur Southern circle, Kollam
Conducting Nature Camps	Field director project tiger, Kottayam Northern circle, Kannur Southern circle, Kollam Wildlife circle, Palakkad

Component	Circle
Construction, cleaning, Desiltation of Pond	Agasthyavanam biological park circle, Thiruvananthapuram Field director project tiger, Kottayam High range circle, Kottayam Northern circle, Kannur Social forestry, central circle, Eranakulam
Eradication of Exotic weeds	Agasthyavanam biological park circle, Thiruvananthapuram Central circle, Thrissur Field director project tiger, Kottayam Wildlife circle, Palakkad
Fire Awareness Campaign	Social forestry, central circle, Eranakulam Social Forestry, Northern Circle, Kozhikode Social Forestry, Southern Circle, Kollam
Fire Watch Stations	High range circle, Kottayam
Interior Camp Sheds	Eastern circle, Palakkad Field director project tiger, Kottayam Wildlife circle, Palakkad
Light System as in fire force (Tower Lights)	Wildlife circle, Palakkad
Maintenance of checkdams and desilting	Wildlife circle, Palakkad
Mtce of Patrolling Routes / Trek Paths	Agasthyavanam biological park circle, Thiruvananthapuram Eastern circle, Palakkad Field director project tiger, Kottayam High range circle, Kottayam Wildlife circle, Palakkad
Providing Vehicle	Forests headquarters, Thiruvananthapuram
Purchase of Equipment	Agasthyavanam biological park circle, Thiruvananthapuram Eastern circle, Palakkad Field director project tiger, Kottayam High range circle, Kottayam Social Forestry, Northern Circle, Kozhikode Social forestry, central circle, Eranakulam Southern circle, Kollam Wildlife circle, Palakkad
Purchase of Microchip Reader for captive elephant management	Social forestry, central circle, Eranakulam

Component	Circle
River Bank Stabilization/Protection	Southern circle, Kollam
Soil and moisture conservation	Field director project tiger, Kottayam High range circle, Kottayam Social Forestry, Northern Circle, Kozhikode Social forestry, central circle, Eranakulam Southern circle, Kollam Wildlife circle, Palakkad
Training to protective staff	Agasthyavanam biological park circle, Thiruvananthapuram Central circle, Thrissur Eastern circle, Palakkad Field director project tiger, Kottayam High range circle, Kottayam Social Forestry, Northern Circle, Kozhikode Social forestry, central circle, Eranakulam Southern circle, Kollam Wildlife circle, Palakkad
Turtle Conservation & Monitoring	Social forestry, central circle, Eranakulam

Annexure IV

Monitoring and evaluation teams

Teams Region	1 Southern Circle, Kollam (1)	2 Southern Circle, Kollam (2)	3 High Range Circle, Kottayam (1)	4 High Range Circle, Kottayam (2)	5 FD PT, Kottayam (1)
Team Co-ordinators (Dr/Mr/Ms)	C. Buvaneswaran	Rekha R Warrier	Kannan CS Warrier	K. Murali Shankar	S. Saravanan
Team Leaders (Dr/Mr/Ms)	A. Balasubra-manian	R. Sumathi	K. Gireesan	A. Mayavel	S.P. Subramani
Member	N. Sivadasan	L.Vivek	K. Sureshkumar	J. Soosairaj	K. Senthil
Member	V. Mareeswaran	S. Sudha	K. Gopalakrishnan	P. Vignesh	M. Suryaprakash
Member	S.S. Abijith	R.G. Anitha	T. Pradeep	K.R. Shankar	R.Ariharasuthan
Member			C. Muthumanikam	M. Vishnu	M. Mahalingam
Team Co-ordinator (KFD)	Fen Antony, ACF	Fen Antony, ACF	KS Subash, ACF	Subash, ACF	Sandeep.S, ACF

Teams Region	6 FD PT, Kottayam (2)	7 Agasthyavanam biological park circle	8 Social Forestry, Southern Region, Kollam	9 Central Circle, Thrissur	10 Social Forestry, Central Region, Thrissur
Team Co-ordinators (Dr/Mr/Ms)	N.V. Mathish	A. Rajasekaran	A.C. Surya Prabha	D. Raja Suguna Sekar	J. Sriram
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Member	K. Senthil	P. Manoharan	J. Soosairaj	P. Malliga	R. Abinaya
Member	M. Suryaprakash	L. Mahalingam	P. Vignesh	S. Pragadeesh	C.V. Vijayam
Member	R.Ariharasuthan	S. Selvakumar	K.R. Shankar	R. Kalaiselvi	R. Sathishkumar
Member	M. Mahalingam	N. Vijayanand	M. Vishnu	C. Thamotharan	Rudranath, V.R.
Team Co-ordinator (KFD)	Sandeep.S, ACF	Ajith.N , ACF	Rohini. GR, ACF	V.P. Jayaprakash, ACF	Chinnu Janardhanan, ACF

Teams Region	11 Social Forestry, Northern Region, Kannur	12 Northern Circle, Kannur	13 Eastern Circle, Palakkad	14 Wildlife Circle, Palakkad	15 Research Division N and S, & Head quarters
Team Co-ordinators (Dr/Mr/Ms)	Madhavraj G. R	A. Karthikeyan	Rekha R Warrier	Rekha R Warrier	JP Jacob
Team Leaders (Dr/Mr/Ms)	K.N. Ashirth	R. Archana	S.Lalitha	A. Shanthi	K. Shanthi & Muhammad Ali Noushad
Member	Srijita Ganguly	C. Rajesh	M. Ganesan	R. Velumani	M.V.Vineetha
Member	M. Jeyakumar	S.M. Paulraj	N. Sudha	A. Sathish	P. Vipin
Member	V. Abirami	Remya T Radhan	Mishra Avinash	K. Rajasekaran	C. Kandasamy
Member	C.K. Suresh	M. Manikandan	S. Ajay		T. Govindaraj
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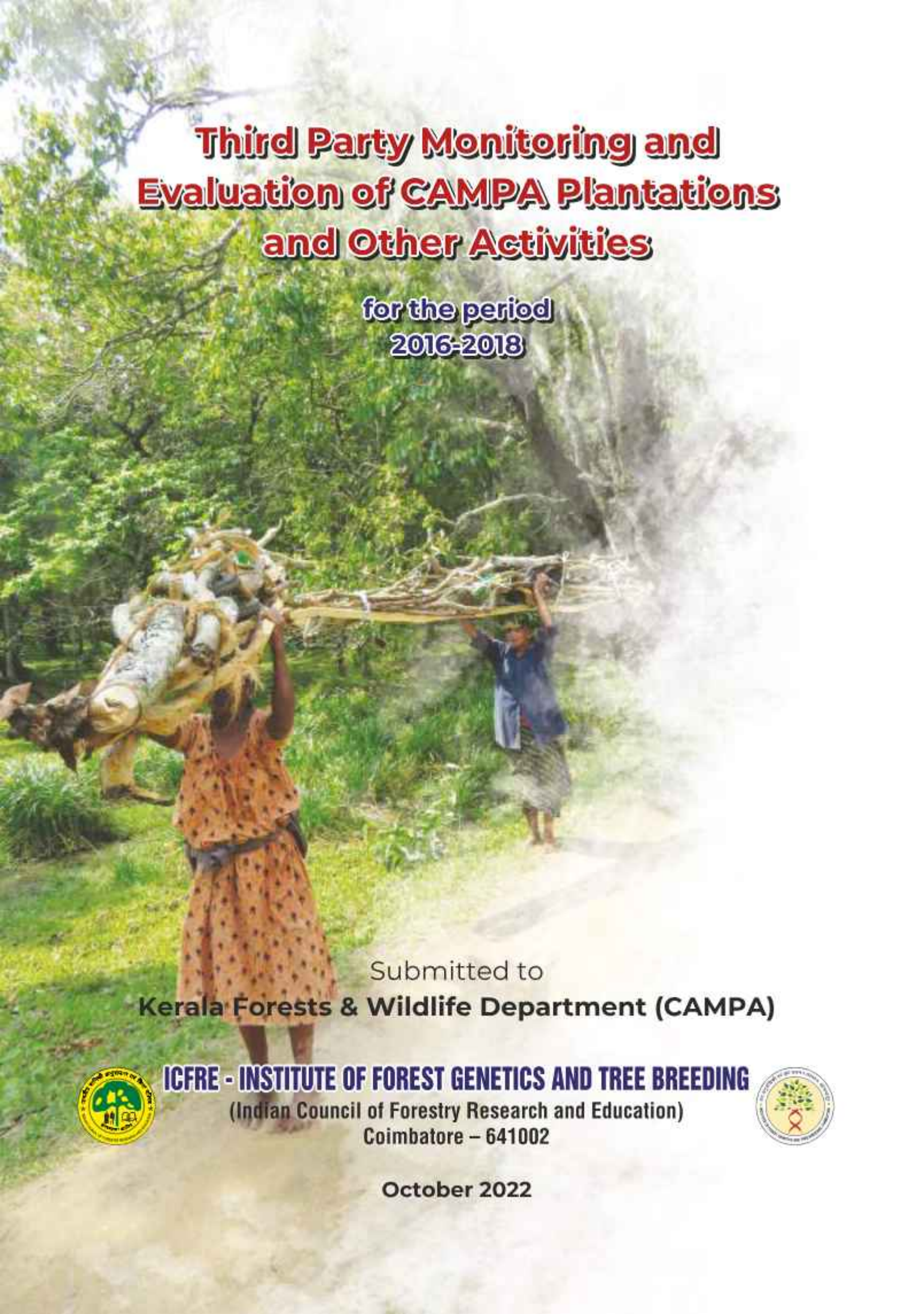

Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

for the period
2016-2018

Submitted to

Kerala Forests & Wildlife Department (CAMPA)

ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
(Indian Council of Forestry Research and Education)
Coimbatore – 641002

October 2022

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October 2022

वन आनुवंशिकी एवं वृक्ष प्रजनन संस्थान
ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्
Indian Council of Forestry Research & Education
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
Ministry of Environment, Forest & Climate Change
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डॉ. सि. कुञ्जिकण्णन
निदेशक
Dr. C. Kunhikannan
Director

Preface

The State of Kerala established the Compensatory Afforestation Management and Planning Authority (CAMPA) Scheme in 2009 to encourage afforestation, reforestation, and restoration/regeneration activities to compensate for forest land diverted for non-forest purposes and to enhance the state's forest cover. The Kerala Forests & Wildlife Department prepared the Annual Plan of Operations (APO) for the years 2016-2017 & 2017-2018, which the MoEFCC, GoI approved. As per the APOs, the state planned various activities, including compensatory afforestation, soil and moisture conservation, biodiversity conservation, awareness campaigns on forests, wildlife and the environment, eradication of invasive alien weeds, river bank stabilisation, protection of research plots and seed production areas, creation of fire breaks and other essential maintenance activities towards forest conservation. All these activities were spread across the forest divisions of the state, including wildlife sanctuaries. The success and sustainability of these CAMPA activities, including structures established and plantations raised in terms of planning, implementation, the quantity of inputs, condition of health and survival, and outcomes, need to be evaluated and documented for monitoring purposes by an independent agency. Accordingly, ICFRE-IFGTB, Coimbatore, was awarded the monitoring and evaluation of CAMPA activities undertaken. A team of IFGTB staff, including forest officers, scientists and technical personnel, have been involved in the work since March 2022. The sampling methodology approved by MoEFCC was broadly followed, and a detailed survey, monitoring and evaluation exercises were conducted to represent all the forest circles and plantation models adopted in a given year. Overall the CAMPA activities supported the forests and contributed to enhancing forest health in Kerala. I would like to acknowledge the Kerala Forests & Wildlife Department for their support and assistance in bringing out this document in a comprehensive manner.

(C. Kunhikannan)

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Acknowledgements

We acknowledge the Kerala Forests & Wildlife Department for identifying ICFRE-IFGTB, Coimbatore, to evaluate the CAMPA activities carried out from 2016 to 2018. We sincerely thank the PCCF & Head of Forest Force for facilitating this special assignment. We would like to express our gratitude to Shri. Rajesh Ravindran IFS, APCCF & Chief Executive Officer, CAMPA, Kerala, who facilitated the evaluation work and extended valuable guidance in finalizing the formats for assessment of different CAMPA activities in the state. We would like to express our sincere thanks to all the Divisional Forest Officers, Range Forest Officers, Frontline Field Staff and Vana Samrakshana Samidi members for their assistance in providing the assessment teams with the essential logistics and information during the on-site evaluation.

ICFRE - IFGTB

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FACT SHEET

S. No.	Item	Details
1.	Scope of evaluation	Third-party monitoring and evaluation of the CAMPA Activities of Kerala Forests and Wildlife Department (2016-18)
2.	Period of evaluation work	Signing of MoU – March 2022 Field works – April to June 2022 Report preparation – July to September 2022
3.	Focus	Quality of conservation and development works. Assessment of compensatory afforestation activities. Public awareness campaigns.
4.	Number of evaluation teams	15 Evaluation Teams and one editorial team.
5.	Objectives	• To evaluate different plantations established under CAMPA in different forest divisions of Kerala. • To evaluate the civil structures (buildings and soil & water conservation structures) established under CAMPA in different forest divisions of Kerala. • To suggest for improvement in quality of plantations for future.
6.	Area covered 25 territorial forest divisions.	14 social forestry divisions. 11 wildlife divisions.
7.	Sample size	**Plantation:** 20% plantation randomly selected from various divisions. Sampling intensity for evaluation is nearly 10% for block plantations. For every hectare (ha) of plantation, the evaluation to be done on a 30 x 30 m plot. In the case of a linear plantation, evaluation of every 10th tree/planted sapling of each row for 25% of its length per running km basis. **Soil and Moisture Conservation (SMC) activities:** 20% of SMC works evaluated in each division based on random selection from measurement book (Mbook). **Eradication of weeds:** Density assessment and plot transects. **Forest protection:** 10% of all fire lines evaluated in each division.
8.	Findings	• The quality of departmental works was mostly high (82%) • Check-dams and gullies are the major SMC works taken up. • The involvement of the VSS in various department activities has ensured a participatory approach to the protection and conservation of forests. • The activities undertaken were minimal due to delayed release of funds.

EXECUTIVE SUMMARY

The Forest (Conservation) Act, 1980 was enforced to conserve and protect forest resources. The Act mandated that whenever forest land is diverted for non-forestry purposes usually the conditions relating to transfer, mutation and declaration as Reserve Forest/Protected Forest, the equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation etc., are to be imposed. Additional conditions such as maintaining a safety zone area, fencing and regeneration etc. are prescribed for mining purposes, and catchment area treatment plans are stipulated for big and medium irrigation projects. Further, the Act provided that the non-forest land for Compensatory Afforestation (CA) was to be identified contiguous to or close to Reserved Forest or Protected Forest. The funds for CA are received from the user agencies based on the rates fixed by the State Forest Department, which are site-specific and vary according to the species, type of forest and site. The fund received for compensatory afforestation, additional compensatory afforestation etc., has to be used as per site-specific schemes submitted by the state along with the approved proposals for diversion of forest land. After receipt of the fund, State Forest Department has to accomplish the afforestation for which money is deposited in the CA fund within a period of one year or two growing seasons.

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Kerala has been constituted with the objective of conservation, protection, regeneration and management of existing natural forests, wildlife and their habitat and raising site specific compensatory afforestation, penal compensatory afforestation etc. As per the provisions of CAMPA guidelines, the state CAMPA has been formulating Annual Plans of Operation (APO) since 2009-10. The APO for the period 2016-17 to 2017-18 were approved vide No. 15-2(18)/2017-CAMPA dated 18.12.2017.

The Government of India released **Rs. 6,22,25,000** for the period 2016 to 2018 to Kerala to implement CAMPA Activities.

The Assignment

As a range of activities were taken up under CAMPA, a technical evaluation of the activities by a third party was considered essential. ICFRE- IFGTB was identified to carry out third party monitoring of all the CAMPA interventions since 2009-10 (File No. FC5 -1433/2021 dated 28.01.2022). The broad scope of evaluation comprised all the components and sub-components of CAMPA implementation in Kerala.

Study Area

The evaluation study covered 50 forest divisions of Kerala (25 territorial, 14 social forestry and 11 wildlife divisions) under 11 forest circles. In addition, research divisions where CAMPA funds were utilised are also covered in the study.

Study Approach and Methodology

Various CAMPA interventions were evaluated using appropriate sampling criteria, data collection approaches and, in view of diversity, nature of component and stakeholders involved. The study approach and methodology have been adopted from the evaluation formats of the MoEFCC, GoI.

Details of Data Collection

- Primary Data: First hand information was obtained using specifically designed formats for different components and subcomponents.
- Secondary Data: Secondary data relating to various activities undertaken in CAMPA were collected from the circle, division and range offices in pre-designed formats and checklists.
- Focussed Group Discussion (FGD): FGDs with the members of the Vana Samrakshana Samidi were conducted to evaluate peoples' perceptions and participation levels in implementing CAMPA activities in a given locality.
- Consultation with Forest Officials: Consultations were undertaken with a range of forest officers involved at various stages such as planning and decision making, implementation, monitoring and evaluation. This included Divisional Forest Officers (DFOs), Forest Range Officers (FROs), Forest Beat Officers (FBOs), Foresters, Forest Guards, etc.
- Field Observation: Data on survival, field measurements to assess growth in different plantations, condition of physical structures in SMC activities and weed density in plantation sites were collected. Notes were prepared on various activities under CAMPA implementation, which provided the basis for the entire evaluation process.

Performance of CAMPA during the period 2016to 2018

- The total funds received from the adhoc CAMPA up to APO year 2016-18 stands at Rs. 6.22 crores and the expenditure ending March 2018 was 3.92 crores which is 63.02% of the funds received.
- The core activities undertaken with the CAMPA funds comprise creation of SMC structures, forest protection and assistance to tribal Vana Samrakshana Samidi.
- The non-core activities comprised biodiversity conservation, infrastructure development, forest Information Technology, monitoring, evaluation and accounting.
- This period focussed more on soil and moisture conservation activities, assistance to tribal Vana Samrakshana Samidi and improving connectivity (50%). The VSS members were engaged in almost all the activities.
- Various SMC structures in CAMPA APOs includes check dams, contour trenches, gully plugging etc. SMC structures undertaken by frontline forest officers under CAMPA are site-specific as per the site requirement.
- Preparatory works for ecorestoration were taken up. Most activities were done departmentally, economically and in time-saving approach.
- Eradication of weeds were taken up in five divisions while river stabilisation was taken up by three divisions. This is an improvement over the earlier APOs.
- Inclusion of Vana Samrakshana Samidi members in patrolling, fire break creation, developing infrastructure in interior forest areas, has encouraged their active participation in conservation activities.

- Training and capacity development programmes did not receive much attention during this period.
- Under infrastructure development, efforts were taken to repair / improve dilapidated structures. The major construction activities undertaken with the help of CAMPA funds were antipoaching campsheds.

Recommendations & Suggestions

1. Maintenance and watch and ward may be continued for 4 to 5 years for better establishment.
2. Number of watchers should be increased proportionate to the size of the plantation site.
3. There should be a provision in CAMPA APOs for the periodic maintenance of SMC structures as most SMC structures are subject to heavy wear and tear due to recurrent floods.
4. Buildings / structures constructed during this period needs to be repaired and maintained. In some cases, renovation / refurbishing may also be done based on a fixed schedule.
5. The frontline staff may be trained on seed handling and nursery technologies of native tree species.

Monitoring and Evaluation of CAMPA Plantations and Other Activities (2016-2018)

1. Introduction

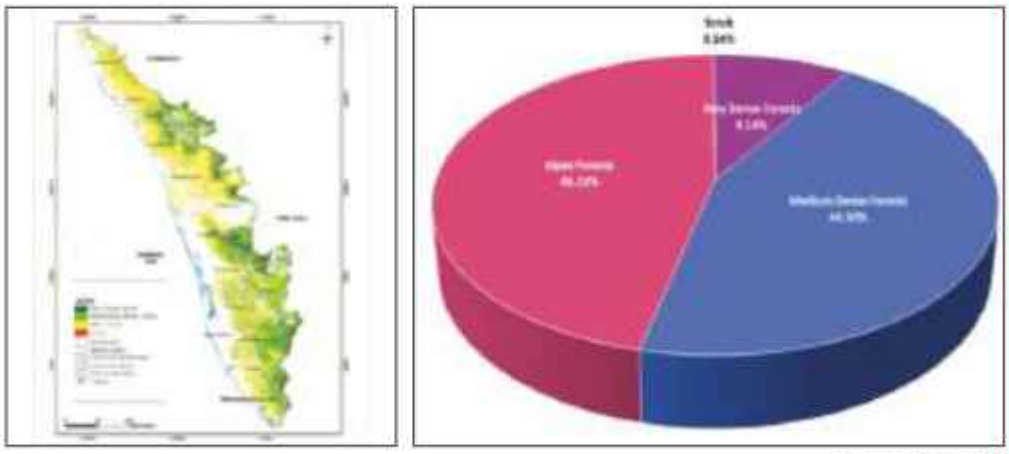
1.1 Background

Forests in India comprise diverse forest types and reserved areas accounting for about 24.62% of the country's geographical area. Forest provides livelihood support to the people living in and neighborhood. Forests are the most significant natural carbon sinks and regulate water regimes. Given that the forest sector provides goods and services to humankind, forest land is diverted for developmental activities for non-forestry purposes, consequently leading to considerable shrinkage of forest cover.

Kerala is endowed with rich natural resources. The conducive tropical climate favours forests with rich biodiversity and endemism. The Western Ghats, one of the biodiversity hotspots, runs all along the eastern boundary of Kerala. Unfortunately, the increasing population and changing lifestyles exert tremendous pressure on forests. The greatest challenge today is to accommodate developmental needs by minimizing the destruction of its pristine forests.

1.2 Forest Cover in Kerala

The forest cover in the state based on the interpretation of the Forest Survey of India (FSI) 2021 is 21,253.49 sq km which is 54.7% of the state's geographical area.



Source: *ISFR, 2021*

Forest cover in the State has increased by 109 sq km compared to the previous assessment reported in ISFR 2019.

Among forest canopy density classes, the state has 1944.32 sq km area under very dense forest, 9472 sq km area under moderately dense forest and 9837.17 sq km area under open forest.

1.3 Forest Cover in Kerala From 2015 To 2019

Forest cover in the state has been increasing over the years. Forest conservation and afforestation activities are the key reasons for the improvement.

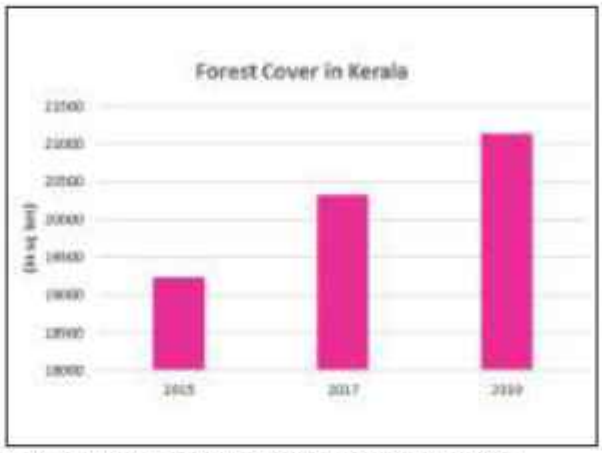
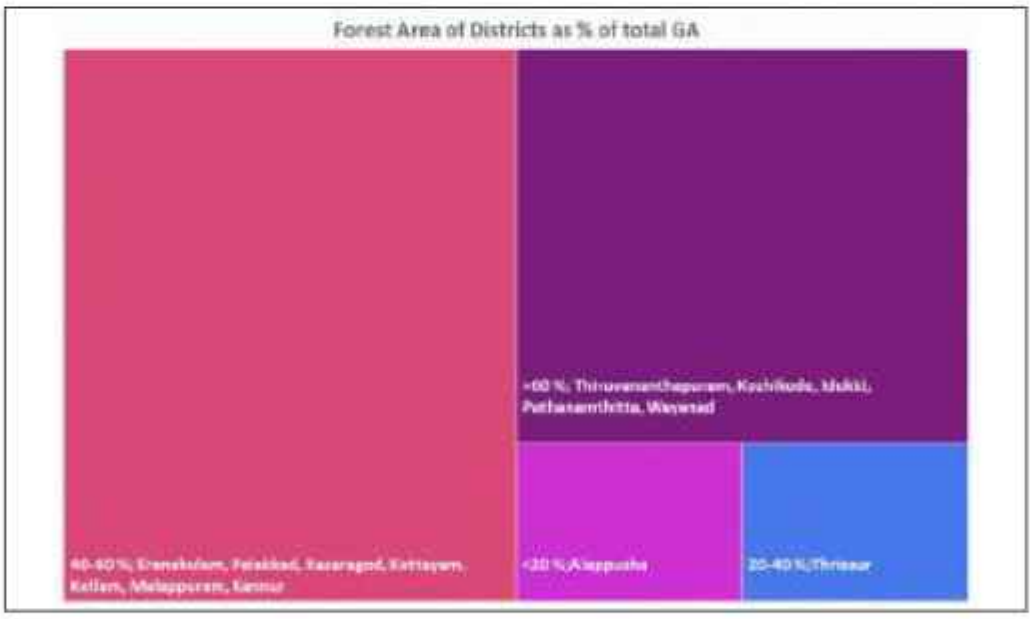


Figure 1.1Forest Cover in Kerala From 2015 To 2019

1.4 District-wise Forest Coverage in Kerala

The tree map at Fig 1.2 provides the distribution across districts.



Comparing district-wise area cover in Kerala, Idukki has the largest forest cover (3155 sq km) in the state, followed by Palakkad (2104 sq km), Malappuram (1984 sq km), Pathanamthitta (1949 sq km) and Kannur (1669 sq km). In terms of percentage of forest cover concerning the total geographical area, Wayanad with 74.2 % has the highest forest cover, followed by Pathanamthitta (73.49%), Idukki (72.44%), Kozhikode (61.74%) and Thiruvananthapuram (60.17%). Data reveals an increase in forest cover by 109 sq km in 2021 compared to 2019 (Kerala ENVIS, 2022).

Nearly 60 lakh ha of forest is degraded with less than 40% canopy density. This is the target area for the afforestation programmes. Forest plantations extend over 1.56 lakh ha, teak being the major species, covering almost 50% of the total plantation area, followed

by mixed plantations and eucalypts. The natural forests, plantations and homestead gardens contribute to the state's green cover, and all these are required in forest management.

2. Project profile

Compensatory afforestation programmes in the state were initiated in 1993, and plantations were maintained until 2002-03. The Government of India notified the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in April, 2004. The State CAMPA receives funds collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980. Kerala state CAMPA was constituted in November 2009.

The Kerala Forests & Wildlife Department (KFD) has been receiving funds since 2009 from CAMPA, MoEFCC, GoI for various developmental activities such as afforestation programs, soil and moisture conservation works, capacity building for staff and local communities, the establishment of civil structures, etc., in various forest divisions of Kerala. The funds were spent for compensatory afforestation, biodiversity conservation, soil and moisture conservation, etc. The Chief Executive Officer, CAMPA, Kerala, is responsible for preparing the schemes, Annual Plan of Operations (APO) for CAMPA, and getting it approved by the Executive Committee, Steering Committee and the Government of India, followed by implementation of the approved APO. After receiving the fund allotment under State CAMPA, the implementing officers, the DFOs execute the assigned activities as per the APO. Under each major heads, there are different subheads available, which vary according to site conditions and needs.

The total cost of CAMPA activities from 2016 to 2018 is Rs. 6.22 crores. The details of the Divisions, and the number of activities against different years are in Annexure-III.

3. Methodology

Physical Verification of Activities

I. Plantation - Methodology

- 10% plantation randomly selected from various divisions.
- Sampling intensity for evaluation - 10% for block plantations.
- For every hectare of the plantation, the evaluation was done on a 30 x 30 m plot.
- Each plot was marked on a map of the plantation area, and GPS co-ordinates of all such (30 x 30 m) plots were collected.
- In case of linear plantation, every 10th tree/planted sapling of each row was evaluated for 25% of its length per running km basis (5 intermittent line transects – each for 5% of length per running km).
- The evaluation was done on 0.1 ha by laying a 30 x 30 m plot based on random sampling.

II. Soil and water conservation measures

(a) The teams obtained the norms and expenditure of SMC activities taken up in the plantation site from the respective offices.

(b) The teams assessed the quantity/ present condition/ treatment plans of the different SMC works. 20% sampling was carried out.

(c) For civil works, 50% M & E was carried out, based on random selection from M-Books from various divisions.

III. Eradication of weeds

Density assessment - plot counts

- Three or more plots (quadrats) of size 10 x 10m (located randomly over the site) were marked, and the number of plants within the plots was counted.
- To get the actual number per ha, multiplied the average number of plants in the plots by 100.

Plot transects

- Marked out 100m transects, keeping them parallel to one another (10m-50m apart). Using a 2 x 2 m plot frame (using a rope) plots were placed at intervals along the transect.
- The number of plants within the plot was counted. The values were converted to density measure by averaging the number of plants in each of the plots (i.e. individuals per ha)

IV. Forest protection

- 10% of all firelines were evaluated in each division based on random selection from M-Books from various divisions.

V. Qualitative Aspects

Focused group discussion: FGD was conducted for 10% of the villages in which CAMPA works were undertaken with at least 15 villagers in a commonplace within the village. The group comprised office bearers of Joint Forest Management Committee, Below Poverty Line households and village residents.

Ranking of individual projects

The criterion below was used to evaluate the project needs since the site parameters, species and inputs provided vary from site to site.

Site suitability	High	Medium	Low
Suitable area with favourable site condition rainfall, soil, etc.	7 to 10	>3 to<7	⩽3
Medium quality forest sites	>5	2-5	⩽2
Poor forest sites	> 4	2-4	⩽2

Criteria for classifying a site into suitable site, medium site and poor site

(a) **Suitable site:** soil depth more than 61 cm, rainfall range between 1270 to 3810 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(b) **Medium site:** Soil depth ranges between 30.4 cm to 61 cm, rainfall ranges between 889 to 1270 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(c) **Poor site:** Soil depth less than 30.4 cm, rainfall less than 889 mm and excessive prevalence of mist and fog during monsoon, prevalence of adverse biotic factors and steep slopes.

This approach involved aggregating the percentage of readings falling into the three higher ratings (3-5) under the 'satisfactory' heading and the two lower ratings (1-2) under 'unsatisfactory'. The introduction of these two broad categories allowed better tracking of performance trends.

The ranking table is provided below

Score	Assessment	Category
5	Highly satisfactory	Satisfactory
4	Satisfactory	
3	Moderately satisfactory	
2	Unsatisfactory	Unsatisfactory
1	Highly Unsatisfactory	

Physical verification

Each of the selected plots was visited by the monitoring team and the following details were documented in the field.

- Plot location with GPS co-ordinates and area
- Plantation type and design (wherever available)
- Year of establishment
- Number of saplings planted initially (species wise)
- Height of the saplings while planting
- Number of plants surviving at the time of monitoring
- Average height of surviving plants
- Species composition and distribution
- Protection measures and maintenance
- Anthropogenic pressure, etc.

Parameters considered during M&E

- **For plantations**

a. Qualitative – site suitability (both climatic and edaphic factors), condition of the plantation, choice of species, etc.

b. Quantitative - Total seedling/tree height, collar girth/GBH, survival percentage, etc.

c. Other parameters – Management practices, biotic and abiotic factors, etc.

✦ **For civil constructions**

a. Verification (sketch and dimensions) based on the original documents and 'M-book'.

Deliverables and time schedule

Work plan submission	One week after signing the agreement
Field Data Collection	Two - three months
Draft report submission	One month after field data collection
Final report submission	Two months after draft report submission
Total Duration	6 months

4. Evaluation Details of the Circles and Divisions

The details of various circles and divisions evaluated are presented below.

	Circles	Divisions
Territorial Circles and Divisions	Northern Circle, Kannur.	Kannur, North Wayanad, South Wayanad and Kozhikode Forest Divisions
	Eastern Circle, Palakkad.	Nilambur North, Nilambur South, Mannarkkad, Palakkad and Nemmara Forest Divisions
	Central Circle, Thrissur.	Thrissur, Chalakkudy, Vazhachal and Malayattoor Forest Divisions
	High Range Circle, Kottayam.	Kothamangalam, Mankulam, Munnar, Marayoor and Kottayam Forest Divisions
	Southern Circle, Kollam	Ranni, Konni, Punalur, Thenmala, Achenkovil and Thiruvananthapuram Forest Divisions
Wildlife Circles and Divisions	Wildlife, Palakkad.	Aralam, Wayanad, Parambikulam, Peechi and Silent Valley National Park Wildlife Divisions.
	Field Director Project Tiger, Kottayam.	Munnar, Idukki, Periyar Tiger Reserve East & Periyar Tiger West Wildlife Divisions.
	Agasthyavanam Biological Park, Thiruvananthapuram.	Shendurney and Thiruvananthapuram Wildlife Divisions.
Social Forestry Circles and Divisions.	Social Forestry, Kozhikode.	Kasargode, Kannur, Wayanad, Kozhikode and Malappuram Social Forestry Divisions.
	Social Forestry, Ernakulam.	Palakkad, Thrissur, Ernakulam and Idukki Social Forestry Divisions.
	Social Forestry, Kollam.	Alappuzha, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram Social Forestry Divisions.

	Circles	Divisions
Research Circles & Research Divisions	Working Plan & Research	Kozhikode, Palakkad, Munnar, Punalur and Kollam Working Plan Divisions as well as Research Division, Thrissur Research Division

Northern circle, Kannur (2016 - 18)

The evaluation covered six forest divisions of the circle. They include

1. Kannur
2. Kozhikode
3. North Wayanad
4. South Wayanad

Seven different activities were undertaken in the circle. The distribution of activities is as follows

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Kannur, Wayanad
2.	Improving connectivity	Kozhikode
3.	CAW - Completion of central nursery work (Phase II)	Wayanad
4.	CAW - Preparatory work for setting up permanent nursery	Thiruvananthapuram, Pathanamthitta.
5.	Eradication of exotic weeds	Wayanad South
6.	River bank stabilization/ protection	Wayanad
7.	Soil and moisture conservation	Wayanad

In addition, activities envisaged during 2014 to 2016 were also taken up during this period.

1. Assistance to Tribal Vana Samrakshana Samidi

The activities envisaged in the reporting period were carried out in 2018-19. The spill overactivities of 2014-15 and 2015-16 were completed during the reporting period.

Sl.No	Location / Range / Division	Activity	Year of activity	Remark
1	Karakkunnu/ Pulppally FS Chedleth Range/ South Wayanad	Wheel track concrete near tribal colony	2017-18	Work carried over from APO 2014-15 &2015-16
2	Vettathoor/ Pulppally FS Chedleth Range/ South Wayanad	Wheel track concrete near tribal colony	2017-18	Work carried over from APO 2014-15 &2015-16
3	Vettathoor/ under Pulppally FS Chedleth Range/ South Wayanad	Wheel track concrete near tribal colony	2017-18	Work carried over from APO 2014-15 &2015-16
4	Karukanthode sandal area in Klapetta Range/ South Wayanad	Maintenance of Machans	2017-18	Work carried over from APO 2014-15 &2015-16

Further, as part of assistance to the tribal VSS, Fire Mazdoor/Fire Gangs/ activities were taken up which involved the VSS members.

Wheel track concrete near tribal colony

Sl.No	Location / Range / Division	Activity	Year	Remark
1.	Kattipara/ Puthuppady / Thamarassery / Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
2.	Ponnankayam/ North beat/ Nairkolly/ Thamarassery/ Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
3.	Kolamala/ Puthuppady / Thamarassery/ Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
4.	Kakkavayal/ Kanalad / Thamarassery/ Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
5.	Kodothikkunnu/ Nairkolly/ Thamarassery/ Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
6.	Kakkad/ Puthuppady/ Thamarassery / Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
7.	Maruthilavu/ Kanalad / Thamarassery/ Kozhikode	Fire mazdoor	2017-18	Work carried over from APO 2014-16
8.	Kuttiyadi/ Thamarasseri/ Kozhikode	Fire protection and mazdoor, Rescuing wild animals	2017-18	Work carried over from APO 2014-16
9.	Neelimala/ Baderi/ Meppady/ South Wayanad	Fire gang	2017-18	Work carried over from APO 2014-16
10.	Palachuram/ Badery/ Meppady/ South Wayanad	Fire gang	2017-18	Work carried over from APO 2014-16
11.	Settukunnu/ Sugandagiri/ Kalpetta/ South Wayanad	Fire gang	2017-18	Work carried over from APO 2014-16
12.	Valanchola medicinal plantation/ Sugandagiri/ Kalpetta/ South Wayanad	Fire gang	2017-18	Work carried over from APO 2014-16
13.	Aranamala/ Mundakai/ Meppady/ South Wayanad	Fire gang	2017-18	Work carried over from APO 2014-16

2. Improving connectivity

The activities envisaged in the reporting period were carried out in 2018-19.

3. Soil and moisture conservation

Activities such as Contour bunding / Gully Plugging / Pond Desiltation were deferred to 2018-19. However, the spill over from APO 2014-15 &2015-16 - construction/ cleaning/ distillation of pond was carried out.

Site	Location / Range / Division	GPS Location	Activity	Year of Construction	Dimensions (m)	Remarks
1	Manthodam / Pulpally / Chedelth /South Wayanad	N11°32'22.8" E76°00'98.2	Construction of Pond	2017 -2018	14 x 11.2x 1.9	Work carried over from APO 2014 - 16
2	Udhaynkara/Pulpally / Chedelth / South Wayanad	N11°41'17.5" E76°5630.7"	Construction of Pond	2017 -2018	15 x 5 x 2	Work carried over from APO 2014-16
3	Mandankolly/Irulam / Chedelth /South Wayanad	N12°34'14.8" E75°08'61.7"	Construction of Pond	2017 -2018	16 x 13 x 10.5	Work carried over from APO 2014-16
4	Nairkolly/Irulam / Chedelth /South Wayanad	N12°34'14.8" E75°08'61.7"	Construction of Pond	2017 -2018	13 x 10 x 10.5	Work carried over from APO 2014-16

Observations of the Evaluation Team: The records were verified and found correct. Ponds retain only 60 - 75% envisaged capacity. Hence, needs periodical desiltation.

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1	Pond / Chedelth / South Wayanad	Four ponds were constructed. Water retention is medium. The ponds need to be desilted periodically.	Presently the ponds are able to retain only 60 -75 % envisaged capacity.	6	Medium

Pond at Udhaynkara

Pond at Mandankolly

4. Eradication of weeds

The activities envisaged in the reporting period were carried out in 2018-19.

5. River bank stabilization/ protection

The activity was carried out during 2017-2018 and was physically verified records perused and found correct.

Location / Range /Division	GPS Location	Activity	Year of Activity	Dimensions (m)	Remarks
Balavanthadukka / Kasargode	N12°53'53.5" E75°18'80.56"	Altitude: 62 msl River Bank Stabilization	2017-18	160 x 1.7 x 0.5	The vegetation has established well.

6. Purchase of equipment

This activity was a spillover from the APOs of 2014-15 and 2015-16. The equipment procured by the divisions was physically verified, and records checked and found correct.

Sl.No	Location / Range / Division	Activity	Year of activity	Remark
1	Mananthavady Range/ North Wayanad	Firefighting equipments	2017-18	Work carried over from APO 2014-16. Verified the records and found correct.
2	Peria range / North Wayanad	First Aid Box for field staff	2017-18	Work carried over from APO 2014-16. Verified the records and found correct.
	Kalpetta Range / South Wayanad	Purchase of animal rescue articles rescuing wild animals	2017-18	Work carried over from APO 2014-16. Verified the records and found correct.
1	Division office/ Kozhikode	Purchase of Cages, Snake catching equipments	2017-18	Work carried over from APO 2014-16. Verified the records and found correct.
2	Division office/ Kozhikode	Purchase of rope, trapping net for RRT	2017-18	Work carried over from APO 2014-16. Verified the records and found correct.
	Padinjarathara section/ Kalpetta Range / South Wayanad	Purchase of life saving equipment for departmental petrol boat	2017-18	Work carried over from APO 2014-16. Verified the records and found correct.

Fire fighting and life saving equipment

7. Awareness program/ Nature camps/ Training to protective staffs

This activity was a spillover from the APOs of 2014-15 and 2015-16. The records were checked and found correct.

Sl.No	Location / Range / Division	Activity	Year	Remark
1.	Kuruva/ Pulppally/ South Wayanad	Conducted fire awareness rally from Tholpetty to Muthanga	2017-18	Work carried over from APO 2014-16
2.	Kalpetta / South Wayanad	Conducted training to protective staff	2017-18	Work carried over from APO 2014-16
3.	Mundakkai / Meppady / South Wayanad	Conducted training to protective staff and watchers	2017-18	Work carried over from APO 2014-16
4.	Meppady / South Wayanad	Legal training on Forest Laws and precaution measures to be taken against forest fire	2017-18	Work carried over from APO 2014-16
5.	Vythiry & Muttil / Meppady / South Wayanad	Conducted training to protective staff and watchers	2017-18	Work carried over from APO 2014-16
6.	Mananthavady / North Wayanad	Fire awareness programme for staff & watchers	2017-18	Work carried over from APO 2014-16
7.	Begur / North Wayanad	Training to protective staff for All India Tiger estimation Phase-I	2017-18	Work carried over from APO 2014-16

Sl.No	Location / Range / Division	Activity	Year	Remark
8.	Mananthavady / North Wayanad	Fire awareness programme by fire & rescue service	2017-18	Work carried over from APO 2014-16
9.	Begur / North Wayanad	Fire awareness programme for field staff	2017-18	Work carried over from APO 2014-16
10.	Peria / North Wayanad	one day awareness camp at varayal for field staff	2017-18	Work carried over from APO 2014-16
11.	North Wayanad	GPS training for protective staff	2017-18	Work carried over from APO 2014-16
12.	Peruvannamuzhy, Kozhikode	Fire awareness programme to staffs and fire watchers	2017-18	Work carried over from APO 2014-16

The spillover activities of 2014-15 and 2015-16 with regard to assistance to Vana Samrakshana Samidi, Soil and Moisture conservation and purchase of equipments were completed during the reporting period. One activity was taken up during 2017-2018 and rest of the 5 activities envisaged in the reporting period were carried out in 2018-19 in the circle. Overall, an amount of Rs. 213 lakhs was allotted to the circle during the period of which 67% financial achievement was observed.

Eastern circle, Palakkad (2016 - 2018)

The evaluation covered five forest divisions of the circle. They include

1. Mannarkkad
2. Nenmara
3. Nilambur North
4. Nilambur South
5. Palakkad

Only two activities have been undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to Tribal VSS	Nilambur, Nemmara, Mannarkkad and Palakkad
2.	Construction & Maintenance of Camp Shed	Nilambur, Nemmara, Mannarkkad

1. Assistance to Tribal Vana Samrakshana Samidi

The Appankavu village in Vazhikkadavu range of Nilambur North received library books supporting education. The Agali village of Attapadi and Mannarkkad ranges were provided with 174 gas connections. Gas connections were also extended to Olavakkode and Walayar ranges of Palakkad.

A beneficiary with the LPG Cylinder

2. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
Bommiyampadi campshed/ Pudur, Attappadi/ Mannarkkad	N11°7'2.21" E76°33'4.88"	2016-18	337m^3	The condition of the structure is good.

The physical condition and asset quality of the camp shed was assessed. Physical measurements and verification of vouchers and estimations were used to verify the specifications of the camp sheds.

Bommiyampadi campshed

Remarks

Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Bommiyampadi /Attappadi	The shed is maintained well.	The shed is routinely used by the frontline staff.	7	High

The works carried out for interior camp shed and ration were evaluated for the physical existence and for the quality. The specifications of the camp shed was checked by verifying the old vouchers and the estimates and found to be correct and the structure is maintained well and used by the frontline staff regularly.

The circle received Rs. 9.00 lakhs; the financial achievement was 99.67%.

Central circle, Thrissur (2016 - 2018)

The evaluation covered four forest divisions of the circle. They include

1. Chalakkudy
2. Malayattoor
3. Thrissur
4. Vazhachal

Only eradication of weeds was envisaged in the circle, which was verified through records. Due to delay in the release of funds, activities were shifted to 2018-19. An amount of Rs.4.00 lakhs was allotted which was spent on the activity.

High range circle, Kottayam (2016 - 18)

The evaluation covered five forest divisions of the circle. They include

1. Kothamangalam
2. Kottayam
3. Mankulam
4. Marayoor
5. Munnar

Four different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Construction, cleaning, desiltation of pond	Munnar
2.	Fire watch stations	Kothamangalam
3.	Improving connectivity	Marayoor
4.	Soil and moisture conservation	Kottayam, Mankulam, Marayoor, Munnar, Kothamangalam

In most divisions, no funds were allocated during these years; hence, the activities were shifted to the subsequent years. In addition, spillover activities of 2009-14 were taken up during this period.

1. Construction, cleaning, desiltation of pond

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
Perumbankuthu	N10°08'24.08" E76° 54'37.28" Elevation- 405m	2017-2018	10 x 10 x 1.40	Water stored at full level

The structure was physically verified and records inspected and found correct.

Perumbankuthu Waterhole in Munnar Division

Observations of the Evaluation Team

Sl. No.	Type of Assets/ Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to < 7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Water Hole/ Munnar Division / Adimali Range /Perumbankuthu	Clearing of ground level vegetation grasses and weeds, earth work for excavation.	This water hole is mostly used to provide water for animals. Water level is maintained throughout the year.	8	High

2. Fire watch stations

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1	N10°02111 E76°80035 Elevation- 86 msl	2017-18	Plastering: 58.75m^2 Earthwork: 58.05m^3 Foundation:33.15m^3 RCC: 26.1m^3	The structure is intact.
2	N10°16' 01.03" E77°09'09.14" Elevation- 979msl	2017-18	8.19 m^3	The structure is intact

Under this activity, two forest watch stations were established. The structures were verified physically and dimensions were measured and confirmed with the vouchers/records.

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Forest Watch Station / Kothamangalam Mullaringad/ Chullikkandam/ Bluvady	The total plinth area covered is 6.81 sq m. The structure comprises two storeys.	It is useful for the frontline staff to monitor various activities.	9	High
2.	Fire Watch Station / Ooruvasal/ Marayoor Division / Marayoor Range	The total plinth area covered is 8.19 sq m. The structure comprises two storeys.	It is being used by the frontline staff	9	High

Forest Watch Station at Kothamangalam

3. Soil and moisture conservation

In Kottayam division, SMC related activities were carried out as a spillover of 2009-14 works during 2017-18. The vouchers/records were verified and found correct.

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
A1/4	N09°27' 50.6" E76°49' 30.5"	2017-18	2 x 0.933 x 5.7	Work carried over from APO 2009-14
A2/4	N09°43' 34.9" E77°01' 10.2"	2017-18	2 x 0.875 x 5.5	Work carried over from APO 2009-14
A3/4	N09°43.554" E76°59.958'	2017-18	2 x 0.941 x 6.65	Work carried over from APO 2009-14
A4/4	N09°27' 50.6" E76°49' 30.5"	2017-18	2 x 1.09 x 9.25	Work carried over from APO 2009-14

Observations of the Evaluation Team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully plugs / Kottayam/ Kanchiyar / Ayyapancoil/ Kallar	Water stored at half level	The gullies have been laid out in a teak plantation area. The moisture content in surrounding areas is improved.	9	High

Gully Plug at Ayyappancoil

4. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1	N10°08' 13.59" E76°54' 53.56" Elevation- 433m	2017-2018	294.28 m^3	The structure is intact

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Antipoaching camp shed / Perumbankuthu, Munnar Division / Adimali Range	The structure comprises two bedrooms, a kitchen and a varandah.	It is being used by the frontline staff	10	High

Perumbankuthu Camp Shed

The work was evaluated for physical existence and quality. The specifications of the camp shed were checked by verifying vouchers and estimates.

The spillover activities of 2009-14 with regard to Soil and Moisture conservation were completed during the reporting period. The other three activities were completed as per the APO. Overall, an amount of Rs. 29.23 lakhs was allotted to the circle during the period of which 94.14% financial achievement was observed.

Southern circle, Kollam (2016 - 2018)

The evaluation covered six forest divisions of the circle. They include

1. Achenkovil
2. Konni
3. Punalur
4. Ranni
5. Thenmala
6. Thiruvananthapuram

Five different activities were envisaged in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Ranni
2.	Construction and maintenance of campshed	Achenkovil
3.	Improving connectivity	Achenkovil
4.	Soil and moisture conservation / Gully plugging	Achenkovil, Konni
5.	River Bank Stabilization/ protection	Punalur*

*This activity was handled by the Timber Sales Division, Punalur.

1. Assistance to tribal Vana Samrakshana Samidi

In Paruthipally forest range of Ranni division, basic infrastructures such as LPG connection were provided to the tribal settlement the beneficiaries mentioned that the LPG provision is highly useful, time saving and reduced their dependence on forests for firewood. As part of the CAMPA operation, the tribal communities in the Ranni division, a turmeric processing unit has been established. This was made functional in the following year.

Site	Year	LPG connection beneficiaries interviewed	Remarks
Thendiyamala, Karipalam, Valiyakilikode, Paruthipally Forest Range	2016-17 & 2017-18	Smt. Omana Smt. Vasantha SA Smt. Salini S Smt. Sarojoni Smt. Sujatha Smt. Deepa Smt. Indiira Smt. Radha K Shri. Deepu K Smt. Deepa S	The beneficiaries support rendered by the forest department has reduced their dependence on forests for firewood.

Smt. Omana, Kizhakkumkara Veedu, Thendiyamala, Paruthipally Forest range beneficiary of LPG connection under CAMPA fund

Smt. Sujatha, Vishnubhavan, Valiyakilikode, Paruthipally Forest range beneficiary of LPG connection under CAMPA fund

2. Construction and maintenance of campshed

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1	N09°8'2.382" E77°8'44.52"	2017-2018	9 x 6	Used by the forest staff regularly for their stay. A 20 x3 x 3 EPT on 4 sides of the camp shed has also been created.

At Pulikayam, Achenkoil, a camp-shed was built and maintained. On inspection it was found that the specifications were in accordance with the dimensions mentioned in vouchers. At present, the physical structure is in good condition and well-maintained. The frontline personnel reported that the shed is quite helpful in carrying out forestry activities. The elephant proof trench executed around the camp shed on all four sides were inspected and found that about 30% of the area is damaged due to rain. It needs reworking to safeguard the camp shed and to enable stay of frontline staff.

Remarks

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Pulikayam/ Achenkoil	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
2.	Elephant Proof Trench / Pulikayam / Achenkoil	20x3x3 on 4 sides of the campshed	To safeguard the Campshed from elephants	5	The trenches were physically verified. It was 30 % damaged due to rain. Reworking of the trench is needed.s

Camp Shed with Elephant Proof Trench

3. Improving connectivity

Patrolling routes and trek paths were laid from Vazhaperiyar to Onnamkallu of Kanayar Range of Achenkovil division. Boundary lines were made in 84 blocks and all are found to be intact during evaluation team inspection. The trek paths, forest roads and patrolling routes are well maintained. Fireline was laid for 3.5 Km at Savacotta of Achenkoil division.

4. Soil and moisture conservation

Under this activity, gully plugging was carried out in 25 sites in Mundomoozhy of Konni division, 3 sites in Katttikuzhy of Achenkoil division and 6 sites in Vazhaperiyar of Achenkoil division. These activities were verified physically and dimensions were measured and confirmed with the vouchers/records. All the structures were in healthy conditions and useful in soil moisture conservation.

Sites	GPS Location	Year of Construction	Dimensions (m^3)	Remarks
1	N09°8'09.06" E77°12'0.006"	2017-18	3.8 x 1.5 x 0.65 m	At Katttikuzhy, Achenkoil: Healthy with no damage
2	N09° 07 8.83" E 77°11' 5.51"	2017-18	13.33 x 1.37 x 0.73 m	At Katttikuzhy, Achenkoil: Healthy with no damage
3	N 09°10' 06.6" E77 °10' 1.26"	2017-18	2.55 x 1.6 x 0.35 m	At Katttikuzhy, Achenkoil: Healthy with no damage
4	N09°7'26.58" E77°11'24.912"	2017-18	6 gullies of size 4 x 1.2 x 1.2 m	At Vazhaperiyar, Achenkoil: Healthy with no damage

Gully Plugging at Kattikuzhy

No spillover activities were taken up in this circle during the reporting period. One activity, river bank stabilisation was undertaken by the Timber Sales Division, which is not within the team's purview. Overall, an amount of Rs. 28.46 lakhs was allotted to the circle during the period which was fully utilised.

Wildlife circle, Palakkad (2016 - 2018)

The evaluation covered four divisions of the circle. They include

1. Peechi
2. Parambikulam
3. Silent Valley
4. Wayanad

Five different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Parambikulam, Peechi
2.	Construction and maintenance of campshed	Wayanad, Parambikulam, Peechi
3.	Improving connectivity	Silent valley, Wayanad
4.	Eradication of exotic weeds	Peechi
5.	Soil and moisture conservation / Gully Plugging	Peechi

1. Assistance to tribal Vana Samrakshana Samidi

Discussions were held with the tribal members of Van Samraksha Samiti living in different villages of Parambikulam forest division. Solar street lights distributed under CAMPA activities were physically verified in some of the locations. The villagers of Wayanad division have made a request to implement scheme for house construction.

In the most vulnerable areas in the forest divisions of Parambikulam, Wayanad and Peechi, the forest department constructed solar power fences during 2016-17 and 2017-18. The locations include Karimala, Nallathanni and Mankuchy. The entire stretch of solar fencing was physically verified. There are minor damages to the fences. Relevant records were verified and found to be in order.

Location	Year	Remarks
Karimala section in Parambikulam	2016-17	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
Nallathanni, Sultha bathery range, Wayanad	2016-17	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
Mankuchy , Chimony range, Peechi division	2017-18	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.

2. Construction and maintenance of campshed

The campshed established under CAMPA in Muthanga range of Wayanad division is well maintained. It is useful to the forestry personnel. The physical quality was assessed and found satisfactory. In the Payampara location of the Peechi division, the campshed was refurbished (kitchen) for the use by the frontline staff. The inspection team evaluated the work for physical existence and quality. Frontline staff informed that the shed is in regular use. The specifications of camp shed were verified with vouchers and estimates and found to be in order.

Sites	GPS Location	Year of Construction	Dimensions (m^1)	Remarks
1.	N11°39'19.28" E76°25'51.78"	2016-17	-	Maintenance only
2.	N10°25'53.4" E76°30'19.02"	2016-17	5.5 x 2.9 (Kitchen only)	The structure is in good condition.

Remarks

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Wayanad/ Muthanga range	The shed is maintained well.	Useful for the frontline staff.	7	High
2	Campshed / Payampara/ Chimony range/ Peechi	The shed is maintained well.	Regularly used by the frontline staff.	7	High

Elephant Proof Trench: Two different locations (Vavala and Anapodu) of Chimony range in Peechi Division were provided with elephant proof trenches during 2016-17. The dimensions of the trenches were physically verified and found to be in conformity with vouchers and records available with the department.

3. Improving connectivity

Trek paths, patrolling routes and vista lines were cleared and maintained in the circle in PTR and Wayanad WLS.

Location / Range / Division	GPS Location	Year of Activity	Dimensions (km)
Kathiapalam / Wayanad WL	N11°56'54.2345" E76°4'30.4276"	2017-18	3.5
Onnamkulam / Wayanad WL	N11°38'31.023" E76°25'21.264"	2017-18	2
Ellakalcheranad / Muthanga / Wayanad WL	SN11°44'59.82" E76°21'19.662"	2017-18	4
Muthanga/ Wayanad WL	SN11°40'1.356" E76°22'21.672	2017-18	1.5
Sulthan bathery/ Wayanad WL	SN11°35'.49" E76°13'27"	2017-18	2.25

Trek Path in Muthanga

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, <3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1	Trek Path/ Kathiapalam / Wayanad WL	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
2	Trek Path/ Onnamkulam / Tholpetty / Wayanad WL	The trek path is maintained well.	The path is used regularly by the frontline staff.	7	High
3	Fire line / Ellakalcheranad / Muthanga / Wayanad WLS	The fireline was 20 per cent less than mentioned in records.	The fireline helped protect against fires.	5	Medium
4	Tourism road / Muthanga / Wayanad WLS	The road is well maintained.	Supports ecotourism.	7	High
5	Patrolling road / Sulthan bathery/ Wayanad WLS	The road is well maintained.	Used regularly by the frontline staff.	7	High

The activities were verified through inspection of records and found correct except in S. No. 3 where the length mentioned was 5 km.

4. Eradication of exotic weeds

Eradication of Exotic weeds was undertaken in Anaporu (12 ha), Peechi Wildlife Division, Chikkanji (60 ha), Kurichiyat (9 ha) and Tholpetti (260 ha) in Wayanad WL Division the same were verified based on the records. The major weed eradicated was Sennaspectablis. Lantana camara, Chromolaena odorata and Mikania macarantha were also observed.

Weed assessment in Tholpetty

5. Purchase of equipment

As a part of forest fire prevention and control operations, and safety, the department purchased protection equipment in Vellanai section in Peechi division. The forestry personnel informed that these items are put to use effectively. This activity was a spillover from 2009-14.

Safety Equipment

One spillover activity were taken up in this circle during the reporting period. SMC activities could not be undertaken. Overall, an amount of Rs. 27.10 lakhs was allotted to the circle during the period which was fully utilised.

Field director project tiger, Kottayam (2016-18)

The evaluation covered four forest divisions of the circle. They include

1. Periyar East
2. Periyar West
3. Idukki Wildlife sanctuary
4. Munnar Wildlife sanctuary

Three different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Eradication of exotic weeds	Idukki WLS
2.	Improving connectivity	Periyar East
3.	Soil and moisture conservation / Gully plugging	Idukki WLS

1. Eradication of exotic weeds

Eradication of weeds envisaged in the circle was verified through records. The sites include Makolikandam, Keerimudi, Chakkakonam, Bharanikkuzhi, Anakkoodu, Sakunthalakadu in the Idukki Wildlife sanctuary. The major exotic weeds present in the area are Clidemia hirta, Chromolaena odorata, Lantana camara and Mimosa diplotricha. Lantana camara was found to be the most prominent weed.

Weed assessment at Idukki

Weeds at Keerimudi

2. Improving connectivity

Sl.No	Location	Year	Activity	Remark
1.	Peermed, Azhutha Range	2016-18	Fire gangs	Forest officials visit the VSS regularly on a month basis to discuss fire protection activities. Verified the activities through inspecting bills books & vouchers and found correct.

VSS members were involved in the fire protection activities. The activitieswere verified by inspecting bills books and vouchers and found correct.

3. Soil and moisture conservation

Sites	GPS Location	Year of Construction / Maintenance	Dimensions (m)	Remarks
Kizhukkanam	N09°44'42.8" E76°59'09.2"	2016-18	11.5 x 2 x 2 12 x 2 x 3 10 x 2 x 3 7 x 1.6 x 1.1 10 x 2 x 2.5 14 x 2 x 3	Inspected six (6) gullies at Kizhukkanam. Gullies are weakened due to flood and needs strengthening and regular maintenance.
Kathithappan kettuchira	N09°44'26.095" E77°00'04.41"	2016-18	12 x 2 x 3 10 x 1.5 x 2 10 x 2 x 3 12 x 3 x 4.5	Inspected Four(4) gullies at kathithappan kettuchira. Gullies are weakened due to flood and needs strengthening and regular maintenance.
Vagavanam	N09°43'24.06" E76°57'23.3"	2016-18	10 x 2 x 2 11 x 2 x 2.5 8.5 x 1.6 x 2.5 9 x 1.5 x 3	Inspected Four(4) gullies at Vagavanam. They displayed minimal damage. Gullies are weakened due to flood hence needs strengthening and regular maintenance.
Vanmavu	N09°44'31.09" E76°59'09.6"	2016-18	8 x 2 x 3 10 x 1.5 x 3 8.5 x 1.8 x 2.8 10 x 1.6 x 3	Inspected Four(4) gullies at Vanmavu. Two gullies are damaged and 2 need strengthening work.
Kallekkulam area	N09°43'29.08" E76°56'35.3"	2016-18	9 x 1.5 x 1.2 15 x 2 x 3 11 x 1.5 x 2 8 x 2 x 3	Inspected Four(4) gullies at Kallekkulam area. Gullies are weakened due to flood hence needs strengthening and regular maintenance.
Vettilapara	N09°48'16.3" E77°00'14.2"	2016-18	10 x 1.5 x 3 8.5 x 1.8 x 2.8 10 x 1.6 x 3 11 x 1.6 x 4 9 x 1.5 x 8	Inspected Five(5) gullies at Vettilapara. Gullies are weakened due to flood hence needs strengthening

Sites	GPS Location	Year of Construction / Maintenance	Dimensions (m)	Remarks
				and regular maintenance.
Matnai	N10°08'29.07" E76°40'47.25"	2016-18	10 x 1.3 x 1.5 7 x 2 x 1.5 8 x 1.3 x 1.2 10 x 1.3 x 1.25 10 x 1.25 x 1.25 10 x 1.3 x 1.25 8 x -1.3 x 1.25 7 x 1 x 1 7 x 1 x 1 7 x 1 x 1	Inspected Ten(10) gullies at Matnai. They displayed minimal damage. Gullies are weakened due to flood hence needs strengthening and regular maintenance.
Chettipally	N10°07'26.60" E76°42'18.68"	2016-18	12 x 2 x 3 10 x 1.5 x 2 10 x 2 x 3 12 x 3 x 4.5 5 x 1.2 x 1 6 x 1.5 x 1.3 12 x 1.5 x 1	Inspected six (6) gullies at Chettipally. They displayed minimal damage which the staff mentioned was due to washing away in floods.
Anjilithandu	N09°49'03.09" E76°57'25.5"	2016-18	8 x 1.5 x 1.5 7 x 1.5 x 1.3 7 x 1.3 x 1.5	Inspected three (3) gullies at Anjilithandu. Although they are intact, they have been weakened due to floods.

Observations of the Evaluation Team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully Plugging/ Idukki WL/ Idukki WLS/ Idukki/ Kizhukkanam, Kathithappan kettuchira, Vagavanam, Vanmavu, Kallekkulam area, Vettilapara, Matnai, Chettipally, Anjilithandu.	The gullies were maintained in 2016-18, but weakened due to floods, hence water retention is poor	The gullies needs strengthening. Presently it is able to deliver only 75 % of the envisaged impact.	6	Medium

Inspected 46 gullies at Kizhukkanam, Kathithappan kettuchira, Vagavanam, Vanmavu, Kallekkulam area, Vettilapara, Matnai, Chettipally, Anjilithandu and observed that the gullies are weakened due to flood and needs maintenance and strengthening. The works were evaluated for physical existence and quality. The specifications of all SMC activities were verified with measurement books and found correct.

Matnai Gully Plugging

Chettipally gully plugging

No spillover activities were taken up in this circle during the reporting period. The circle focussed on SMC activities during this period. Overall, an amount of Rs. 7.58 lakhs was allotted to the circle during the period, 81.66 percent financial achievement was observed.

Agasthyavanam Biological Park Circle, Thiruvananthapuram (2016-18)

The evaluation covered both Shendurney and Thiruvananthapuram Wildlife Divisions of the circle.

Five different activities were undertaken in the circle. The distribution of activities is as follows:

S. No.	Activity	Divisions
1.	Assistance to tribal Vana Samrakshana Samidi	Thiruvananthapuram
2.	Construction, cleaning, desiltation of pond	Shendurney, Thiruvananthapuram
3.	Eradication of exotic weeds	Shendurney
4.	Improving connectivity	Shendurney, Thiruvananthapuram
5.	River Bank stabilization/ protection	Shendurney, Thiruvananthapuram

Most works was carried out during the period are spillover activities from 2014-2016.

1. Construction, cleaning, desiltation of pond

Sites	GPS Location	Year of Activity	Dimensions (m)	Remarks
Kattilappara	N08°55'41.63" E77°03' 41"	2017-18	10 x 6 x 0.3	Due to paucity of funds in 2014-2016, the work was carried out in 2017-2018.
Kattilappara	N08°54' 9.53" E77°06' 48.6"	2017-18	17 x 7.5 x 0.7	Due to paucity of funds in 2014 -2016, the work was carried out in 2017-2018.
Mankuthu	N 08°55' 41" E 77°3' 41"	2017-18	15 x 12.6 x 0.9	Due to paucity of funds in 2014 -2016, the work was carried out in 2017-2018.
Samaramukku	N 08°55'11.86" E 77°8'37.268"	2017-18	10 x 9 x 0.9	Due to paucity of funds in 2014 -2016, the work was carried out in 2017-2018.

Remarks

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Pond/ Kalluvarambu / Shenduruney Wildlife/ Kattilappara	The water hole is present in a swampy area surrounded by Myristica swamps.	This water hole is mostly used to provide water for animals.	4	Medium

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
		There is silt deposition and the water depth is less than 50 cm. The water hole is poorly maintained and needs desiltation.			
2	Pond/ Kalluvarambu / Shenduruney Wildlife/ Kattilappara	The water hole is present in a swampy area surrounded by Myristica swamps. There is weed growth on the sides of the pond. The pond is partially maintained and desiltation is needed.	This water hole is mostly used to provide water for animals.	7	High
3	Pond/ Kalluvarambu / Shenduruney Wildlife/ Mankuthu	Tree have fallen into the pond, weed growth is minimal. The pond is well maintained.	This water hole is mostly used to provide water for animals.	9	High
4	Pond / Ettapadappu / Shenduruney / Shenduruney Wildlife / Samaramukku	The pond is filled with soil and silt. The water hole is poorly maintained and needs desiltation.	This water hole is mostly used to provide water for animals.	3	Low

The activity carried out during the period is spillover from 2014-2016. The ponds were evaluated for physical existence and quality and observed that one water hole is maintained well while the remaining rest are poorly maintained and needs desiltation. The specifications of the ponds were checked by verifying the vouchers and estimates.

Heavily silted pond at Ettapadappu

Pond at Kalluvarambu surrounded by Myristica swamps

Pond at Kalluvarambu with logs within

2. Eradication of exotic weeds

Eradication of exotic weeds was taken up at Kochuparamedu in Kalluvarambu section in Shenduruney range. The major exotic weeds present in the area are Clidemia hirta, Chromolaena odorata, Lantana camara and Mimosa diplotricha. Clidemia was found to be the most prominent exotic weed followed by Chromolaena, Lantana and Mimosa respectively. Hence, regular weeding is required to arrest secondary invasion. Eradication of weeds was verified through records and vouchers.

Site	Size/density of weeds in the worked plot	Size/density of weeds in the unworked plot
Kochuparamedu	860/ha	2080/ha

Weed assessment at Kochuparamedu

3. Improving connectivity

Location / Range /Division	GPS Location	Year of Activity	Dimensions (m)	Remarks
Vilakkumaram to Kochupara	N08°53' 5.1" E77°06' 23.2"	2017-18	3000 x 3	Due to paucity of funds in 2014-2016, the work was carried out in 2017-2018.
Onnammile to Unakkathode	N08°54'53.31" E77°06' 34.2"	2017-18	2000 x 2.5	Due to paucity of funds in 2014-2016, the work was carried out in 2017-2018.
Thenginthope to Azhanthachal	N08°51'53.44" E77°10' 45.8"	2017-18	3000 x 2.5	Due to paucity of funds in 2014-2016, the work was carried out in 2017-2018.

Observations of the Evaluation Team

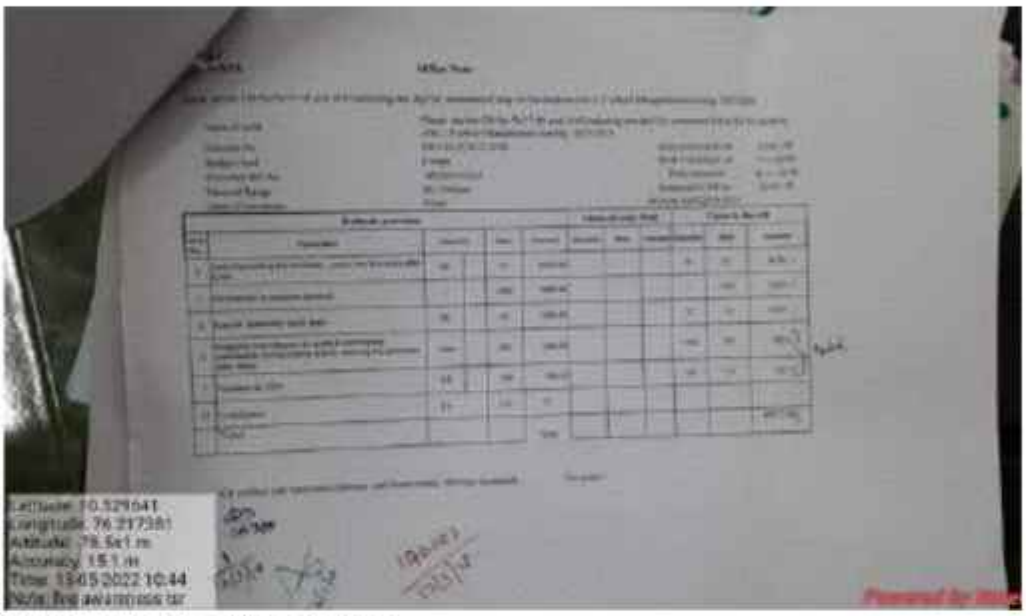
Sl. No.	Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1	Maintenance of patrolling route / Shenduruney/ Kalluvarambu / Thiruvanan thapuram	The route is maintained well.	The path is used regularly by the frontline staff.	7	High
2	Maintenance of patrolling route / Shenduruney/ Kalluvarambu / Thiruvanan thapuram	Some trees have fallen in the trek path and there is minimal weed growth on either side.	The path is used regularly by the frontline staff.	5	Medium
3	Maintenance of patrolling route / Shenduruney/ Kalluvarambu / Thiruvanan thapuram	The route is maintained well.	The path is used regularly by the frontline staff.	7	High

The activity carried out is a spillover from 2014-2016. The patrolling route is being regularly used by the frontline staff and maintained well. The activity was verified through inspecting bills books and vouchers and found correct. Construction of hanging bridges in both divisions could not be taken up.

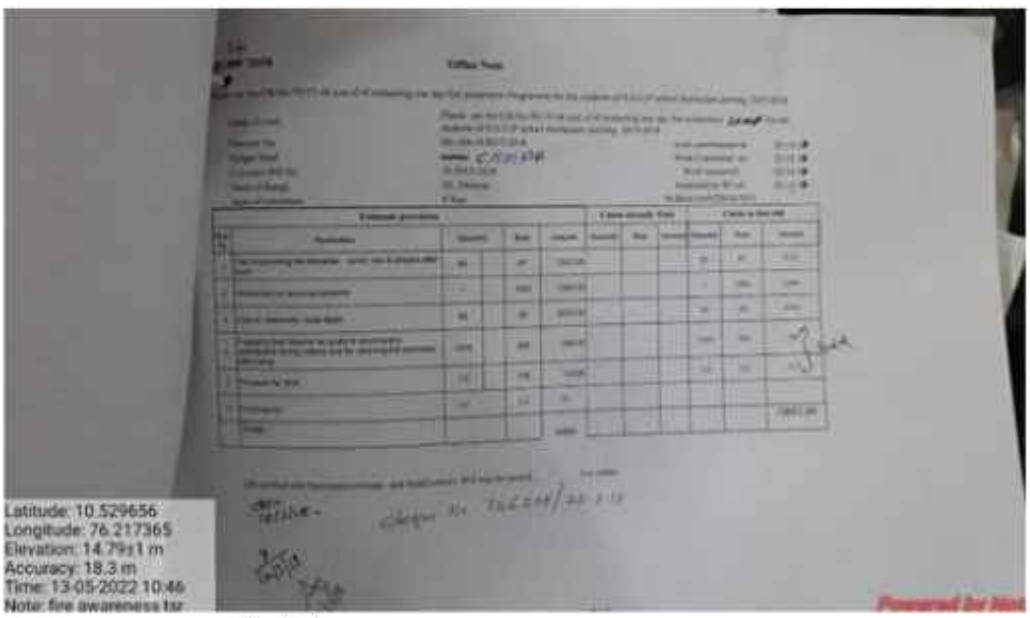
Most activities were spillover for earlier years. Overall, an amount of Rs. 32.54 lakhs was allotted to the circle during the period with 50% financial achievement.

Social Forestry central circle, Eranakulam (2016 - 18)

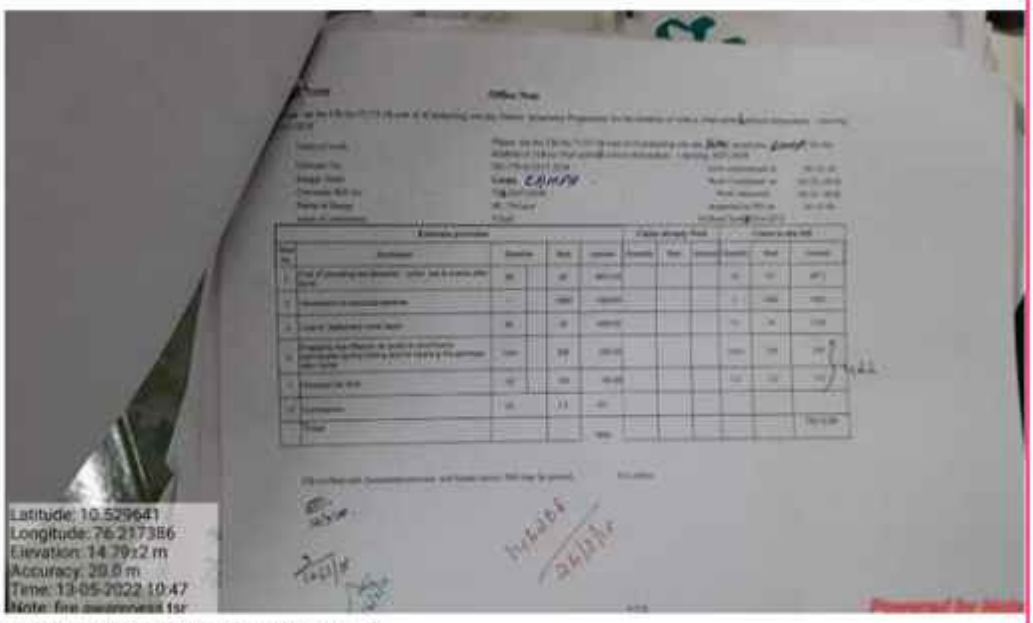
The APO for the period listed two activities, both of the activities were undertaken. They include plant diversity and Construction, cleaning, desiltation of pond. The activities envisaged during 2014-15 and 2016-17 were completed during this period. Seven wells and two ponds were cleaned. The water bodies at Malippuram kandal park were also cleaned. The records were verified and found correct. Production and distribution of medicinal seedlings (200 nos), mangroves (5000 nos) and generation of booklets on mangroves were taken up. The records were verified and found correct. The released of amount Rs. 11.55 lakhs was fully utilised.



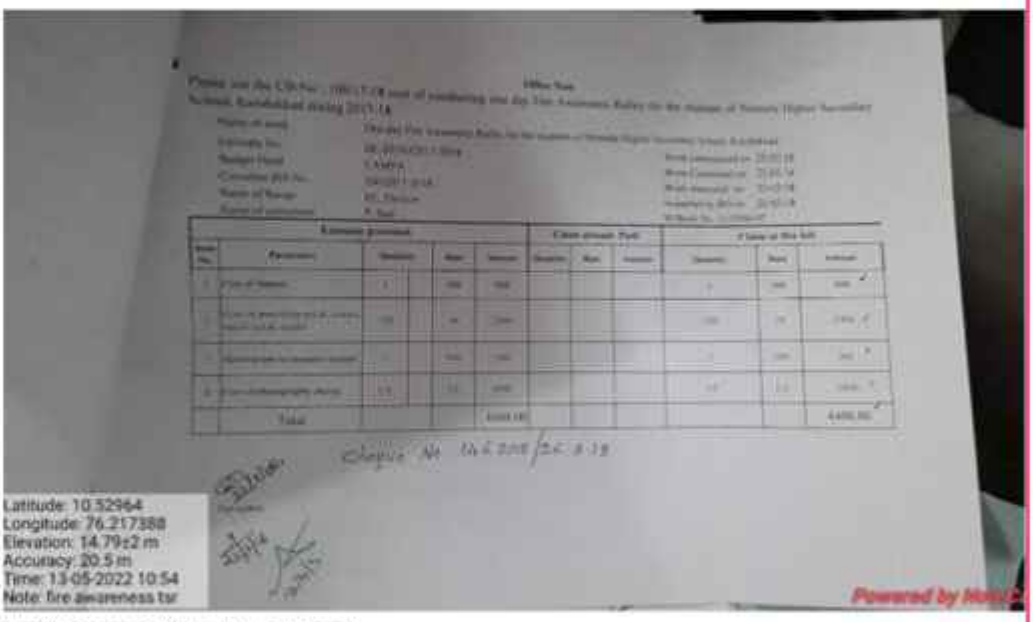
Fire Awareness camp at Mangattukkara



Fire Awareness camp at Thalikulam



Fire Awareness camp at Chittanukkara



Fire Awareness Rally at Kundukkad

Social Forestry southern circle, Kollam (2016-18)

Though no activities were listed under the APO, the Social Forestry wing Kollam carried out various extension and campaign activities during 2016-2018 in Kollam, Kottayam, Alappuzha, Thiruvananthapuram and Pathanamthitta divisions. The forestry personnel performed fire awareness programs at schools for students by distributing banners, posters, and awareness notices, among other things.

Inspection of records by the monitoring team

The general public was also informed about the importance of safeguarding environment and damages caused by forest fire. The documents related to these activities including vouchers were verified by the evaluation team members. The records were verified and found correct. A financial achievement of 99.8% was made against a release of Rs. 9.50 lakhs.

Social Forestry northern circle, Kohikode (2016-18)

No activity was carried out during the evaluation period.

4. Recommendations and Suggestions

The proposed evaluation had multiple objectives. *Inter alia*, this evaluation examined the impact of various activities in terms of increase in vegetation spread, soil and water conservation measures, infrastructure development, capacity building and the extent to which the objectives of CAMPA were achieved. The qualitative data were used to support further analysis of variations across regions and categories. The following are the recommendations and suggestions arising out of this present monitoring and evaluation of CAMPA activities in Kerala

(a) Soil & Water Conservation (SWC)Works: Most SWC works carried out in the forest areas are effective. The SMC activities, in most places, have increased the vegetation, indicating the moisture retention impacts. However, certain SWC structures are very crucial as they connect different ranges within a division. Such chappaths deserve special attention. Due to frequent flooding, heavy wear and tear is observed in most chappaths. The depth and width of rivers has increased in many sections. Such chappaths need to be replaced with concrete structures with the support of the PWD. Some of the water-holding structures are old, and not capable of holding water to the designed potential. Such structures may be abandoned.

(b) Regional and State level workshops could be organized for prioritation of species for Afforestation/Enrichment planting in the forest areas by involving local communities, field staff of SFDs, Forestry Research institutions, NGOs and other stakeholders.

(c) Technical support can be obtained from Forestry Research institutions for transferring/developing seed handling techniques and nursery technologies for indigenous species prioritized for afforestation / enrichment planting.

(d) In remote locations and in locations with high damages to the planted seedlings by wild animals, manual seeding of indigenous species using "Seed Ball Technologies" could be attempted.

(e) Maintenance costs should be linked to survival rates and strict guidelines should be framed regarding replanting in failed sites.

(f) Protection measures were not effective in many places. It is essential to provide maintenance provisions for five years so that the purpose is well achieved.

(g) Fodder Plantations should be prioritied in elephant corridors which would act as deterrents to their entry into human-habitation.

(h) Protection of Forests and Wildlife: Anti-Poaching Camps (APC) have been established throughout the state in almost all divisions. The APCs are sufficienfly equipped with staff and modern equipment for protection activities. There is a need to regularly support the staff with protective gears and field survival kits.

(i) GIS-based forest survey monitoring has been attempted in the state. The staff reported that this has helped prevent, contain and douse forest fires in many places. All staff have to be provided basic training in the use of advanced methods of monitoring for protection. The procedures of fire management / fire protection can be extended to the forest fringe area inhabitants in addition to school/ college students.

(j) Provisions need to be made in the budget for procuring more field vehicles, as a dearth in availability of these was observed.

(k) In almost all divisions, the maintenance of buildings, roads, SMCs are taken up regulalry. A fixed cycle could be adopted for maintenance and repair of civil works, rather than taking a routine annual maintenance.

(l) A decentralised allotment to the social forestry wings may be considered, to meet the local needs for each division.

(m) Incentives to temporary staff associated with the department's activities may br provided for more than ten years.

(n) Digitisation of records would enable easy access to information.

(o) Internal evaluation needs to be strengthened and a database must be established to monitor the changes. This would enable regular assessment of seasonal works like protection camps, fire protection works etc. Further, this report should also be made available during third party monitoring and evaluation.

(p) Timely fund release is viewed to be more helpful for executing the plantation activities in the respective APO execution years.

(q) Permanent structures created under CAMPA should be acknowledged through suitable markings to ensure proper visibility of CAMPA-funded activities.

ANNEXURES

Annexure I

Minutes of meeting

Third Party Evaluation of State CAMPA Activities in Kerala

23rd November 2021

Venue: VC Hall, IFGTB

Participants:

IFGTB	Kerala Forest Department
Dr. C. Kunhikannan, Director IFGTB	Shri. Rajeesh Ravindran IFS, CEO
Dr. R. Yasodha, Scientist G & GCR	CAMPA & APCCF
Dr. JP Jacob, Scientist G – *on leave*	Ms P. T. Sreelekha, ACF, SA&NO,
Shri. Rajesh Gopalan IFS - *online*	CAMPA
Dr. C. Buvaneswaran, Scientist F	
Dr. Kannan CS Warrier, Scientist F	
Dr. A. Karthikeyan, Scientist F	
Dr. D.R.S. Sekar, Scientist F – *not attended*	
Dr. Rekha R Warrier, Scientist F	
Dr. S. Saravanan, Scientist F	
Dr. A. Rajasekaran, Scientist F	

An online meeting was held on 23rd November 2021 at 10.00 am to discuss the modalities of third party evaluation of CAMPA-related works undertaken in Kerala by Kerala Forest Department.

Under CAMPA, various activities have been taken up to accelerate preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works.

Shri Rajesh Ravindran, CEO-CAMPA listed the different circles where CAMPA activities have been taken up. He sought evaluation of different protection activities, labour deployed for watch and ward, fire protection, and site suitability, especially regarding

ecorestoration of monoculture plantations, the species planted and their performance, etc.

Dr. S. Saravanan, Scientist F, presented the need for third-party evaluation to assess the various activities taken under State CAMPA. He elaborated on the requirements of the National CAMPA Authority concerning the monitoring while carrying out the evaluation.He also detailed the methodology for the evaluation process and the extent of sampling for the different activities taken under CAMPA based on the guidelines provided by the IIFM, Bhopal with necessary modifications. He also informed that IFGTB has experience working towards the evaluation of NAP of the NAEB in Kerala and providing consultancies to various industries. A team has been formed for the execution of the work.

This was followed by a discussion on the modalities for execution of the evaluation. The following points emerged.

1. An MoU would be signed between the Kerala Forest Department and IFGTB towards the activity. IFGTB would complete the evaluation within a period of six months from the date of release of funds.
2. State CAMPA would provide information, plantation journals, maps, measurement books, and all relevant records pertaining to the CAMPA works from 2009 to the present. Co-ordination in the state, local travel, lodging, and field support of personnel would also be provided by the Department.
3. The Department looks forward to APO-wise reports. Thus, six reports are envisaged at the end of the evaluation.
4. The sampling intensity was agreed upon.
5. A proposal including financial requirements and draft MoU would be sent to the CEO-CAMPA for perusal.
6. The CEO-CAMPA would visit IFGTB during the last week of November, 2021 for a detailed discussion and finalising the proposal.

Annexure II

Timelines of the Evaluation

Milestone	Activity
September 2021	Identification of ICFRE - IFGTB for third party monitoring
November 2021	Finalisation of activities under the third party monitoring
January 2022	Acceptance of project proposal of ICFRE - IFGTB for monitoring & evaluation of CAMPA activities in Kerala. Approval of the MoU.
March 2022	Signing of the MoU and release of the first instalment
April to June 2022	Field works
July to September 2022	Report preparation
September 2022	Release of the second instalment
October 2022	Submission of final report

Annexure III

APO-wise components implemented in various Circles

Component	Circle
Plant Diversity	Social Forestry central range, Eranakulam
Central Nursery work	Northern Circle, Kannur
Preparatory work for setting up Permanent Nursery	Northern Circle, Kannur
Construction, cleaning, Desiltation of Pond	Agasthyavanam Biological Park Circle, Thiruvananthapuram High Range Circle, Kottayam Social Forestry central range, Eranakulam Southern Circle, Kollam
Eradication of Exotic weeds	Agasthyavanam Biological Park Circle, Thiruvananthapuram Central Circle, Thrissur Field Director Project Tiger, Kottayam Northern Circle, Kannur Wildlife Circle Palakkad
Fire Watch Stations	High Range Circle, Kottayam
Interior Camp Sheds	Eastern Circle, Palakkad Wildlife Circle Palakkad
Assistance to Tribal Vana Samrakshana Samidi	Agasthyavanam Biological Park Circle, Thiruvananthapuram Eastern Circle, Palakkad High Range Circle, Kottayam Northern Circle, Kannur Southern Circle, Kollam Wildlife Circle Palakkad
River Bank Stabilization/Protection	Agasthyavanam Biological Park Circle, Thiruvananthapuram Northern Circle, Kannur Southern Circle, Kollam
Soil and moisture conservation / Gully Plugging	Field Director Project Tiger, Kottayam High Range Circle, Kottayam Northern Circle, Kannur Southern Circle, Kollam Wildlife Circle Palakkad
Improving Connectivity	Agasthyavanam Biological Park Circle, Thiruvananthapuram Field Director Project Tiger, Kottayam High Range Circle, Kottayam Northern Circle, Kannur Southern Circle, Kollam Wildlife Circle Palakkad

Annexure IV

Monitoring and evaluation teams

Teams Region	1 Southern Circle, Kollam (1)	2 Southern Circle, Kollam (2)	3 High Range Circle, Kottayam (1)	4 High Range Circle, Kottayam (2)	5 FD PT, Kottayam (1)
Team Co-ordinators (Dr/Mr/Ms)	C. Buvaneswaran	Rekha R Warrier	Kannan CS Warrier	K. Murali Shankar	S. Saravanan
Team Leaders (Dr/Mr/Ms)	A. Balasubramanian	R. Sumathi	K. Gireesan	A. Mayavel	S.P. Subramani
Member	N. Sivadasan	L.Vivek	K. Sureshkumar	J. Soosairaj	K. Senthil
Member	V. Mareeswaran	S. Sudha	K. Gopalakrishnan	P. Vignesh	M. Suryaprakash
Member	S.S. Abijith	R.G. Anitha	T. Pradeep	K.R. Shankar	R. Ariharasuthan
Member			C. Muthumanikam	M. Vishnu	M. Mahalingam
Team Co-ordinator (KFD)	Fen Antony, ACF	Fen Antony, ACF	KS Subash, ACF	Subash, ACF	Sandeep. S, ACF

Teams Region	6 FD PT, Kottayam (2)	7 Agasthyavanam biological park Circle	8 Social Forestry, Southern Region, Kollam	9 Central Circle, Thrissur	10 Social Forestry, Central Region, Thrissur
Team Co-ordinators (Dr/Mr/Ms)	N.V. Mathish	A. Rajasekaran	A.C. Surya Prabha	D. Raja Suguna Sekar	J. SriramTeam
Leaders (Dr/Mr/Ms)	S.P. Subramani	Muhammad Ali Noushad	P. Chandrasekar	B. Deeparaj	A. Mayavel
Member	K. Senthil	P. Manoharan	J. Soosairaj	P. Malliga	R. Abinaya
Member	M. Suryaprakash	L. Mahalingam	P. Vignesh	S. Pragadeesh	C.V. Vijayam
Member	R. Ariharasuthan	S. Selvakumar	K.R. Shankar	R. Kalaiselvi	R. Sathishkumar
Member	M. Mahalingam	N. Vijayanand	M. Vishnu	C. Thamotharan	Rudranath, V.R.
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Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

for the period
2018-2019

Submitted to
Kerala Forests & Wildlife Department (CAMPA)

ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
(Indian Council of Forestry Research and Education)
Coimbatore – 641002

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वन आनुवंशिकी एवं वृक्ष प्रजनन संस्थान
ICFRE-INSTITUTE OF FOREST GENETICS AND TREE BREEDING
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Preface

The State of Kerala established the Compensatory Afforestation Management and Planning Authority (CAMPA) Scheme in 2009 to encourage afforestation, reforestation, and restoration/regeneration activities to compensate for forest land diverted for non-forest purposes and to enhance the state's forest cover. The Kerala Forests & Wildlife Department prepared the Annual Plan of Operations (APO) for 2018-2019, which the MoEFCC, GoI approved. As per the APOs, the state planned various activities, including compensatory afforestation, soil and moisture conservation, biodiversity conservation, awareness campaigns on forests, wildlife and the environment,eradication of invasive alien weeds, river bank stabilisation, protection of research plots and seed production areas, creation of fire breaks and other essential maintenance activities towards forest conservation. All these activities were spread across the forest divisions of the state, including wildlife sanctuaries. The success and sustainability of these CAMPA activities, including structures established and plantations raised in terms of planning, implementation, the quantity of inputs, condition of health and survival, and outcomes, need to be evaluated and documented for monitoring purposes by an independent agency. Accordingly, ICFRE-IFGTB, Coimbatore, was awarded the monitoring and evaluation of CAMPA activities undertaken. A team of IFGTB staff, including forest officers, scientists and technical personnel have been involved in the work since March 2022. The sampling methodology approved by MoEFCC was broadly followed, and a detailed survey, monitoring and evaluation exercises were conducted to represent all the forest circles and plantation models adopted in a given year. In total, 155 activities were monitored and evaluated. Overall the CAMPA activities supported the forests and contributed to enhancing forest health in Kerala. I would like to acknowledge the Kerala Forests & Wildlife Department for their support and assistance in bringing out this document in a comprehensive manner.

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We acknowledge the Kerala Forests & Wildlife Department for identifying ICFRE - IFGTB, Coimbatore, to evaluate the CAMPA activities carried out from 2018- 19. We sincerely thank the PCCF & Head of Forest Force for facilitating this special assignment. We would like to express our gratitude to Shri. Rajesh Ravindran IFS, APCCF & Chief Executive Officer, CAMPA, Kerala, who facilitated the evaluation work and extended valuable guidance in finalizing the formats for assessment of different CAMPA activities in the state. We would like to express our sincere thanks to all the Divisional Forest Officers, Range Forest Officers, Frontline Field Staff and VSS members for their assistance in providing the assessment teams with the essential logistics and information during the on-site evaluation.

ICFRE - IFGTB

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FACT SHEET

S. No.	Item	Details
1.	Scope of evaluation	Third-party monitoring and evaluation of the CAMPA Activities of Kerala Forests and Wildlife Department (2018-19)
2.	Period of evaluation work	Signing of MoU – March 2022 Field works – April to June 2022 Report preparation – July to September 2022
3.	Focus	Quality of conservation and development works. Assessment of compensatory afforestation activities. Public awareness campaigns.
4.	Number of evaluation teams	15 Evaluation Teams and one editorial team.
5.	Objectives	• To evaluate different plantations established under CAMPA in different forest divisions of Kerala. • To evaluate the civil structures (buildings and soil & water conservation structures) established under CAMPA in different forest divisions of Kerala. • To suggest for improvement in quality of plantations for future.
6.	Area covered	25 territorial forest divisions. 14 social forestry divisions. 11 wildlife divisions.
7.	Sample size	**Plantation:** 20% plantation randomly selected from various divisions. Sampling intensity for evaluation is nearly 10% for block plantations. For every hectare (ha) of plantation, the evaluation to be done on a 30 x 30 m plot. In the case of a linear plantation, evaluation of every 10th tree/planted sapling of each row for 25% of its length per running km basis. **Soil and Moisture Conservation (SMC) activities:** 20% of SMC works evaluated in each division based on random selection from measurement book (Mbook). **Eradication of weeds:** Density assessment and plot transects. **Forest protection:** 10% of all fire lines evaluated in each division.
8.	Findings	• The average survival rate in ecorestoration activities is 70%. Compensatory afforestation was observed in one circle only. • The quality of other departmental works was rated high (85%) • Check-dams and gullies are the major SMC works taken up. • Eradication of weeds was taken up effectively with ~60 per cent success. • Priority was accorded to biodiversity conservation. • The involvement of the Vana Samrakshana Samidi in various department activities has ensured a participatory approach to the protection and conservation of forests. • Most activities related to assiatnce to tribal Vana Samrakshana Samidi, as this period witnessed heavy and unprecedented floods.

EXECUTIVE SUMMARY

Executive Summary

The Forest (Conservation) Act, 1980 was enforced to conserve and protect forest resources. The Act mandated that whenever forest land is diverted for non-forestry purposes usually the conditions relating to transfer, mutation and declaration as Reserve Forest/Protected Forest, the equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation etc., are to be imposed. Additional conditions such as maintaining a safety zone area, fencing and regeneration etc., are prescribed for mining purposes, and catchment area treatment plans are stipulated for big and medium irrigation projects. Further, the Act provided that the non-forest land for Compensatory Afforestation (CA) was to be identified contiguous to or close to Reserved Forest or Protected Forest. The funds for CA are received from the user agencies based on the rates fixed by the State Forest Department, which are site-specific and vary according to the species, type of forest and site. The fund received for compensatory afforestation, additional compensatory afforestation etc., has to be used as per site-specific schemes submitted by the state along with the approved proposals for diversion of forest land. After receipt of the fund, State Forest Department has to accomplish the afforestation for which money is deposited in the CA fund within a period of one year or two growing seasons.

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Kerala has been constituted with the objective of conservation, protection, regeneration and management of existing natural forests, wildlife and their habitat and raising site specific compensatory afforestation, penal compensatory afforestation etc. As per the provisions of CAMPA guidelines, the state CAMPA has been formulating Annual Plans of Operation (APO) since 2009-10. The APO for the period 2018-19 was approved vide No. 15-2(18)/2018-CAMPA dated 31.08.2018.

The Government of India released **Rs. 7,93,49,000** for the period 2018 to 2019 to Kerala to implement the activities.

The Assignment

As a range of activities were taken up under CAMPA, a technical evaluation of the activities by a third party was considered essential. ICFRE-IFGTB was identified to carry out third party monitoring of all the CAMPA interventions since 2009-10 (File No. FC5 -1433/2021 dated 28.01.2022). The broad scope of evaluation comprised all the components and sub-components of CAMPA implementation in Kerala.

Study Area

The evaluation study covered 50 forest divisions of Kerala (25 territorial, 14 social forestry and 11 wildlife divisions) under 11 forest circles. In addition, research divisions where CAMPA funds were utilised are also covered in the study.

Study Approach and Methodology

Various CAMPA interventions were evaluated using appropriate sampling criteria, data collection approaches and, in view of diversity, nature of component and stakeholders

involved. The study approach and methodology have been adopted from the evaluation formats of the MoEFCC, GoI.

Details of Data Collection

- Primary Data: First hand information was obtained using specifically designed formats for different components and subcomponents.
- Secondary Data: Secondary data relating to various activities undertaken in CAMPA were collected from the circle, division and range offices in pre-designed formats and checklists.
- Focussed Group Discussion(FGD): FGD with the members of the Vana Samrakshana Samidi were conducted to evaluate peoples' perceptions and participation levels in implementing CAMPA activities in a given locality.
- Consultation with Forest Officials: Consultations were undertaken with a range of forest officers involved at various stages planning and decision making, implementation, monitoring and evaluation. This includes Divisional Forest Officers (DFOs), Forest Range Officers (FROs), Forest Beat Officers (FBOs), Foresters, Forest Guards, etc.
- Field Observation: Data on survival, field measurements to assess growth in different plantations, condition of physical structures in SMC activities and weed density in plantation sites were collected. Notes were prepared on various activities under CAMPA implementation, which provided the basis for the entire evaluation process.

Performance of CAMPA during 2018-19

- The total funds received from the adhoc CAMPA up to APO year 2018-19 stands at Rs. 7.94 crores and the expenditure ending March 2019 was 5.09 crores which is 70.77% of the funds received.
- The core activities undertaken with the CAMPA funds comprise creation of SMC structures, forest protection and assistance to tribal VSS.
- The non-core activities comprised biodiversity conservation, infrastructure development, forest Information Technology, monitoring, evaluation and accounting.
- Major components addressed were forest and wildlife protection, and Forest fire management (71%). This period focussed more on activities such as improving connectivity and fire protection (32%), followed by soil and moisture conservation activities and assistance to tribal Vana Samrakshana Samidi. The Vana Samrakshana Samidi members were engaged in almost all the activities.
- Various SMC structures in CAMPA APOs includes check dams, contour trenches, gully plugging etc. SMC structures undertaken by frontline forest officers under CAMPA are site-specific as per the site requirement.
- Preparatory works for ecorestoration were taken up. Most activities were done departmentally, an economical and time-saving approach.
- River stabilisation was taken up by five divisions, an improvement over the earlier APOs.

- Conservation of fauna was also prioritised in this period, with the social forestry wings focussing on bird and sea turtle conservation.
- Under infrastructure development, efforts were taken to repair / improve dilapidated structures. The major construction activities undertaken with the help of CAMPA funds were antipoaching campsheds.
- Inclusion of VSS members in patrolling, fire break creation, developing infrastructure in interior forest areas, has encouraged their active participation in conservation activities.
- During this period, permanent nurseries were set up in different districts to support various department plantings and public needs.
- Training and capacity development programmes focussed on imparting training sessions and awareness among general public.

Recommendations & Suggestions

1. There should be provision in CAMPA APOs for the periodic maintenance of SMC structures as most SMC structures are subject to heavy wear and tear due to recurrent floods.
2. De-centralized local nurseries for production of forest type specific planting stocks may be promoted.
3. Maintenance and watch and ward may be continued for 4 to 5 years for better establishment.
4. Buildings / structures constructed during this period needs to be repaired and maintained. In some cases, renovation / refurbishing may also be done based on a fixed schedule.
5. Species should be selected on the basis of floristic composition of the forest types and prevailing local soil condition of the afforestation / plantation site.
6. Number of watchers should be increased proportionate to the size of the plantation site.
7. Record keeping needs to be ensured in some circles.
8. The frontline staff may be trained on seed handling and nursery technologies of native tree species.

Monitoring and Evaluation of CAMPA Plantations and Other Activities (2018-2019)

1. Introduction

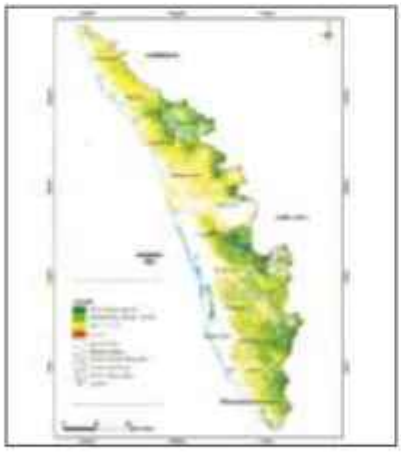
1.1 Background

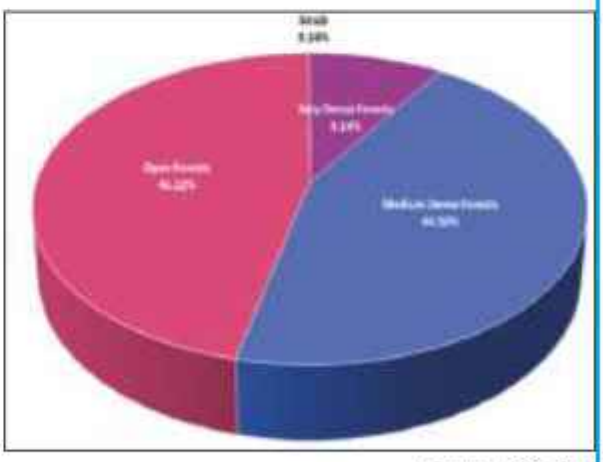
Forests in India comprise diverse forest types and reserved areas accounting for about 24.62% of the country's geographical area. Forest provides livelihood support to the people living in and neighborhood. Forests are the most significant natural carbon sinks and regulate water regimes. Given that the forest sector provides goods and services to humankind, forest land is diverted for developmental activities for non-forestry purposes, consequently leading to considerable shrinkage of forest cover.

Kerala is endowed with rich natural resources. The conducive tropical climate favours forests with rich biodiversity and endemism. The Western Ghats, one of the biodiversity hotspots, runs all along the eastern boundary of Kerala. Unfortunately, the increasing population and changing lifestyles exert tremendous pressure on forests. The greatest challenge today is to accommodate developmental needs by minimizing the destruction of its pristine forests.

1.2 Forest Cover in Kerala

The forest cover in the state based on the interpretation of the Forest Survey of India (FSI) 2021 is 21,253.49 sq km which is 54.7% of the state's geographical area.





Source: *ISFR, 2021*

Forest cover in the state has increased by 109 sq km compared to the previous assessment reported in ISFR 2019. Among forest canopy density classes, the state has 1944.32 sq km area under very dense forest, 9472 sq km area under moderately dense forest and 9837.17 sq km area under open forest.

1.3 Forest Cover in Kerala from 2015 to 2019

Forest cover in the state has been increasing over the years. Forest conservation and afforestation activities are the key reasons for the improvement.

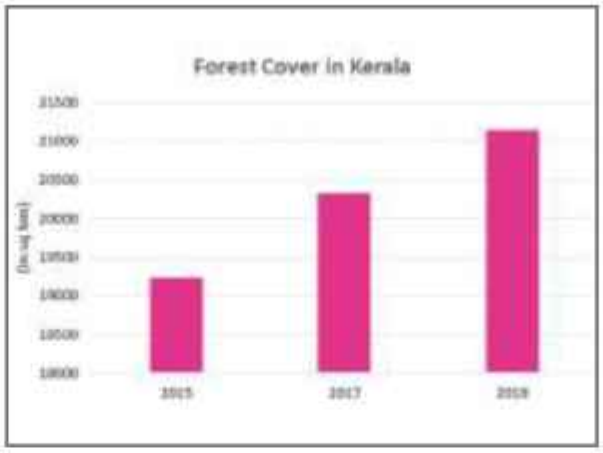
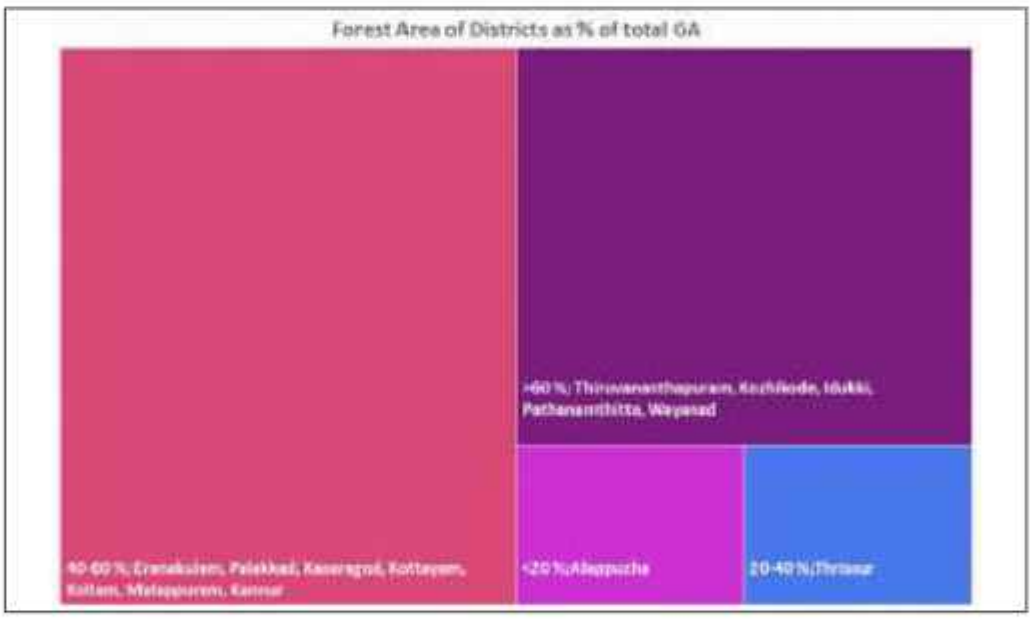


Figure 1.1 Forest Cover in Kerala From 2015 To 2019

1.4 District-wise Forest Coverage in Kerala

The tree map at Fig 1.2 provides the distribution across districts.



Comparing district-wise area cover in Kerala, Idukki has the largest forest cover (3155 sq km) in the state, followed by Palakkad (2104 sq km), Malappuram (1984 sq km), Pathanamthitta (1949 sq km) and Kannur (1669 sq km). In terms of percentage of forest cover concerning the total geographical area, Wayanad with 74.2% has the highest forest cover, followed by Pathanamthitta (73.49%), Idukki (72.44%), Kozhikode (61.74%) and Thiruvananthapuram (60.17%). Data reveals an increase in forest cover by 109 sq km in 2021 compared to2019 (Kerala ENVIS, 2022).

Nearly 60 lakh ha of forest is degraded with less than 40% canopy density. This is the target area for the afforestation programmes. Forest plantations extend over 1.56 lakh ha, teak being the major species, covering almost 50% of the total plantation area, followed by mixed plantations and eucalypts. The natural forests, plantations and homestead gardens contribute to the state's green cover, and all these are required in forest management.

2. Project profile

Compensatory afforestation programmes in the state were initiated in 1993, and plantations were maintained until 2002-03. The Government of India notified The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in April, 2004. The State CAMPA receives funds collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980. Kerala state CAMPA was constituted in November 2009.

Kerala Forests & Wildlife Department (KFD) has been receiving funds since 2009 from CAMPA, MoEFCC, GoI for various developmental activities such as afforestation programs, soil and moisture conservation works, capacity building for staff and local communities, the establishment of civil structures, etc. in various forest divisions of Kerala. The funds were spent for compensatory afforestation, biodiversity conservation, soil and moisture conservation, etc. The Chief Executive Officer, CAMPA, Kerala, is responsible for preparing the schemes, Annual Plan of Operations (APO) for CAMPA, and getting it approved by the Executive Committee, Steering Committee and the Government of India, followed by implementation of the approved APO. After receiving the fund allotment under State CAMPA, the implementing officers, the DFOs execute the assigned activities as per the APO. Under each major heads, there are different subheads available, which vary according to site conditions and needs.

The total outlay of the CAMPA activities from 2018 to 2019 is Rs. 7.94 crores. The details of the divisions, and the number of activities against different years are in Annexure-III.

3. Methodology

Physical Verification of Activities

I. Plantation - Methodology

- 10% plantation randomly selected from various divisions.
- Sampling intensity for evaluation - 10% for block plantations.
- For every hectare of the plantation, the evaluation was done on a 30 x 30 m plot.
- Each plot was marked on a map of the plantation area, and GPS co-ordinates of all such (30 x 30 m) plots were collected.
- In case of linear plantation, every 10th tree/planted sapling of each row was evaluated for 25% of its length per running km basis (5 intermittent line transects – each for 5% of length per running km).
- The evaluation was done on 0.1 ha by laying a 30 x 30 m plot based on random sampling.

II. Soil and water conservation measures:

(a) The teams obtained the norms and expenditure of SMC activities taken up in the plantation site from the respective offices.

(b) The teams assessed the quantity/ present condition/ treatment plans of the different SMC works. 20% sampling was carried out.

(c) For civil works, 50% M & E was carried out, based on random selection from M-Books from various divisions.

III. Eradication of weeds

Density assessment - plot counts

- Three or more plots (quadrats) of size 10 x 10 m (located randomly over the site) were marked, and the number of plants within the plots was counted.
- To get the actual number per ha, multiplied the average number of plants in the plots by 100.

Plot transects

- Marked out 100m transects, keeping them parallel to one another (10m-50 m apart). Using a 2 x 2 m plot frame (using a rope) plots were placed at intervals along the transect.
- The number of plants within the plot was counted. The values were converted to density measure by averaging the number of plants in each of the plots (i.e. individuals per ha).

IV. Forest protection

- 10% of all firelines were evaluated in each division based on random selection from M-Books from various divisions.

V. Qualitative Aspects

Focused group discussion : FGD was conducted for 10% of the villages in which CAMPA works were undertaken with at least 15 villagers in a common place within the village. The group comprised office bearers of Joint Forest Management Committee, Below Poverty Line households and village residents.

Ranking of individual projects

The criterion below was used to evaluate the project needs since the site parameters, species and inputs provided vary from site to site.

Site suitability	High	Medium	Low
Suitable area with favourable site condition rainfall, soil, etc.	7 to 10	>3 to<7	<3
Medium quality forest sites	>5	2-5	<2
Poor forest sites	> 4	2-4	<2

Criteria for classifying a site into suitable site, medium site and poor site

(a) Suitable site: soil depth more than 61 cm, rainfall range between 1270 to 3810 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(b) Medium site: Soil depth ranges between 30.4 cm to 61 cm, rainfall ranges between 889 to 1270 mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(c) Poor site: Soil depth less than 30.4 cm, rainfall less than 889 mm and excessive prevalence of mist and fog during monsoon, prevalence of adverse biotic factors and steep slopes.

This approach involve aggregating the percentage of readings falling into the three higher ratings (3-5) under the 'satisfactory' heading and the two lower ratings (1-2) under 'unsatisfactory'. The introduction of these two broad categories allowed better tracking of performance trends. The ranking table is provided below

Score	Assessment	Category
5	Highly satisfactory	
4	Satisfactory	
3	Moderately satisfactory	Satisfactory
2	Unsatisfactory	
1	Highly Unsatisfactory	Unsatisfactory

Physical verification

Each of the selected plots was visited by the monitoring team and the following details were documented in the field.

- Plot location with GPS co-ordinates and area
- Plantation type and design (wherever available)
- Year of establishment
- Number of saplings planted initially (species wise)
- Height of the saplings when planted
- Number of plants surviving at the time of monitoring
- Average height of surviving plants
- Species composition and distribution
- Protection measures and maintenance
- Anthropogenic pressure, etc.

Parameters considered during M&E

- **For plantations**

a. Qualitative – site suitability (both climatic and edaphic factors), condition of the plantation, choice of species, etc.

b. Quantitative - Total seedling/tree height, collar girth/GBH, survival percentage, etc.

c. Other parameters – Management practices, biotic and abiotic factors, etc.

- **For civil constructions**

a. Verification (sketch and dimensions) based on the original documents and M-book.

Deliverables and time schedule

Work plan submission	One week after signing the agreement
Field Data Collection	Two - three months
Draft report submission	One month after field data collection
Final report submission	Two months after draft report submission
Total Duration	6 months

4. Evaluation Details of the Circles and Divisions

The details of various circles and divisions evaluated are presented below.

	Circles	Divisions
Territorial Circles and Divisions	Northern Circle, Kannur	Kannur, North Wayanad, South Wayanad and Kozhikode Forest Divisions
	Eastern Circle, Palakkad.	Nilambur North, Nilambur South, Mannarkkad, Palakkad and Nemmara Forest Divisions
	Central Circle, Thrissur.	Thrissur, Chalakkudy, Vazhachal and Malayattoor Forest Divisions
	High Range Circle, Kottayam.	Kothamangalam, Mankulam, Munnar, Marayoor and Kottayam Forest Divisions
	Southern Circle, Kollam	Ranni, Konni, Punalur, Thenmala, Achenkovil and Thiruvananthapuram Forest Divisions
Wildlife Circles and Divisions	Wildlife, Palakkad.	Aralam, Wayanad, Parambikulam, Peechi and Silent Valley National Park Wildlife Divisions.
	Field Director Project Tiger, Kottayam.	Munnar, Idukki, Periyar Tiger Reserve East & Periyar Tiger West Wildlife Divisions.
	Agasthyavanam Biological Park , Thiruvananthapuram.	Shendurney and Thiruvananthapuram Wildlife Divisions.
Social Forestry Circles and Divisions.	Social Forestry, Kozhikode	Kasargodee, Kannur, Wayanad, Kozhikode and Malappuram Social Forestry Divisions.
	Social Forestry, Ernakulam	Palakkad, Thrissur, Ernakulam and Idukki Social Forestry Divisions.
	Social Forestry, Kollam	Alappuzha, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram Social Forestry Divisions.
Research Circles & Research Divisions	Working Plan & Research	Kozhikode, Palakkad, Munnar, Punalur and Kollam Working Plan Divisions as well as Research Division, Thrissur Research Division.

Northern circle, Kannur (2018-19)

The evaluation covered four forest divisions of the circle. They include

1. Kannur
2. Kozhikode
3. North Wayanad
4. South Wayanad

Six different activities were envisaged in the circle under four components. The distribution of activities is as follows:

Component	Particulars of work	Divisions
Forest and Wildlife Protection	Digging water holes/Ponds River Bank Stabilization Soil and moisture conservation / Gully Plugging	South Wayanad Kasargodee South Wayanad, Kozhikode
Forest Fire Management	Engaging Fire Gang	South Wayanad, Kozhikode, Kasargode
Infrastructure Development	Providing basic infrastructure to tribal settlement	South Wayanad
Capacity Building	Conducting Nature Camps	North Wayanad

All the activities mentioned in the APO were carried out in the Circle. In addition, spillover activities of the APOs 2014-15 and 2015-16 were also undertaken. These activities were also evaluated.

I. Forest and Wildlife Protection

a. Digging water holes/Ponds

Location / Range / Division	GPS Location	Dimensions (m^3)	Observations of the Evaluation Team
Pulpplally/ Srambi / Chedleth / South Wayanad	N11°32'22.8" E76°00'98.2"	561.69	Good
Pulpplally/Polanna/ Chedleth / South Wayanad	N11°41'17.5" E76°5630.7"	558.94	Good

Observations of the Evaluation Team

Type of Assets/ Division / Range / Place	Type of current use / Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Pond/Pulpplally/ Srambi/ Chedleth / South Wayanad	The Water retention is medium.	The ponds deliver 70% of the envisaged impacts and needs desiltation.	7	Medium
Pond/Pulpplally/ Polanna/Chedleth / South Wayanad	The Water retention is medium.	The ponds deliver 70% of the envisaged impacts and needs desiltation.	7	Medium

Water pond at Pulpally

The activity carried out during 2018-2019 was physically verified, records perused and found correct. Ponds were able to deliver only 70% of the envisaged impacts. The structure needs periodical desiltation.

b. River bank stabilization

Location / Range / Division	GPS Location	Dimensions (m^3)	Observations of the Evaluation Team
Balavanthadukka/ Kasargode/ Kasargode	N12°53'53.5" E75°.18'80.56"	15 x 0.5 x 2	Verified.

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	River Bank Stabilization / Balavanthadukka Kasargode/ Kasargode	Vegetation has established well. which protects soil erosion and road damage.	Good	9	High

The activity was physically assessed, the records were verified and found correct.

Soil and moisture conservation / Gully Plugging

Sites Team	Location / Range / Division	GPS Location	Dimensions (m^2)	Observations of the Evaluation
1.	Nalukettumchola / Meppady/South Wayanad	N11°35'21.56" E76°06'17.31" Altitude:725	87.536	Good condition
2.	Vannathimala/Kalpetta/ South Wayanad	N11°37'11.4" E75°59'53.4"	87.682	Good condition
3.	Poozhithodu/ Peruvannamuzhy/ Kozhikode	N11°50'27.5" E75°59'01.3"	85.654	Good condition
4.	Kurumurukandy and Payona /Puthuppadi/ Thamarassery/ Kozhikode	N11°84'26.05" E75°65'57.95" Alt:167 msl	92.324	Good condition
5.	Kolamala and Mele Kolamala/Puthuppadi/ Thamarassery/ Kozhikode	N11°45'451" E75°52'661"	89.256	Good condition

Observations of the evaluation team

Type of Assets/ Division / Range / Place	Type of current use / Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Nalukettumchola/ Meppady/South Wayanad	The gullies were constructed in 2018-19 has good soil retention.	The gullies have helped retain mositure in the adjoining areas, improving the vegetation.	7	Good
Vannathimala/ Kalpetta/South Wayanad			8	Good
Poozhithodu/ Peruvannamuzhy /Kozhikode			8	Good
Kurumurukandy and Payona/ Puthuppadi/ Thamarassery/ Kozhikode			7	Good
Kolamala and Mele/ Kolamala /Puthuppadi Thamarassery / Kozhikode			8	Good

Gully plug dimension assessment

Under the activity soil and water conservation, gully plugging was carried out in 2018-2019.The gullies were evaluated for physical existence and quality. The specifications of the gullies were checked by verifying the vouchers and estimates.

II. Forest fire management

a. Engaging Fire Gang: Under the component Forest fire management fire gang, fire watchers, fire protection mazdoors were engaged for fire protection activity.

Location / Range / Division	Activity
Peedikapullu /Kalpetta/ South Wayanad	Fire Gang
Attipara/ Kalpetta/ South Wayanad	Fire Gang
Head Quarteres level/Meppady / South Wayanad	Fire Gang
Chembra / Vythiry/Meppady/ South Wayanad	Fire Gang
Manikunnu & Thrikkaipetta/ Vythiry/Meppady/ South Wayanad	Fire Gang
Veettikunnu / Vythiry/ Meppady/ South Wayanad	Fire Gang
Puthuppady/ Thamarassery/Kozhikode	Fire protection Mazdoor
Edathara/Thamarassery/ Kozhikode	Fire protection Mazdoor
Kadothikunnu/ Nairkolly/ Thamarassery/ Kozhikode	Fire protection Mazdoor
Kanalad/ Thamarassery/ Kozhikode	Fire protection Mazdoor
Thamburankolli/Nairkolly/ Thamarassery/ Kozhikode	Fire protection Mazdoor
Peedikappara/ Thamarassery/ Kozhikode	Fire protection Mazdoor
Panathady/Kanhangad/Kasargode	Fire gang
Bheemanady/Kanhangad/Kasargode	Fire gang
Kidoor/ Anangaur/Kasaragod/Kasargode	Fire watcher
Bandaduka/Kasaragod/Kasargode	Firegang
Bovikanam/Kasaragod/Kasargode	Firegang
Panathur /Panathady /Kanhangad/Kasargode	Fire gang
Panathur /Panathady / Kanhangad/Kasargode	Fire gang

The activity was verified through inspecting bill books and vouchers and found correct.

III. Infrastructure development

a. Providing basic infrastructure to tribal settlement - Under this CAMPA activity small street lights and furniture were provided to the tribal settlements in different places in Chedleth range under South Wayanad.

Sl.No	Location /Range/ Division	Activity
1.	Appadu Community Hall/ Chedleth / South Wayanad	Providing furniture
2.	Athikkadavu Community Hall/ Chedleth / South Wayanad	Providing furniture
3.	Chettimattam Paniya Colony/ Irulam/ Chedleth / South Wayanad	Providing Small Street light
4.	Chettipambra Anganvady/Chedleth / South Wayanad	Providing furniture
5.	Kakkodan block PaniyaColony/Pulpally / Chedleth / South Wayanad	Providing SmallStreet light
6.	Kolarattukunnu Anganvady /Chedleth / South Wayanad	Providing furniture
7.	MadaparambuAnganvady /Chedleth / South Wayanad	Providing furniture
8.	Manikode Urali Colony / Pulpally / Chedleth / South Wayanad	Providing Small Street light
9.	Manthadam PaniyaColony/ Pulpally/Chedleth / South Wayanad	Providing small Street light
10.	Olimidavu NaikkaColony/ Pulpally /Chedleth/ South Wayanad	Providing Small Street light
11.	Vattappady Community Hall/ Chedleth / South Wayanad	Providing furniture
12.	Velamkode Anganvady /Chedleth/ South Wayanad	Providing furniture
13.	Vettathoor Anganvady/ Chedleth/South Wayanad	Providing furniture

The activitieswere verified through inspection of vouchers by the monitoring team and found correct.

Tribal girl provided study table

Study table provided under CAMPA

Provision of street lights

Interaction with the tribal VSS

IV. Capacity building

a. Conducting Nature Camps

Location / Range / Division	Activity
North Wayanad	Conducting training programme to protective staffs
North Wayanad	Conducting nature camps for staffs

Under the component capacity building conducted training programme and nature camps for protective staffs. The activity was verified from vouchers and found correct.

Following eight activities of earlier APOs (2014-16) were undertaken

A. CA plantation maintenance

Sl. No.	Location / Range / Division	GPS Location	Activity	Year of Activity	Dimensions (ha)
1	Tharippa CA Plantation / Kuttiyady / Kozhikode	N11°41'11.5" E75°51'14.8"	Engaging Fire mazdoors for fire protection work in CA plantation	2018-19	5.816
2	Meenpatti CA Plantation/ Kuttiyady / Kozhikode	N11°41'13.7" E75°51'17.8"	Engaging Fire mazdoors for fire protection work in CA plantation	2018-19	0.911

As a part of CA plantaion maintenance, fire mazdoors were engaged for fire protection work in compensatory afforestation plantation raised in Tharippa and Meenpatti in Luttiyady range, Kozhikode. The activity was verified through inspecting vouchers by the inspecting team and found correct.

B. Soil and moisture conservation / gully plugging

Location / Range / Division	GPS Location	Year of Construction	Dimensions (m)
Kollymala/Vythiri/ Meppady / South Wayanad	N11°50'35.8" E76°45'34.2"	2019-20	8.53 x 1.25x 0.54 10.57 x 1.13x 0.58 8 x1.13x0.54 16 x1.18x0.64
Karuvanthode / Kalpetta/ South Wayanad	N11°41'17.5" E76°56'30.7"	2018-19	9.47 x 2.47x 0.8 8.1 x 2.967x 0.909 10.25 x 2 x 0.8912
Seethapara/Pannikottur/ Peruvannamuzhy / Kozhikode	N11°32'22.8" E76°00'98.2"	2018-19	7x 2.06x 0.85 9.7x 2.05x 0.95 9.3x 2.0x 1 9.6x2.05x0.9
Chempothumpoil / Vilangad/Kuttiady/ Kozhikode	N11°32'22.8" E76°00'98.2"	2018-19	11.48x 0.9x 0.98 8.85x 0.9x 0.875
Uruppuvenkunnu/ Keezhpally/ Kottiyoor /Kannur	N11°84'26.05" E75°65'.57.95"	2018-19	7x 2.06x 0.85
Punneri/ Kannavam/ Kannavam/ Kannur	N11°82'01.1" E75°68'.27.47"	2018-19	4.20x2.06x 1.05 4.10x2.10x1.06 5.27x2.06x 1.0

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully Plugging/ Vythiri/ Meppady/ South Wayanad	Gully plugging constructed in 2018 -2019 & 2019-20. The soil retention is good.	Few Gullies are damaged due to flood.	7	Good
2.	Gully Plugging/ South Wayanad/ Kalpetta / Karuvanthode	Gully plugging constructed in 2018-19 is maintained good. The soil retention is good.	The gully deliver 80 % of the envisaged impacts.	8	Good
3.	Gully Plugging/ Peruvannamuzhy/ Kozhikode Division	Gully plugging constructed in 2018-19. The soil retention is good.	Few Gullies are damaged due to wild life movement.	7	Good
4.	Gully Plugging/ Thamarassery/ Kozhikode	Gully plugging constructed in 2018-19. The soil retention is good.	The gully deliver 70 % of the envisaged impacts	8	Good
5.	Gully Plugging/ Kozhikode/ Peruvannamuzhy / Pannikottur	Gully plugging constructed in 2018-19. The soil retention is good.	The gully deliver 80 % of the envisaged impacts	8	Good
6.	Gully Plugging/ Kozhikode/ Peruvannamuzhy / Pannikottur	Gully plugging constructed in 2018-19. The soil retention is good.	The gully deliver 80 % of the envisaged impacts	8	Good
7.	Gully Plugging/ Kozhikode/ Kuttiady / Chempothumpoil	Gully plugging constructed in 2018-19. The soil retention is good.	The gully deliver 80 % of the envisaged impacts	7	Good
8.	Gully Plugging/ Uruppuvenkunnu /Keezhpally / Kottiyoor / Kannur	Gully plugging constructed in 2018-19. The soil retention is good.	Maintained in good condition	8	Good
9.	Gully Plugging/ Punneri/ Kannavam/ Kannavam /Kannur	Gully plugging constructed in 2018-19. The soil retention is good.	Maintained in good condition	8	Good

Under soil water conserservation gully plugging was carried out in 10 sites. The evaluation team physically perusedthe gullies for their quality and dimensions were measured and confirmed with the vouchers/records. Few Gullieswerefound damaged due to wild life movement and flood. The activity was verified through inspecting vouchers by the inspecting team and found correct.

C. Construction/ cleaning/ distillation of pond

Sites	Location / Range / Division	GPSLocation	Year of Construction	Dimensions (m)
1	Chendamoola, Kamblikara/ Parappa/ Kasargode / Kasargode	N12°58'11.44" E75°27'20.32" Altitude113msl	2018 -2019	18x12x 6
2	Balavanthadukka/ Kasargode / Kasargode	N12°52'47.67" E75°20'02.07" Altitude121 msl	2018 -2019	10x10x 5
3	Ranipuram/ Kanhangad/ Kasargode	N12°41'22.19" E75°36'73.7" Altitude 820 msl	2018 -2019	15x5x 2 16x13x 105

Observations of the Evaluation Team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Ponds / Kasargode/ Kasargode	The ponds were constructed in 2018-19. The water retention is medium.	The ponds deliver 70 % of the envisaged impacts and needs desiltation.	7	Medium
2.	Ponds/ Kanhangad/ Kasargode	The ponds were constructed in 2018-19. The water retention is medium.	The ponds deliver 70% of the envisaged impacts and needs desiltation.	7	Medium

The ponds were evaluated for their physical existence and quality. They need desiltation. The specifications of the ponds were checked by verifying the vouchers and estimates.

D. Better connectivity (includes culverts/ foot bridges, roads)

Sites	Location / Range / Division	GPS Location	Year of Construction	Dimensions (m)
1	Athikkode/Kakkayam /Peruvannamuzhy/ Kozhikode	N11°53'58.93" E75°95'21.87"	2018 -2019	9.8 x 2.9

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Culverts / Athikkode / Kakkayam / Peruvannamuzhy / Kozhikode	The culverts were damaged in flood.	Damaged	3	Low

The culverts were inspected by the team for their existence and quality and found damaged due to flood. The specifications of the ponds were checked by verifying the vouchers and estimates.

E. Fire Mazdoor/ fire gangs/ EDC assistance

Location / Range / Division	Activity
Jankikkad / Kuttiyadi/ Kozhikode	Fire mazdoor
Nilamburkad To Mailallampara/ Kanalad/ Thamarassery / Kozhikode	Fire mazdoor
Peruvannamuzhy / Kozhikode	Fire protection
Puthuppady/ Thamarassery / Kozhikode	Fire mazdoor
Palchuram/ Kottiyoor/ Kannur	Fire gang
Edappuzha/Irutty/ Kottiyoor / Kannur	Fire gang
Konnakkad /Kanhangad / Kasargode	Fire watcher
Kasaragod / Kasargode	Fire gang
Bheemanady /Kanhangad / Kasargode	Fire watcher
Panathady/ Ranipuram / Kasargode	Fire gang
Parappa /Parappa/ Kasargode	Fire gang
Mandakol /Bandaduka / Kasargode	Fire gang
Maruthom / Kasargode	Fire gang
Karadukka / Kasargode	Fire gang
Muliyar / Kasargode	Fire gang
Chittarikkal/ Bheemanady / Kasargode	Fire gang
Vilaramkunnu / Padinjarathara/ Kalpetta / South Wayanad	Fire gang
Kalpetta / SouthWayanad	Fire gang

The evaluation team verified the records and vouchers for the engagement of fire gang, fire mazdoor, fire watchers and driver for fire protection activities vehicle and found correct.

F. Assistance to Tribal VSS

Sl.No	Location /Range/ Division	Activity
1.	Ambalamoola/ Begur/ NorthWayanad	Supply bench & desk for alternate school
2.	Anapanthi Kn Colony/ Pulpally/ Chedleth/ South Wayanad	Street lights
3.	Anappathy Anganvady/ Chedleth/ South Wayanad	Furniture (Toys)
4.	OzhakollyAnganvady/ Nellarachal/ Aranamala/ Meppady/ South Wayanad	Improving infrastructure
5.	Anganvady- Tribal Settlement/ Meppady/ South Wayanad	Drinking Water facilities
6.	Appadu Community Hall/ Chedleth/ South Wayanad	Providing furniture
7.	Athikkadavu Community Hall/Chedleth / South Wayanad	Providing furniture
8.	Cheriyamala /Pulpally/ Chedleth / South Wayanad	Street lights
9.	Chettimattam Paniya Colony/ Irulam/ Chedleth/ South Wayanad	SmallStreet lights
10.	Chettipambra Anganvady/Chedleth / South Wayanad	Providing furniture
11.	Churali Colony/ Kunhome/Peria/ North Wayand	Educational support to anganvady
12.	Elambelery To Poolakkunnu Tribal Settlement/Meppady/ South Wayanad	Drinking Water facilities
13.	Forest Vayal / Pulpally /Chedleth / South Wayanad	Basic infrastructure improvement
14.	Govindanpara TribalSettlement/Vythiri /Meppady /South Wayanad	House hold articles
15.	Idiyamvayal Community Hall / Kalpetta /Kalpetta/South Wayanad	Equipment like steel racks, table, chair, Plastic Chair
16.	Kakkodan Block Paniya Colony/ Pulpally/ Chedleth/ South Wayanad	Small Street light
17.	Kallingal / Kunhome / Peria / North Wayanad	LPG gas connection
18.	Kappikkalam Anganvady/Cheerapoil Tribal Settlement/ Padinjarathaa / Kalpetta / South Wayanad	Equipment like steel racks, table, chair, Plastic Chair
19.	Karukanthode Anganvady /Karukan Thode Tribal Settlement/ Kalpetta /Kalpetta / South Wayanad	Equipment like steel racks, table, chair, Plastic Chair
20.	Kolarattukunnu –Anganvady/ Chedleth / South Wayanad	Providing furniture
21.	Koodaloor KN Colony/Irulam/Chedleth / South Wayanad	Street light
22.	Koonampala /Kottiyoor / Kannur	LPG gas connection
23.	Kuttiyamvayal Anganvady/Mangalam Kunnu Tribal Settlement/ Padinjarathaa /Kalpetta /South Wayanad	Equipment like steel racks, table, chair, Plastic Chair, Slider, Oonjal
24.	MadaparambuAnganvady/ Chedleth / South Wayanad	Providing furniture and Drinking Water facilities
25.	Madathil Colony/ Varayal/ Peria/ North Wayanad	Educational support to schools
26.	Mangalassery /Mananthavady / North Wayanad	Study materials to tribal students and Basic infrastructure improvement

Sl.No	Location /Range/ Division	Activity
27.	Manikode Urali Colony / Pulpally/ Chedleth Range/South Wayanad	SmallStreet light
28.	Manthadam PaniyaColony/ Pulpally/Chedleth / South Wayanad	SmallStreet light
29.	Olimidavu NaikkaColony/ Pulpally/Chedleth /South Wayand	SmallStreet light
30.	Paithalmala/ Karamaramthattu / Thaliparambu / Kannur	Water pump for drinking water
31.	Pilathil Colony/ Kunhome/ Peria / North Wayand	Furniture to community hall
32.	Suganthagiritribal Settlement/ Kalpetta /Kalpetta /South Wayanad	Equipment like steel racks, table, chair, Plastic Chair
33.	Thazhaseery Colony/Pulapally / Chedleth / South Wayanad	Street lights
34.	Varachankunnu Community Hall/ Chedleth /South Wayanad	Furniture
35.	Various Tribal Settlement In Kalpetta /Kalpetta /South Wayanad	Torches, Steel boxes, Plastic chairs
36.	Vattappady Community Hall /Chedleth / South Wayanad	Providing furniture
37.	VelamkodeAnganvady/ Chedleth / South Wayanad	Providing furniture
38.	Vettathoor/Anganvady- PFS/ Chedleth / South Wayanad	Furniture

Drinking water facilities at Madaparambu

As part of the CAMPA operation, the tribal communities were provided with furnitures, small street light, Educational support, bench and desk to alternate schools and anganvady, Study materials to tribal students, steel rack , steel table, steel chair, plastic chair, Slider, Oonjal, toys, drinking water facility, water pump for drinking water and LPG gas connection. The records were verified and found correct.

G. Purchase of equipment

Sl.No	Location /Range/ Division	Activity
1	Kalpetta / South Wayanad	Electronic Search Light for elephant Scaring squad
2	Thamarassery / Kozhikode	Cages, Snake catching equipment
3	Chedlth / South Wayanad	Security equipment
4	APC at Kakkayam/ Kozhikode	Torches
5	Peruvannamuzhy / Kozhikode	Life saving equipments
6	Kanhangad / Kasargode	Life saving equipments
7	DFO office/ Kasargode	Life saving equipments
8	Division office, South Wayanad	Android mobile phone for MSTRIPS

Fire Safety Guards

Search Lights

The equipment purchased were evaluated for physical existence and quality. They were checked by verifying the vouchers. The equipment are in good condition and used regularly.

H. Awareness programme/ Nature camps/ Training to protective staffs

Location / / Division	Activity
Ladysmith Hall / Kalpetta/ South Wayanad	Conducting training in HAWK Module to staff
Kasargode / Kasargode	Training in vanasree complex
Kasargode / Kasargode	Training in vanasree complex
Kasargode / Kasargode	Snake catcher Training
Kasargode / Kasargode	Snake catcher Training

The evaluation team verified the records and vouchers pertaining to the awareness programme.

All the six activities envisaged were completed during 2018-19 in the circle. Eight spillovers of earlier years were also taken up during this period. These activities were also evaluated. Against an outlay of Rs. 47.50 lakhs allotted, an expenditure of Rs. 52.18 lakhs was incurred due to unforseen expenditure to the camp sheds as a result of damage by the floods.

Eastern circle, Palakkad (2018 - 2019)

The evaluation covered five forest divisions of the circle. They include

1. Mannarkkad
2. Nenmara
3. Nilambur North
4. Nilambur South
5. Palakkad

Five different activities have been undertaken in the circle. The distribution of activities is as follows:

Component	Particulars of work	Divisions
Forest and Wildlife Protection	Creation of Kayyalas Interior Camp sheds Maintenance of trek path/ Patrolling Route	Nemmara Nemmara Palakkad
	River Bank Stabilization	Palakkad
Forest Fire Management	Engaging Fire Gang	Nilambur North, Nilambur South, Palakkad

I. Forest and Wildlife protection

a. Creation of Kayyalas

Sites	GPS Location	Dimensions (m)	Remarks
Kollengode /Nemmara	N10° 34'15.26" E76°46'32.62"	143 x 1.5x0.1	Inspected the kayyaylas created during 2017-18 and found in good condition

The measurement book was checked for dimensions and expenditure and found correct.

Bommiyampadi campshed

b. Interior campsheds

Sites	GPS Location	Year of Construction	Observations of the Evaluation Team
Nelliyampathy, Nemmara	N10°30'14.7" E76°41'27.94"	Constructed during British period	Maintenance of doors/windows/ kitchen utensils/ furnitures are required.

Sooryapara Camp shed at Nelliyampathy

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of asset - Low, Medium or High
1.	Sooryapara Camp shed, Nelliyampathy, Nemmara	Damaged due to minimal maintenance	The shed may be maintained for use by the frontline staff.	5	Medium

c. Maintenance of trek path/ Patrolling route

Sites	GPS Location	Year of Activity	Dimensions	Observations of the Evaluation Team
Pudur, Attappady	N11°09'56.06" E76°37'26.41"	2018-19	Length - 8 km Width - 3.2m	The works were evaluated for physical existence and quality.
Koottupuzha Elival, Olavakkode	N11°25'0.72" E76°13'28.01"	2019-20	Length – 3km	The works were evaluated for the physical existence and for the quality.

Trek path at Pudur

The Trek paths which are useful for the frontline staff were evaluated for physical existence and quality.

d. River bank stabilization

Sl. No.	Divisions	Area (ha)/ Planting	Species	Survival (%)	Observations of the Evaluation Team
1	Elival, Olavakkode /Palakkad	5 ha	Bamboo and *Syzigium cumini*	10%	The river bank was severely damaged in the 2018 floods.

Under river bank stabilization, 1100 plants of bamboo and *S.cumini* were planted in 5 ha. Most of them were destroyed due to 2018 floods.

M-book details on production and distribution of seedlings

II. Forest fire management

a. Engaging fire gang

Location / Range / Division	Activity
Nilambur North : Kanjirapuzha, Walluvassery, Vazhukaradam, Ayiravellikavu, Edavanna, Kodumpuzha	Fire gang
Karulai, Nilambur South	Fire gang
Mannarkad, Agali, Attappady	Fire gang and purchase of furniture for campsheds of the range
Olavakkode and Walayar/ Palakkad	Fire gang

The inspection team verified the records and the vouchers for engaging fire gang and purchase of furnitures for campsheds of the entire range and found correct.

All the five activities envisaged were completed during 2018-19 in the circle. The amount allotted for the campshed was utilized for the purchase of equipment such as water purifier and the vouchers were checked. Overall, an amount of Rs. 47.50 lakhs was allotted to the circle which was fully utilised.

Central circle, Thrissur (2018 - 2019)

The evaluation covered four forest divisions of the circle. They include

1. Chalakkudy
2. Malayattoor
3. Thrissur
4. Vazhachal

Six different activities were undertakenunder three components in the circle. The distribution of activities is as follows.

Component	Particulars of work	Divisions
Compensatory Afforestation Funds	Compensatory Afforestation Works	Chalakkudy, Vazhachal
Forest and Wildlife Protection	Better connectivity including bridges roads communications	Chalakkudy, Vazhachal, Malayatoor
	Construction & Maintenance of check dams	Malayatoor
	Construction of Chappath/ Bridge	Malayatoor
	Interior Camp sheds	Chalakkudy
Forest Fire Management	Engaging Fire Gang	Chalakkudy, Vazhachal, Malayatoor, Thrissur

Two new activities were also taken up. were These activities were also evaluated.

I. Compensatory afforestation funds

a. **Compensatory afforestation works:** This work has not been evaluated as the details were not available with the concerned office.

A CA plantation of 2018 visited by the team

II. Forest and wildlife protection

a. **Interior campsheds**

Sites	GPS Location	Dimensions (m^2)	Observations of the Evaluation Team
Camp Shed/ Chalakudy division/Vellikulangara Range	N10°22'11.59" E76°27'53.53" N10°22'18.93" E76°20'54.4" N10°24'59.6" E76°20'54.4"	10	The above Camp sheds are maintained well.

Sites	GPS Location	Dimensions (m^2)	Observations of the Evaluation Team
Vazhachal Division, Poringalkuthu	N10°20'46.82" E76°38'18.76"	95	Maintenance like patch work in the floor of the existing camp shed.
Malayattoor Division Thundathil & Kuttampuzha ranges	N10°11'46.1" E76°48'1.5" N10°09'24.1" E76°50'23.2"72.	16	Maintenance like tress work over the existing camp shed.

The inspection team with members of VSS at camp shed

III. Forest fire management

a. **Engaging fire gang:** Antipoaching watchers and fire gangs were engaged through tribal VSS tribal. The records were verified and found correct.

IV. Capacity building

a. **Training and workshops:** Awareness classes and nature education were imparted in Vellikulangara, Chalakudy Division during 2019.

The following three new activities outside the APO were undertaken

A. Provision for field Ration for interior camps

S.No	Year	Range	Particulars (Field Ration)
1.	2018	Vellikulangara	Providing field ration for the participants in camping site (10 Nos) inside forest area in Vellikulangara range
2.	2019	Palappilly	Field ration for interior camping in the Palappilly range
3.	2019	Pariyaram	Cost of field ration for the participants in camping site inside forest area in Pariyaram
4.	2019	Vellikulangara	Providing field ration for interior camping in the Vellikulangara range

The records and vouchers were verified and found correct

B. Purchase of equipment

S. No.	Location / Range / Division	Items procured
1	Parakkadavu/ Palappily / Chalakudy	Interior camp shed items
2	Myladumpara/Pariyaram /Chalakudy	Furniture and utensils
3	Charpa /Vazhachal	Emergency flickering light and search light for control room vehicle

The items were physically verified by the team. The vouchers were also verified and found correct.

Out of the six activities envisaged under the three components during 2018-19, in the circle except one activity, five activities have not been evaluated. Two new activities outside the APO were undertaken.Overall, an amount of Rs. 67.57 lakhs was allotted to the circle during the period of which 95.14 percent financial achievement was observed.

High Range Circle, Kottayam (2018 - 2019)

The evaluation covered five forest divisions of the circle. They include

1. Kothamangalam
2. Kottayam
3. Mankulam
4. Marayoor
5. Munnar

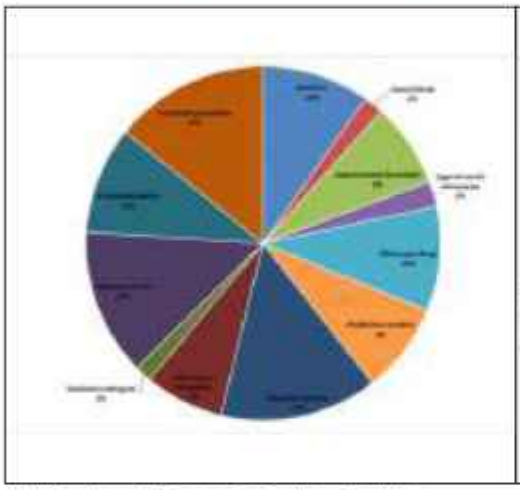
Seven different activities were undertaken in the circle. The distribution of activities is as follows:

Component	Particulars of Work	Divisions
Compensatory Afforestation Funds	Compensatory Afforestation Works	Munnar
Forest and Wildlife Protection	Digging water holes/Ponds	Mankulam, Marayoor, Munnar
	Interior Camp sheds	Kottayam, Marayoor
	Maintenance of trek path/ Patrolling Route	Marayoor, Munnar
	Soil and moisture conservation / Gully Plugging	Munnar, Kothamangalam
Infrastructure Development	Providing basic infrastructure to tribal settlement	Marayoor
Capacity Building	Training and workshops	Marayoor, Mankulam

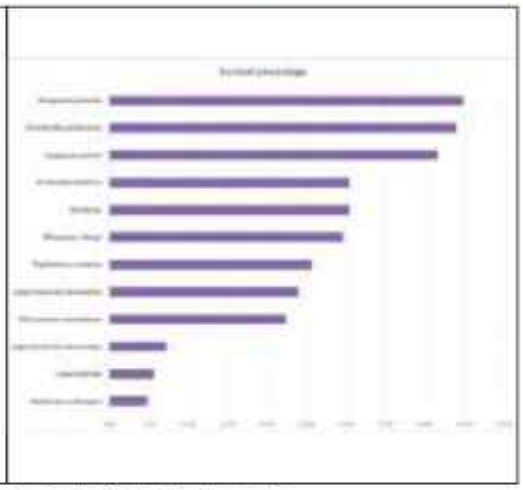
I. Compensatory afforestation funds

a. Compensatory afforestation works

S. No.	Divisions	Area (ha)/ Planting	Species	Survival (%)
1.	Munnar, Makkucmchal, Adimali	19.3 ha	*Pongamia pinnata, Syzygium cumini, Terminalia paniculata, T. bellirica,* Bamboos, *Garcinia gummigutta, Albizia procera, Dalbergia, Mimusops elengi, Vateria indica, Lagerstroemia microcarpa, Cassia fistula, Pterocarpus marsupium, Phyllanthus emblica*	40.16



Distribution of the species in the plantation



Survival of individual species

Growth performance of different species in terms of height (cm) at Makkumchal

Species	Average (cm)	Maximum (cm)	Minimum (cm)	CV (%)
Bamboos	50.45	78.00	33.00	26.37
Cassia fistula	125.71	200.00	89.00	77.31
Lagerstroemia lanceolata	32.43	51.00	19.00	17.92
Lagerstroemia microcarpa	57.56	65.00	50.00	11.09
Mimusops elengi	42.78	70.00	21.00	23.13
Phyllanthus emblica	40.31	61.00	19.00	17.77
Pongamia pinnata	96.45	212.00	34.00	96.77
Pterocarpus marsupium	54.43	106.00	24.00	56.20
Swietenia mahagoni	83.00	90.00	74.00	12.41
Syzygium cumini	78.37	200.00	19.00	96.79
Terminalia bellirica	70.05	113.00	30.00	55.09
Terminalia paniculata	59.67	88.00	35.00	26.57

Survival of different species at Makkumchal plantation

This activity was carried out in Munnar Division. Of the 12 species planted only *Pongamia pinnata*, *Syzygium cumini* and *Terminalia paniculata* recorded more than 40 % survival.

II. Forest and wildlife protection

a. Interior campsheds

Sites	GPS Location	Dimensions (m^3)	Remarks
1	N10°10'55.88" E77°09'38.18" Elevation-1023m	8.548	The shed is maintained well.
2	N10°16'19.38" E77°09'17.08" Elevation-1016m	9.408	The shed is maintained well.
3	N10°16'21.80" E77°09'16.19" Elevation-1033m	9.408	The shed is maintained well.
4	N09°40'54.55" E76°54'24.91" Elevation-1037m	34.43	Steel Structure for Water Tank with 1.35 x 1.35 x 2.75 was constructed.

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp Shed/ Ambalappara, Marayoor, Marayoor	The shed is maintained well.	The shed is useful for the frontline staff.	9	High
2	Camp Shed / Karimpara, Marayoor, Marayoor	The shed is maintained well.	The shed is useful for the frontline staff.	9	High
3	Camp Shed / Uralkuthy, Marayoor, Marayoor	The shed is maintained well.	The shed is useful for the frontline staff.	9	High
4	Campshed / Vagamon/ Erumely/ Kottayam	The camp shed has two rooms, kitchen, verandah and a toilet. Roofing was done with 0.50 mm GI Sheet.	The shed is useful for the frontline staff.	9	High

Observations of the Evaluation Team

Campshed at Erumely

The works were evaluated for physical existence and quality. The specifications of the camp sheds were checked with measurement books and vouchers and verified the expenditure.

b. Soil and moisture conservation / Gully Plugging

Sites	GPSLocation	Dimensions (m)	Observations of the Evaluation Team
1.	N10°10'40.55" E77°08'54.22" Elevation-2235m	10 x 10 x 1.40	Water is stored at full level for the wildlife.
2.	N10v10'49.18" E77°09'09.17" Elevation-2272m	10 x 10 x 1.40	Water is stored at full level for the wildlife.
3.	N10°03'52.23" E76°47'45.43" Elevation-227m	10 x 5 x 1.40	Water is stored at full level for the wildlife.
4.	N10°01547" E76°80817" Elevation-127m	2.23 x 0.97 x 4.42 2.48 x 1.09 x 5.92 2.03 x 1.02 x 4.52 2.43 x 1.2 x 4.73 2.2 x 1.11 x 7.71 2.47 x 1.14 x 3.9 2.28 x 1.09 x 5.4	Water stored at quarter level

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully/Bluvady/ Chullikkandam/ Mullaringad/ Kothamangalam	Water stored at quarter level	Nine gullies were created. The water storage was observed to be low in almost all of them.	4	Medium
2.	Gundumala Water Hole/ Munnar, Munnar	Water is stored at full level for the wildlife.	This water hole is mostly used to provide water for animals. Well maintained.	9	High
3.	Munnam Mile Water Hole/ Munnar, Neriamangalam	Water is stored at full level for the wildlife.	This water hole is mostly used to provide water for animals. Well maintained.	9	High
4.	Muthuvanpara Water Hole: Munnar, Munnar	Water is stored at full level for the wildlife.	This water hole is mostly used to provide water for animals. Well maintained.	9	High

Gully at Bluvady

Muthuvanpara Water Hole

Munnam Mile Water Hole

Under the soil water conservations the gullies and water holes made were inspected for their physicl appaearance and quality and found good wildlife. The records are verified and found correct.

III. Infrastructure development

a. Providing basic infrastructure to tribal settlement: LPG connections were provided to the members of Kuthukallukudi VSS , Pongampally VSS and Cherukad VSS of Marayoor and Kanthalloor Ranges in Marayoor Division.

IV. Capacity building

a. Training and workshops

(i) Training was provided to the staff and watchers on fire protection during 2018-2019, Marayoor Division, Marayoor Range.

(ii) Engaging Fire Gang: Fire gangs were engaged in Marayaoor Division (Marayoor Range and Kanthalloor Range), Mankulam Division, Mankulam Range, Mankulam Section, Mankulam Division, Mankulam Range, Kallar Section and Mankulam Division, Anakkulam Range.

(iii) Training Workshop: A training workshop on bird watching and bird census was organized at Mankulam Division, Mankulam Range for protection staff and watchers.

The following new activity outside the APO were undertaken

A. Soil and moisture conservation

Sites	Type of Assets/ Division / Range	GPS Location	Dimensions (m)	Observations of the Evaluation Team
1.	Temporary checkdam/ Nallyamavu / Vattakkalamthatty/ Kulamavu/ Thodupuzha/ Kothamangalam	N°10.01544° E°76.80844° Elevation-134 m	-	The check dam has been constructed using brushwood.
2.	Gully Plugging(6)/ Bluvady/ Mullaringad/ Kothamangalam	N°10.01544° E°76.80844° Elevation-134 m	2.56x 0.92x 5.16 2.25 x 1 x 9.41 2.25 x 1.07 x 6.1 2.73 x 1.2 x 8.73	Water stored at quarter level in all except one, wherefull storage was observed.
3.	Gully Plugging/ Perakuthu/ Kothamangalam/ Kothamangalam	N°10.0761° E°76.7220° Elevation- 72 m	43.64m^3	Water stored at quarter level
4.	Gully Plugging/ Pothencheri/ Nedukkadu/ Kaliyar/ Kothamangalam	N°10.0132° E°76.7357° Elevation- 50 m	43.64m^3	Water stored at quarter level

Lush vegetation surrounding the SMC

Under this activity, gullies were created in 8 sites and temporary check dam in one site. These activities were verified physically and dimensions were measured and confirmed with the vouchers/records. All the structures were in healthy conditions and useful in soil moisture conservation as is evident from the lush green vegetation.

Seven activities were planned under four components during 2018-19 in the circle. Two activities have not been evaluated as the details were not available with the concerned office. Soil and moisture conservation activities outside the APO were undertaken. Overall, an amount of Rs. 62.85 lakhs was allotted to the circle during the period of which 96.82 percent financial achievement was observed.

Southern circle, Kollam (2018 - 2019)

The evaluation covered six forest divisions of the circle. They include

1. Achenkovil
2. Konni
3. Punalur
4. Ranni
5. Thenmala
6. Thiruvananthapuram

Six different activities were undertaken in the circle. The distribution of activities is as follows:

Component	Particulars of Work	Divisions
Compensatory Afforestation Funds	Compensatory Afforestation Works	Punalur
Forest and Wildlife Protection	Better connectivity including bridges roads communications	Konni, Achenkovil, Punalur, Ranni, Thenmala
	Interior Camp sheds	Achenkovil
	River Bank Stabilization	Konni
Forest Fire Management	Engaging Fire Gang	Konni, Achenkovil, Punalur, Ranni, Thenmala, Thiruvananthapuram
Capacity Buildling	Awareness Program	Ranni, Konni, Achenkoil, Punalur

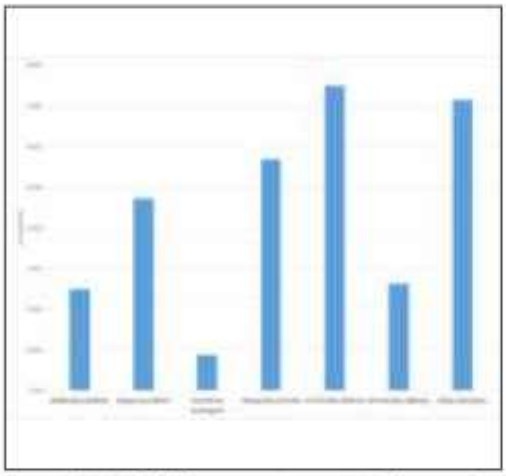
Most activities mentioned in the APO were carried out in the Circle. Four new activities were also taken up. were These activities were also evaluated.

I. Compensatory afforestation funds

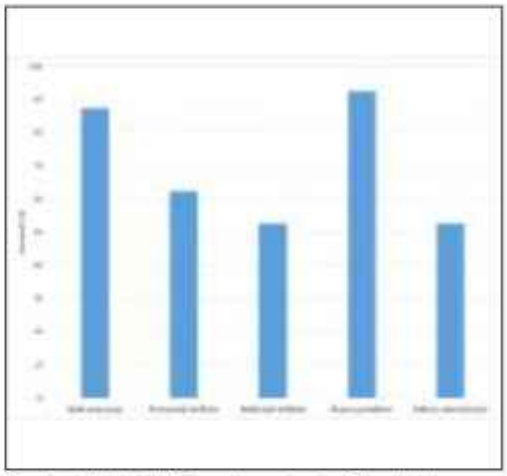
a. Compensatory afforestation works

S. No.	GPS	Area (ha)/ Planting	Species	Survival (%)
1.	N09°3'51.76" E76°58'2.39"	Out of 50 ha at Verukuzhi *10 ha gap planting*	*Terminalia bellirica, Hopea parviflora, Xylia xylocarpa, Schleichera oleosa* and *Atrocarpus hirsutus.*	54.00
2.	N09°05'59.9" E76°57'3.9"	Kulatharapacha 28 ha gap plantation	*Dalbergia latifolia, Hopea parviflora, Sweitenia mahogany, Pongamia pinnata, Xylia xylocarpa, Terminalia bellirica,* and *Terminalia elliptica*	44.37
3.	N09°05'59.9" E76°57'3.9"	Chudalakunnu gap plantation work in an area of 10 Ha	*Xylia xylocarpa, Terminalia bellirica, Dalbergia latifolia, Hopea parviflora, Albizia odoratissima.*	69.5

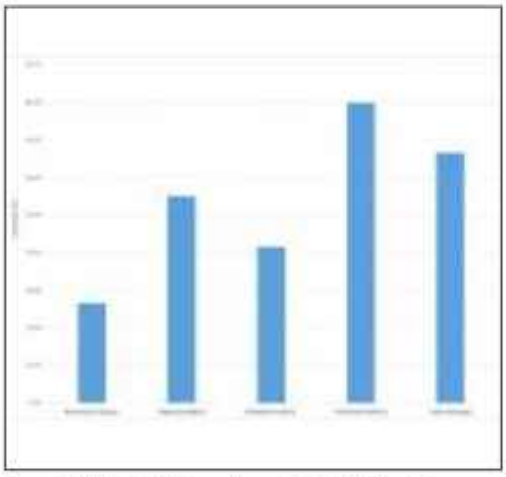
Activities which were carried out include selective removal of alien exotic weeds, gap planting, construction of staggered trenches for soil water conservation and to hold seeds of forest tree species for further natural regeneration, protection against fire, grazing by engaging protection watcher, fire protection through fire break.



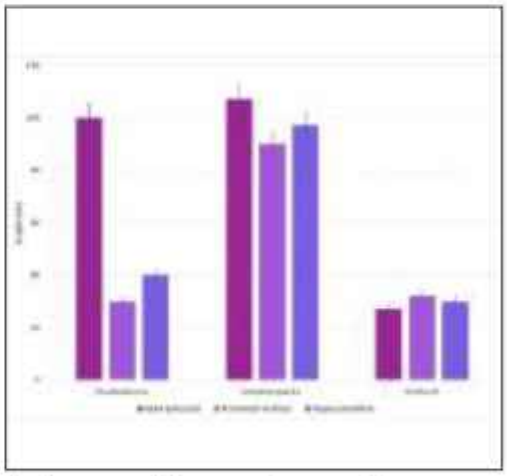
Survival (%) of different species in Kulathurpacha



Survival (%) of different species in Chudalakunnu



Survival (%) of different species in Verikuzhi



Performance of three species across three locations in the Circle

Compensatory afforestation was carried out in Punalur Division. Performance of three species *Hopea parviflora, Xylia xylocarpa, Terminalia bellirica* across three locations were evaluated. All three species performed wellin Kulatharapacha.

II. Forest and Wildlife protection

a. **Better connectivity including bridges roads communications:** Records were verified and found correct

b. **Interior campsheds**

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1	N09°10'0.498" E77°9'17.736"	2018-2019	10 x 10.5	The condition of the structure is good.

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Camp Shed at Chittar, Achenkovil division	The shed is maintained well.	The shed is useful for the frontline staff.	7	High

Camp shed at Chittar

The camp shed was evaluated for its physical existence and quality. The specifications of the camp shed was checked by physical measurements and verifying the vouchers and estimates. The camp shed is well maintained which is useful for the frontline staff.

c. River bank stabilization

Divisions	Area of Planting	Species	Survival (%)	Observations of the Evaluation Team
Mannapara at Konni N09°100165 E77°123735	12 km along Achencovil river from Mannarapara to Chithode	3000 *Bambusa bambos*	65	Natural regeneration of *Tetrameles nudiflora, Albizia chinensis, Homonoia riparia*and *Bombax ceiba*was noted.

Divisions	Area of Planting	Species	Survival (%)	Observations of the Evaluation Team
				The weeds *Glycosmis pentaphylla, Jatropa curcas, Scoparia dulcis, Rorippa indica* and *Acacia initia* were observed River width increased by 5m in both sides. The field was highly infested with weeds and the saplings were damaged due to elephant and wild boar grazing.

River Bank Stabilisation along Achenkovil river in Konni Division

Successful establishment of bamboos in river bank stabilisation

III. Forest fire management

a. Engaging Fire Gang: This work was carried out with the support of VSS members. Records were verified and found correct.

IV. Human animal interace

a. Preparation of detailed GIS based system for managing Human animal interface: It was explained that this is a common activity organised by the HQ and all details are available with HQ.

V. Capacity buildling

a. Awareness programmes

Conducted five training and awareness programmes to students field staff, VSS members and public at at Ranni, Konni, Achenkoil, Punalur.

The benefits as observed from records and through interviews.

i. Due to fire gang activities incidents of forest fire reduced

ii. Human animal conflict reduced by placing elephant ponds at correct locations

iii. Improved basic infrastructure like camp shed facilities, received LPG connections

iv. Improved awareness about forest protection

v. Employment opportunities through fire gang activities and honey collection etc.

The following four new activities outside the APO were undertaken

A. Elephant proof trench

Location	Year	Remarks
Punchakolly, Koodallor, Pambra	2013-14	The trenches were physically verified.
Maramala, Chedleth Range	2013-14	The trenches were physically verified.

B. Construction of solar fencing

Location	Year	Remarks
Orkittammolla, Ammani	2013-14	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.

C. Gully plugging

Sites	GPS Location	Dimensions (m)	Observations of the Evaluation Team
Anchanakkoppam Reach II, Sankily, Kulathupuzha	N08°48'40.6" E77°05'28.3"	2.1 x 1.25 x 20.5	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Gully plugs are found to be intact and good.
Anchanakkoppam Reach II, Sankily, Kulathupuzha	N08°48'23.0" E77°05'53.6"	1.4 x 1.30 x 6.6	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Gully plugs are found to be intact and good.

Sites	GPS Location	Dimensions (m)	Observations of the Evaluation Team
Anchanakkoppam Reach II, Sankily, Kulathupuzha	N08°48'25.6" E77°05'54.6"	1.9 x 1.5 x 5.1	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Gully plugs are found to be intact and good.
Kocharappinchola, Vithura, Paruthipally	N08°46'26.3" E77°02'36.7"	1.8 x 1.4 x 8.5	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Gully plugs are found to be intact and good.
Dally, Mylamood, Kulathupuzha	N08°51'11.18" E77°03'57.82"	11.50 x 0.75 x 20	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Gully plugs are found to be intact and good.

Gully plugging at Anchanakkoppam

Gullies were verified for their physical existence and quality. The specifications of the gullies were checked by physical measurements and verifying the Measurement (M) book.

D. Construction / Desilting of elephant ponds

Sites	GPS Location	Year of Construction	Dimensions (m)	Observations of the Evaluation Team
Dally, Mylamood, Kulathupuzha	N08°51'11.18" E77°03'57.82"	2018-19	11.50 x 0.75 x 20	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.

Sites	GPS Location	Year of Construction	Dimensions (m)	Observations of the Evaluation Team
Poovathinmoodu, Mylamood, Kulathupuzha	N08°50'11.90" E77°05'26.60"	2018-19	12 x 0.80 x 15	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.
Kozhiyaruppankala, Chittar North	N08°47'07.94" E77°02'17.84"	2018-19	10 x 1.5 x 15	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.
Oduchuttapadukka, Chittar South, Kulathupuzha	N08°46'24.9" E77°02'35.9"	2018-19	10 x 1.5 x 15	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.
Nallumarudia -moodu, Vithura, Paruthipally	N08°46'26.3" E77°02'36.7"	2018-19	10 x 1 x 15	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.
Aanakulam, Vithura, Paruthipally	N08°70'58.09" E77°14'59.1"	2018-19	10 x 1.10 x 15	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.
Apathuvayal, Sankily, Kulathupuzha	N08°48'43.57" E77°05'50.77"	2018-19	7 x 0.75 x 18	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.
Bonakadu, Vithura, Paruthipally	N08°41'51.09" E77°09'31.06"	2018-19	10 x 1.5 x 13	Sketch and dimensions mentioned in the Measurement (M) book found to be same. Bills and records were maintained well. Elephant ponds are found to be intact and good.

Elephant Pond at Kozhiyaruppankala

Elephant Pond at Oduchuttapadukka

Elephant pond at Dally, Mylamood

The ponds were evaluated for their physical existence and quality. The specifications of the ponds were checked by verifying the vouchers and estimates.

This circle undertook the highest number of activities during the period 2018-2019, and implemented most activities listed in the APO. Seven activities under five components mentioned in the APO were carried out in the Circle. Four activities outside the APO were undertaken namely elephant proof trench, Solar Fencing, gully plugging and elephant pond creation.Overall, an amount of Rs. 75.65 lakhs was allotted to the circle. An expenditure of Rs, 89.69 lakhs was incurred, which was ascribed to the heavy floods during the year.

Wildlife circle, Palakkad (2018 - 2019)

The evaluation covered four divisions of the circle. They include

1. Peechi
2. Parambikulam
3. Silent Valley
4. Wayanad

Eight different activities were envisaged in the circle under five components. The distribution of activities is as follows:

Component	Particulars of Work	Divisions
Forest and Wildlife Protection	Better connectivity including bridges roads communications	Wayanad
	Digging water holes/Ponds	Silent Valley
	Interior Camp sheds	Wayanad, Parambikulam
	Maintenance of trek path/ Patrolling Route	Silent Valley
Forest Fire Management	Engaging Fire Gang	Parambikulam
Infrastructure Development	Providing basic infrastructure to tribal settlement	Silent Valley
Biodiversity Conservation	Eradication of Exotic weeds/ Obnoxious weeds	Wayanad
Capacity Building	Training and workshops	Wayanad

I. Forest and Wildlife protection

a. Interior campsheds

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1.	N11°44'28.52" E76°22'1.59"	2018-2019	6.5 x5.1x 8	The condition of the structure is good.
2.	N10°37'65.48" E76°69'0.42"	2018-2019	9.5x5.5x6.2	The condition of the structure is good.

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ⩽3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Campshed/ Wayanad division/ Sulthanbatery	The shed is maintained well.	The shed is useful for the frontline staff.	7	High
2.	Camp shed/ Parambikulam division/ Karimala range	The shed is maintained well.	The shed is useful for the frontline staff.	7	High

Camp Shed at Naiketty Section

The camp sheds were evaluated for physical existence and quality. The specifications of the camp shedswere checked by physical measurements and verifying the vouchers and estimates. The camp sheds are well maintained and is useful for the frontline staff.

II. Forest fire management

a. Engaging Fire Gang

Antipoaching watchers were engaged from tribal people to protect Forest in Parambikulam Division. Trenches were made for protection from wildlife.

III. Biodiversity conservation

a. Eradication of Exotic weeds/Obnoxious weeds:

Eradication of Exotic weeds was undertaken in Wayanad Division, based on the records verified. Three species were removed, *Senna spectablis Lantana camara and Chromalena odorata*

Plot No.	GPS coordinates of the worked plot	Species	Efficiency (%)	Observations of the Evaluation Team
1.	N11°56'55.487" E76°4'30.4"	*Senna spectablis*	65	The weeds have reduced in camparison to the unworked plot. However, regular maintenance is required.
2.	N10°26'39.37" E76°27'26.35"	*Senna spectablis Lantana camara Chromalena odorata*	72	The weeds have reduced in camparison to the unworked plot. However, regular maintenance is required.

The following four new activities outside the APO were undertaken

A. Construction of Solar Fencing

Location	Year	Observations of the Evaluation Team
Chiranada, Sulthan bathery	2018-19	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
Podhuvapadam, Silent Valley	2018-19	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.
Ambalapara, Silent valley	2018-19	The solar fencing was physically verified. There are minor damages to the fences. Records were verified and found correct.

Solar Fencing at Silent Valley

B. Elephant proof trench

Location	Year	Observations of the Evaluation Team
Anaporu, Chimmony (maintenance)	2018-19	The trenches were physically verified for its maintenance

Elephant Proof Trench at Chimmony

C. Interior campshed & ration

Sites	GPS Location	Dimensions (m)	Observations of the Evaluation Team
Camp shed / Chavachi/ Aralam	N11°55'43.85" E76°26'31.92"	4x3.5	The maintenance of the structure is in good condition
Camp shed/ Keeripara/ Bhavani/ Silent Valley	N11°55'41.5" E76°54'10.5"	4.5x1.5x4	The maintenance of the structure is in good condition.
Camp shed/ Pooparai/ Karimala/ Parambikulam	N10°35'73.11" E76°81'36.35"	5.5x5.5	The maintenance of the structure is in good condition.

Campshed at Parambikulam

Campshed at Aralam

The works were evaluated for the physical existence and for the quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates.

D. Gully Plugging

Sites	GPS Location	Dimensions (m)	Observations of the Evaluation Team
Gully Plugging/ Peechi/ Chimony/ Pazhavalachal	N10°26'45.48" E76°27'5.67"	10.2x1x1.7	Inspected gullies. They displayed damages which the staff mentioned was due to washing away in floods.
Gully Plugging/ Peechi/ Chimmony/ Vellani	N10°59'80.43" E76°35'36.7"	2.9x5.5x0.9 1.5x6.3x0.6 1.5x6x2	Inspected gullies. They displayed damages which the staff mentioned was due to washing away in floods.

Gully plugging at Chimmony

The works were evaluated for physical existence and quality. The specifications of gullies were checked by verifying the vouchers and te estimates.

Eight different activities envisaged under five components were carried out in the circle. Four new activities outside the APO were undertaken namely elephant proof trench, solar fencing, gully plugging and interior camp shed.

Overall, an amount of Rs. 47.10 lakhs was allotted to the circle which was fully utilised.

Field Director Project Tiger, Kottayam (2018 - 2019)

The evaluation covered four forest divisions of the circle. They include

1. Periyar East
2. Periyar West
3. Idukki Wildlife
4. Munnar Wildlife

Fifteen different activities were undertaken under five components in the circle. The distribution of activities is as follows.

Component	Particulars of work	Divisions
Forest and Wildlife Protection	Construction & Maintenance of check dams	Periyar West Division
	Construction of Chappath/ Bridge	Periyar East Division
	Creation of Kayyalas	Periyar West Division
	Digging water holes/Ponds	Periyar West Division
	Interior Camp sheds	Idukki WL, Periyar West Division, Periyar East Division
	Maintenance of trek path/ Patrolling Route	Periyar East Division
	Organising Joint Patrolling and Raids	Periyar West Division
	River Bank Stabilization	Periyar West Division
	Soil and moisture conservation / Gully Plugging	Idukki WL
Forest Fire Management	Engaging Fire Gang	Idukki
	Fire Watch Station	Periyar West Division
Human Animal Interface	Creation of Elephant Proof Trench	Periyar West Division
Biodiversity Conservation	Bird survey and conservation	Periyar West Division
Capacity Building	Conducting Nature Camps	Idukki WL, Periyar West Division, Munnar WL
	Training to protective staff in batches of 20 to 30 persons (in a batch)	Periyar West Division

I. Forest and Wildlife protection

a. Construction & maintenance of check dams

Sites	GPS Location	Year of Construction	Dimensions (m)	Observations of the Evaluation Team
1.	N09°28 34.40" E77°05 44.60"	2018-19	9 x 0.75 x 2	Concrete work, earth work for excaction etc.,

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Check Dam/ Uppupara/ Azhutha/ PTR (West)	Activities, M-Book are verified and found its correct.	8	High

Check dams constructed were verified physically and dimensions were measured and confirmed with the vouchers/records.

b. Construction of Chappath/Bridge: Though a Hanging Bridge was envisaged at Tamara, East Periyar, the activity could not be undertaken.

c. Creation of Kayyalas

GPS Location	Dimensions (m)	Observations of the Evaluation Team
N09°27'33.05" E76°58.03.9"	Fountation: 1 x 26 x 0.3 Super structure: 36 x 1.3 x 1.50	Contruction of stone kayyalas for forest boundary

Kayyala in Periyar (West) Division

Observations of the evaluation team

Type of Assets/ Division / Range /Place	Type of current use/ Observations	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - High, Medium, Low
Kayyalas/ Parathodu/ Azhutha/PTR(West)	Activities, M-Book are verified and found correct.	8	High

d. Digging water holes/ ponds

Sites	GPS Location	Dimensions (m)	Observations of the Evaluation Team
4th mile near APC/Azutha/PTR(W)	N09°29'19.01" E77°07'54.21"	11 x 3.4 x 4.2	10 ponds were created.

The ponds were created atKaduvethanam, Thalikanam, 4th mile, and Jollymala (7). There was an increase (14.5 %) in expenditure as the activity had to be undertaken in difficult, rigid and rock like conditions.

Pond hole at Thalikanam

Pond hole at Jollymala

e. Interior campsheds

Sites	GPS Location	Observations of the Evaluation Team
1	N10°06 58.98" E76°41 58.87"	Providing and fixing 12 mm plywood in the existing framework. Painting of ceiling in rooms. Polishing on wood work. The structure is in good condition.
2.	N10°06 58.91" E76°42 30.36"	Spare parts such as plumbing pipes, flash washer, sockets, taps, electrical items such as lights, fans, rewinding of fan motor, water pump sets for drinking water supply were procured. The structure is in good condition.

Sites	GPS Location	Observations of the Evaluation Team
3.	N10°06 58.91" E76°42 30.36"	Fixing of door frames and repair of windows. The structure is in good condition.
4.	N09°47 41.4" E76°59 09.4"	Cement flooring of the camp shed and fixing of metal sheet, procuring kitchen utensils, and fixing solar power set-up. The structure is in good condition and maintained very well.
5.	N09°26 37.9" E76°56 29.59"	Constructed interlocking and sidewall protection. Laying solid interlocking wall iwith cement and concrete etc. M-Book, Bills verified and found correct.
6.	N09°31 57.30" E77°08 52.62"	Roofing work on the existing building. Activities, Measurement, Items, M-Book, Bills are verified and found correct.
7.	N09°35 07.35" E77°18.04.00"	Toilet and plumbing work in the camp shed.
8.	N09°33 47.01" E77°18.19.9"	Purchase of electrical items such as cable wire, LED bulb, PVC pipes, drip system, junction box, MCB fixing.
9	N09°35 15.80" E77°12.29.26"	Purchase of electrical items such as cable wire, LED bulb, PVC pipes, drip system, junction box, MCB fixing.
10	N09°34 15.74" N09°34 15.74"	E77°15.57.28"Maintenance of trenches
11	N09°31 58.67" E77°15.39.61"	Maintenance of trenches
12	N09°34 33.61" E77°20.12.17"	Maintenance of trenches

Campshed in Idukki Range

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Ovumkal/ Idukki WL/Idukki WLS	Construction of toilet was undertaken.	The shed is useful for the frontline staff.	7	High
2.	Kolumba/ Idukki WL/TBS	Minor repairs were undertaken. Camp shed maintained well	The shed is useful for the frontline staff.	7	High
3	Thottapura/ Idukki WL/ Idukki WLS	Door was replaced. Camp shed is maintained well.	The shed is useful for the frontline staff.	8	High
4	Interior Camp shed/Idukki WL/ Idukki WLS	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
5	Antipoaching camp shed/ Azhuthakkadavu/ Pampaa/ PTR(West)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
6	Damsite camp shed/ Vallakkadavu range/ PTR (East)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
7	Camp shed / Eravangalar/ Eravangalar / Periyar/PTR(East)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
8	Anjurali camp shed/ Thekkady/ PTR(East)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
9	Karadikkavala camp shed/ Thekkady/ PTR(East)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
10	Mavadi/ Periyar range/ PTR(East)	The shed is maintained well. The shed is used	The shed is useful for the frontline staff.	9	High

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
		during patrolling by the watchers.			
11	Senioroda/ Mullathodu anti poaching camp shed/ Periyar/ PTR(East)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High
12	Manalar Camp shed/Periyar/ PTR(East)	The shed is maintained well. The shed is used during patrolling by the watchers.	The shed is useful for the frontline staff.	9	High

Anti Poaching Camp at Azhuthakadavu

The camp shed constructed at 12 locations were evaluated for their physical existence and the quality of the asset. The specifications of the camp shed was checked by physical measurements and verifying the vouchers and estimates. The camp sheds are well maintained and useful to the frontline staff.

f. Maintenance of trek path/ patrolling route

Location/ Range/ Division	GPS Location	Dimensions	Observations of the Evaluation Team
Trek Path/ Kanamudiyoram/ Vallakkadavu/ PTR(East)	N09°32 12.45" E77°20.05.44"	7.5 km x 5.5 m	Bills and vouchers verified and found correct.

The activities were verified through inspection of records and found correct.

Trek Path at Kanamudiyoram

Observations of the evaluation team

Type of Assets/ Division / Range	Type of current use/ Observations	Score (Low, ⩽ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Trek Path/ Kanamudiyoram/ Vallakkadavu/ PTR(East)	The trek path needs maintenance	5	Medium

Inspecting the Trek Path at Kanamudiyoram

g. **Organising Joint Patrolling and Raids:** The activities, Measurement, Items, M-Book, Billsare verified and found its correct.

h. **River Bank stabilization**

Divisions	Dimensions	Observations of the Evaluation Team
Azutha River Moolikkal area / Pampa / PTR(W)	Foundation: 8.1 m^3 Super structure : 14.49 m^3 Length: 18 m Width: 18 X 0.9 X 0.5 m Height : 18 X 0.7 m	Concrete cement, bricksand dryable hard stone were used for river bank stabilization.

The activities were verified through inspection of records and found correct.

River bank stabilisation along Azutha River

i. **Soil and moisture conservation / gully plugging**

Sites	GPS Location	Dimensions (m)	Remarks
Kizhukkanam	N09°44'42.8" E76°59'09.2"	11.5 x 2 x 2 12 x 2 x 3 10 x 2 x 3 7 x 1.6 x 1.1 10 x 2 x 2.5 14 x 2 x 3	Inspected six(6) gullies at Kizhukkanam. Floods have weakened them and needs strengthening and maintenance
Kathithappan	N09°44'26.095" E77°0004.41"	12x2 x3 10x 1.5 x 2 10x 2 x 3 12x3 x 4.5	Inspected four(4) gullies. Floods have weakened them and needs strengthening and maintenance.

Sites	GPS Location	Dimensions (m)	Remarks
Vagavanam	N09°43'24.06" E76°57'23.3"	10 x 2 x 2 11 x 2 x 2.5 8.5 x 1.6 x 2.5 9 x 1.5 x 3	Inspected four(4) gullies. They displayed minimal damage. Floods have weakened them and needs strengthening and maintenance.
Vanmavu	N09°44'31.09" E76°59'09.6"	8 x 2 x 3 10 x 1.5 x 3 8.5 x 1.8 x 2.8 10 x 1.6 x 3	Inspected four(4) gullies. Twogullies are damaged and others need some strengthening work.
Kallekkulam	N09°43'29.08" E76°56'35.3"	9 x 1.5 x 1.2 15 x 2 x 3 11 x 1.5 x 2 8 x 2 x 3	Inspected four(4) gullies. Floods have weakened them and needs strengthening and maintenance
Vettilapara	N09°48'16.3" E77°00'14.2"	10 x 1.5 x 3 8.5 x 1.8 x 2.8 10 x 1.6 x 3 11 x 1.6 x4 9 x 1.5 x 8	Inspected five(5) gullies. Floods have weakened them and needs strengthening and maintenance.
Matnai	N10°08'29.07" E76°40'47.25"	10 x 1.3 x 1.5 7 x 2 x 1.5 8 x 1.3 x 1.2 10 x 1.3 x 1.25 10 x 1.25 x 1.25 10 x 1.3 x 1.25 8x -1.3 x 1.25 7x 1 x 1 7 x 1 x 1 7 x 1 x 1	Inspected ten (10) gullies. They displayed minimal damage. Floods have weakened them and needs strengthening and maintenance.
Chettipally	N10°07 26.60" E76°42 18.68"	12x2 x 3 10 x 1.5 x 2 10 x 2 x 3 12 x 3 x 4.5 5 x 1.2 x 1 6 x 1.5 x 1.3 12 x 1.5 x 1	Inspected six (6) gullies. They displayed minimal damage which the staff mentioned was due to washing away in floods.
Anjilithandu	N09°49 03.09" E76°57 25.5"	8 x 1.5 x 1.5 7 x 1.5 x 1.3 7 x 1.3 x 1.5	Inspected three (3) gullies. Although they are intact, they have been weakened due to floods.

Under this activity, 46 gullies were created. These activities were verified physically and dimensions were measured and confirmed with the vouchers/records. Most gullies have been weakened due to floods.

Gullies from different locations in Idukki WLS

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully Plugging/ Idukki WL/ Idukki WLS/ Idukki/ Kizhukkana, Kathithappan Kettuchira, Vagavanam, Vanmavu, Matnai, Kallekkulam, Vettilapara, Chettipally.	The gullies were maintained in 2018-19. They have weakened due to floods. Water retention is poor	The gullies need strengthening. Presently it is able to deliver 75 % of the envisaged impacts	6	Medium
2.	Gully plugging/ Idukki WLS/ Idukki WL/ Anjilithandu	The gullies are damaged due to floods. Water retention is poor	The gully needs repairs. Presently it is only able to deliver 75 % of the envisaged imapcts	5	Medium

II. Forest Fire management

a. Engaging fire gang

Location / Range / Division	Activity
TBS –Urulanthanni / Idukki	Fire Gang
TBS –Urulanthanni / Idukki	Watch and Ward

III. Capacity building

a. Conducting Nature Camps: Five different nature camp activities on the present trend of population and movement of birds in Thattekad Bird Sanctuary and awareness programmes were organized. The files and vouchers were verified and found correct.

A. Eradication of exotic weeds

Plot	GPS coordinates of the worked plot	Species	GPS coordinates of the unworked adjacent plot	Species
TBS	N10°07 47.09" E76°41 19.03"	*Nelumbo nucifera, Nymphaea nouchali, Cyperus sp., Algae*	N10°07 50.96" E76°41 .25.69"	*Nymphaea nouchali, Asclepias curassavica, Digitaria sp., Carex filicina, Ageratum conyzoides, Dactyloctenium aegyptium, Echinochloa frumentacea, Ludwigia perennis, Persicaria hydropiper, Xanthium indicum, Alternanthera aronychioides, Cyperus sp.*and Algae
TBS	N10°07 46.33" E76°41 19.78	*"Nelumbo nucifera, Nymphaea nouchali, Cyperus sp., Persicaria hydropiper, Algae*	N10°07 51.97" E 76°41 .22.53"	*Nelumbo nucifera, Nymphaea nouchali, Ageratum conyzoides, Ischaemum sp., Mimosa pudica, Ludwigia perennis, Alternanthera paronychioides, Carex filicina, Scleria lithosperma, Xanthium indicum*and Algae
TBS	N 10°07 48.09" E76°41'18.05	*Nelumbo nucifera, Nymphaea nouchali, Cyperus sp., Algae*	N10°07 51.40" E76°41 19.93	*Hyptis suaveolens, Alternanthera paronychioides, Asclepias curassavica, Mimosa pudica, Lantana camara, Ageratum conyzoides, Echinochloa frumentacea, Ischaemum sp., Cyperus sp.*and Algae
Vallakkadavu 2 mile	N09°30 23.05" E77°07 .18.73"	*Lantana camara Eupatorium perfoliatum* Palatable grasses	N09°31 39.34" E77°06 .45.27"	*Lantana camara Eupatorium perfoliatum Jasminium sp., Mikania macranta Pteris sp., Cinnamom sp., Coixe sp., Pupalia sp., Tragia sp., Pagopytum sp., Mercine sp.,* Palatable grass
Vallakkadavu 2 mile	N 09°30 24.22" E77°07 19.20"	*Lantana camara Eupatorium perfoliatum* Palatable grasses	N09°31 39.34" E77°06 .43.51"	*Lantana camara Eupatorium perfoliatum Jasminium sp., Mikania macranta Pteris sp., Cinnamom sp., Coixe sp., Pupalia sp., Tragia sp., Pagopytum sp., Mercine sp.,* Palatable grass

Plot	GPS coordinates of the worked plot	Species	GPS coordinates of the unworked adjacent plot	Species
Vallakkadavu 2 mile	N09°30 26.02" E77°07 21.18	*Lantana camara* *Eupatorium perfoliatum* Palatable grasses	N09°31 39.34" E77°06 .42.41"	*Lantana camara* *Eupatorium perfoliatum* *Pteris sp., Cinnamom sp., Coixe sp., Pupalia sp., Tragia sp., Pagopytum sp., Mercine sp., Jasminium sp., Mikania macranta* Palatable grass

Aquatic weed eradication in Thattekad Bird Sanctuary

Assessment of effectiveness

Id/No.	Size/density of infestation in the worked plot	Size/density of infestation in the unworked plot	% change (+/-)	Observations of the Evaluation Team Present status - Intact/Worn out/effectiveness of work
Aquaticbody-TBS	Infestation- Nil All the exotic aquatic weeds were removed. Recorded only lotus and lilies only.The algal cover is low.	28000/ High level of aquatic exotic weeds occupied in the lake. Algal cover is higher in this plot.	100	The removal of aquatic exotic weeds increased the native species of lotus and lilies and also reduced the floating algal growth. Weed eradication has been very effective in maintaining the aquatic lake.
Vallakkadavu 2 mile	Ecorestoration of Eucalyptus plantation through gridling of bark and removal of *Lantana camara* and *Eupatorium perfoliatum* found very effectitve and hardly few lantana was observed.	The plot is heavily infested.	85	same kind of treatement may be implemented in other areas which will help in protecting the grasslands and improve the wildlife habitats. This treatment protects the grassland which is the main food source for wild elephants and buffalos.

Weed Density Assessment in Vallakkadavu

B. Maintenance of trek path/Patrolling Route

Location / Range / Division	GPS Location	Dimensions	Observations of the Evaluation Team
Fireline/ Eravangalar/ Periyar/ PTR (East)	N09°3573.05" E77°18.04.00"	Length -7 km Width - 5 m	Clearing of ground level vegetation palatable grasses and weeds etc.,
Fireline/ Manalar / Periyar/ PTR (East)	N09°3212.45" E77°20.05.44"	Length - 2.5 km Width - 5.5 m	Clearing of ground level vegetation palatable grasses and weeds etc.,
Trek Path/ Kanamudiyoram/ Vallakkadavu/ PTR (East)	N09°3212.45" E77°20.05.44"	Length - 7.5 km Width - 5.5 m	Bills and vouchers verified and found correct.
Trench/ Eravangalar/ Eravangalar/ Periyar/ PTR (East)	N09°3507.35" E77°18.04.0"	L - 145 m W- 4.5 m D - 2.5 m Bottom : 1 m	Bills and vouchers verified and found correct.

The activities were verified through inspection of records and found correct.

Trek path in PTR (East)

Observations of the Evaluation Team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ⩽3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Fireline/ Eravangalar/ Periyar/ PTR (East)	The firline is maintained well.	No fire incidence for last five years	9	High
2	Fireline/ Manalar/ Periyar/ PTR (East)	The firline is maintained well.	This fireline is to protect the forest, wild animals. For the	9	High

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
			last 5 years, no fire incidence was recorded. Every year the firelines are maintained.		
3	Trench/ Eravangalar/ Periyar/ PTR(East)	Maintained well.	The trench is used to protect the camp shed from wildlife	9	High

Trenches around campsheds

Two new activities outside the APO were undertaken. Overall, an amount of Rs. 69.10 lakhs was allotted to the circle during the period of which 96.85 percent financial achievement was observed.

Agasthyavanam biological park circle, Thiruvananthapuram (2018-2019)

The evaluation covered both Shendurney and Thiruvananthapuram Wildlife Divisions of the circle. Eight different activities were undertaken in the circle.

Component	Particulrs of Work	Divisions
Forest and Wildlife Protection	Construction &Maintenance of check dams	Thiruvananthapuram WL
	Construction of rain water harvesting/water retension structure	Thiruvananthapuram WL

Component	Particulars of Work	Divisions
	Creation of Kayyalas	Shendurney WL
	Interior Camp sheds	Thiruvananthapuram WL
	Maintenance of trek path/ Patrolling Route	Thiruvananthapuram WL, Shendurney WL
	Soil and moisture conservation / Gully Plugging	Thiruvananthapuram WL, Shendurney WL
	Provision for elephant corridor	Shendurney WL
Forest Fire Management	Engaging Fire Gang	Thiruvananthapuram WL, Shendurney WL

Two major components were addresed during this period. Almost all the works were carried out during the period. One spillover activity from 2014-2016 was observed.

I. Forest and Wildlife protection

a. Construction & maintenance of check dams

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
Cherrupunnathode	N08°33' 42" E 77° 9'56"	2018-19	1 x 1 x 8	Since Mbook details were not provided, the year of work execution could not be verified.

The structure is good, based on the physical verification

Observations of the Evaluation Team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ⩽ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Desilting of ponds and check dams/ ABP/Kottor / Trivandrum Wildlife/ Cherrupunnathode	There is silt deposition which needs to be removed.	Siltations render the check dam inefficient.	4	Medium

b. Construction of rain water harvesting/water retension structure

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
Kamanthikkavu	N08°36'47.2" E77°11'6.3"	2018-19	18 x 10.9 x 2	Since M-book details were not provided, the year of work execution could not be verified.
Painthy	N08°36'07.56" E77°09'18.85"	2018-19	6 x 9.5 x 0.7	Since M-book details were not provided the year of work execution could not be verified.
Karingakala	N08°36'28.9" E77°08'10.6"	2018-19	9 x 8.5 x 1.5	M-book details were verified and found correct.
Kudilinga	N08°37'40.5" E77°11'10.5"	2018-19	6.75 x 3 x 6.75	Since M-book details were not provided the year of work execution could not be verified.
Kunnatheri	N08°37'22.7" E77°11'56.9"	2018-19	6.75 x 3 x 6.75	Due to paucity of funds during 2014-2016, the work was carried out in the year 2018-2019. M-book details were verified and found correct.

Observations of the evaluation team

Type of Assets/ Division / Range	Type of current use/Observations	Impact	Score (Low, ⩽ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset – Low, Medium or High
Elephant Pond/ Athirumala/ Shenduruney/ Shenduruney Wildlife	The water hole is present in a grassland area and weeds have grown around the pond. There is silt deposition and the water depth is around 2 m.	Desiltation is needed. This water hole is mostly used to provide water for animals. Partially maintained.	4	Medium

Type of Assets/ Division / Range	Type of current use/Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset – Low, Medium or High
Elephant Pond/ Painthi/ Kottoor/ ABP/Thiruvanantha puram	The site is frequently visited by elephants. There is silt deposition and the depth is around 0.5m. Desiltation is needed.	This water hole is mostly used to provide water for animals. Partially maintained.	4	Medium
Elephant Pond/ Karingakala/ Pulininnakala/ Shenduruney Wildlife	There is extensive weed growth around the pond. Well maintained.	This water hole is mostly used to provide water for animals.	9	High
Elephant Pond/ Kudilinga/ Athirumala / Peppara / Shenduruney Wildlife	Silt and soil deposition is observed and the pond needs regular maintenance.	This water hole is mostly used to provide water for animals. Partially maintained.	7	High
Elephant Pond/ Kudilinga/ Athirumala / Peppara / Shenduruney Wildlife	The pond is partially filled with soil and silt. Maintenance work needs to be done.	This water hole is mostly used to provide water for animals. Partially maintained.	4	Medium

*The elephant pond at Karingakala has been maintained very well with the structure deepened to meet the requirement of the animals.

Water retention Structures

Elephant Pond at Karingamala

c. Interior campsheds

Sites	GPS Location	Dimensions (m)	Remarks
Chakkappara/ Neyyar wildlife sanctuary/ Thiruvanathapuram	N08°30' 22" E77°10'48"	6 x 5	Since Mbook details were not provided, the year of execution could not be verified.
Karlakkode/ Athirumala/ Peppara wildlife sanctuary/ Thiruvanatha puram Wildlife	N08°36' 31" E77°09'37"	2.4 x 2.6 x 1.75	Work has been completed. Mbook details were verified and found correct.

The physical condition and asset quality of the camp shed was assessed. Physical measurements and verification of vouchers and estimates were used to verify the specifications of the camp sheds.

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Chakkappara/ Neyyar wildlife sanctuary/ Thiruvanatha -puram Wildlife	The shed is maintained well.	The shed is routinely used by the frontline staff.	7	High

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
2.	Karlakkode/ Athirumala/ Peppara wildlife sanctuary/ Thiruvanatha puram Wildlife	The kitchen shed was constructed using concrete bricks and cement. There is a rock basement and the roofing is done with GI sheets. The kitchen is in good condition.	The shed is routinely used by the frontline staff.	9	High

Camp Shed at Chakkapara

The works carried out for interior camp shed was verified for their existence and quality. The specifications of the camp shed were checked by verifying vouchers and the estimates and found correct.

d. Maintenance of trek path/ patrolling route

Trek paths and partolling routes were cleared and maintained in the circle in both divisions.

Location / Range / Division	GPS Location	Year of Activity	Dimensions (m)	Remarks
Pallivasal to Dharbhakkulam	N08°54' 34.1" E77°10' 58.2	2018-19	8100 x 2 M	book details verified and found correct.
Vattavila to Pazhaunniattinpuram	N08°35' 23.1" E77°7' 13.2	2018-19	2000 x 1.5	Mbook details verified and found correct.
Utharamkayam to Pulizhunthalchuna	N08° 32'44" E77° 13'4"	2018-19	2000 x 1.5	Since Mbook details were not provided, the year of work execution could not be verified.
Bhoodhaka – Ayanimoodappu	N08° 33'33" E77° 17'20"	2018-19	4900 x 2.5	Since Mbook details were not provided, the year of work execution could not be verified.

Inspection of trek path

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Maintenance of trek path / Rosemala / Eettapadappu/ Shenduruney/ Shenduruney Wildlife	The 6 km trek path is well maintained.	The path is used regularly by the frontline staff.	8	High
2	Maintenance of patrolling route/ Vattavila to Pazhaunniattin puram/ ABP/ Trivandrum Wildlife	The 2 km trek path is well maintained.	The path is used regularly by the frontline staff.	8	High
3	Maintenance of patrolling route/ Utharamkayam to Pulizhunthal chuna/ Neyyar Wildlife sanctuary / Trivandrum Wildlife	The 2 km trek path is well maintained.	The path is used regularly by the frontline staff.	8	High
4	Maintenance of patrolling route/ Bhoodhaka – Ayanimoodappu/ Neyyar Wildlife sanctuary / Trivandrum Wildlife	The trek path is well maintained.	The path is used regularly by the frontline staff.	8	High

e. Soil and moisture conservation / gully plugging

SMC related activities (gully plugging) carried during 2018-19 were evaluated and is presented.

S. No.	GPS Location	Dimensions (m)	Remarks
1.	N08°52'29.85" E77° 7'13.87"	14.5 x 2.05 x 1.26 10 x 2.16 x 1.5 8.4 x 2.08 x 1.5 7.6 x 2.10 x 1.5	Work has been completed. However, M-book details were not provided; hence the year of work execution could not be verified.
2.	N08°52'29.85" E77°07'13.87"	13 x 2.05 x 1.3 10.8 x 2.05 x 1.3	Work has been completed. However, M-book details were not provided; hence the year of work execution could not be verified.
3.	N08°25' 6" E77°14' 23"	9.4 x 0.85 x 1.5 6 x 0.85 x 1 5.4 x 0.85 x 1 9.4 x 0.85 x 1.5	Work has been completed. However, M-book details were not provided; hence the year of work execution could not be verified.
4.	N08°37' 08.2" E77°09' 07.2"	20 x 1.25 x 0.70 11.5 x 1.2 x 0.6 11.2 x 1.25 x 0.60	Work has been completed and verified in M-book.

Observations of the evaluation team

Sl. No.	Type of Assets / Division / Range / Place	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
1.	Gully plugs / Rockwood/ Kalluvarambu/ Shenduruney/ Shenduruney Wildlife	The gully is present across a stream. There are 4 gullys and all of them are in good condition.	The moisture content in surrounding areas is improved as is evident from the vegetation.	9	High
2.	Gully plugs / Rosemala/ Moonumukku/ Kalluvarambu/ Shenduruney/ Shenduruney Wildlife	There were 4 gullies of which only two exist now, the others were washed away by flood during heavy rains.	Siltation is observed in the gullies indicating erosion.	5	Medium
3.	Aananirathy/ Neyyar wildlife sanctuary/ Thiruvanatha -puram Wildlife	The condition of the gullys are good.	The moisture content in surrounding areas is improved as is evident from the vegetation.	9	High
4.	Thumbithode/ Athirumala/ Peppara wildlife sanctuary/ Thiruvanatha puram	There are 8 gullys at three different locations of which three were verified. All the gullys are intact.	The moisture content in surrounding areas is improved as is evident from the vegetation.	9	High

Gully plugging in four dfferent locations

Gullies were verified physically and dimensions were measured and confirmed with the vouchers/records. All the structures expect in one location were in healthy conditions and useful in soil moisture conservation as is evident from the lush green vegetation.

In addition, to the activities mentioned, the staff also mentioned creation of a chappath. Since M-book details were not provided, the year of work execution could not be verified.

Location / Range / Division	GPS Location	Activity	Dimensions (m)	Observations of the Evaluation Team
Punnakkathode / Shenduruney / Kalluvarabu / Shenduruney Wildlife	N08°53'16.6" E77°07'22.5"	Chappath creation	10 x 4.16 x 1.25	The structure is well maintained

In this circle it was observed that measurement books were not available to verify vouchers and estimates for many of the activities.

Eight different activities were envisaged under two major components were addressed during this period in the circle. Almost all the works were carried out during the period, except the provision for elephant corridor. Only one spillover activity from 2014-2016 was observed.

Overall, an amount of Rs. 54.30 lakhs was allotted to the circle during the period of which 81.58 percent financial achievement was observed.

Social forestry southern circle, Kollam (2018 - 2019)

Four different activities under two components were undertaken in the circle. The distribution of activities is as follows:

Component	Particulars of work	Districts
Compensatory Afforestation Funds	Preparatory work for setting up Permanent Nursery	Kollam and Kottayam
	Setting up Permanent Nursery Works	Thiruvananthapuram and Pathanamthitta
Biodiversity Conservation	Bird survey and conservation	Kollam, Pathanamthitta
	Sea Turtle Conservation	Alappuzha

I. Compensatory Afforestation Funds

a. Preparatory work for setting up Permanent Nursery

In Kollam, funds were surrendered to Headquarters as the division has an established nursery(documents were verified). Seedlings were produced and distributed to schools and public for planting during World Environment day.

In Kollam, polyhouse and compost mixing unit were established at Kottayam Aranya Bhavan, Forest complex Govt Timber Depot.

Construction of Poly House

i. Total Plinth Area – 80 m^2(10 x 8 m)
ii. Structure was constructed with 50mm,40mm, 32mm, 25mm & 20mm GI Pipes
iii. Height of Structure – 2.50 m
iv. Height of Roofing – 1.70 m
v. Roofing is done with White UV Film
vi. Aluminum Stand – 3.00m x 1.20m x 1m (12 Nos)

Compost Mixing Unit & Net Fencing around Central Nursery

a) Total Plinth Area – 12.96m^2 (3.6 x 3.6 m)
b) Structure was constructed with 60mm GI Pipe
c) Electrification had been done
d) Height of Structure – 2.70 m
e) Roofing is done with 0.35 mm GI Sheet with projection of 0.6m away from flooring.
f) Foundation was done with RR Masonry

Documents and structures were verified physically. The dimensions were measured and confirmed with the vouchers/records.

b. Permanent Nursery works

S.No	Location	Items	Dimensions
1	Poojapura/	Construction of Rain Shelter	150m^2 (10 x 15 m)
2	Thiruvananthapuram	Construction of Shade Net House	235m^2 (9 x 15 m)
3	(N 11.01782, E 76.95147)	Construction of Poly House	300m^2 (30 x 10 m)
4		Construction of Potting Mixture Shed, Storage Shelter, Work Shed for Labour	157.5m^2 (17.5 x 9 m)
5		Chain Link Fencing with Angle Post	400m
6		Clearing and Levelling	960 m^3
7		Earth Work Excavation & Tree Cutting	60 m^3
8		Laying of Interlocking Pathway	338.92 m^2
9		Construction of Semi-Permanent Office Building	69.60m^2 (9.47 x 7.35 m)
10		Beautification of District Permanent Nursery, Tools and Machineries	Hand Trowel, Wheel Barrow, Secateur, Brush Cutter, Weed Control Sheet
11		Irrigation System, Providing Electricity Supply, Providing of Electrification and Lighting, Construction of Overhead Tank	10.56m^2 (5.15 x 2.05 m)

These activities were verified physically and dimensions were measured and confirmed with the vouchers/records.

In Pathanamthitta Division (N09°16611, E76°98500), Vazhappara, the following were undertaken.

i. Providing chain linked fencing around the nursery area, leveling and clearing the proposed site.

ii. Renovation of building for store room, Renovation of existing building for front office cum interpretation centre including interpretation centre furnishing.

iii. Construction of shade house, Construction of rain shelter, Repair of damaged poly house, Construction of compost unit and potting media mixing unit.

iv. Construction of toilet block.

v. Making road and inspection path.

vi. Purchase of machines for weeding, sieving, chopping, mixing etc.

vii. Purchase of root trainers (45000, tray and metal frame).

viii. Maintenance of existing well, construction of new pond, 3HP motor pump, overhead tank of 20000 litres, pump house and plumbing work.

ix. Beautification and boards.

x. Engaging a protection mazdoor for the upkeep of nursery, Construction of retaining wall, Construction of labour shed by renovating existing damaged building.

xi. Construction of gates (Entrance and Exit).

xii. Contingencies such as electric connection, solar lighting, procurement of computer, furniture etc.

These activities were verified physically and dimensions were measured and confirmed with the vouchers/records.

II. Biodiversity conservation

a. Bird survey and conservation

Sr.No.	Division	Location	Remarks
1	Kollam	GHS Sasthamkotta	Records were verified
2	Alappuzha (Special campaign on house sparrows)	Chenganur, Kayamkulam, Edathuva, Alapuzha and Cherthala	
3	Pathanamthitta	GHS Kulathupuzha	

b. Sea turtle conservation

Sr.No.	Division	Location	Remarks
1	Alappuzha	Pallana near Thottappalli Maradikulam Attingal	Records were verified

The staff mentioned that due to paucity of funds for providing wages to the personnel engaged in Sea Turtle conservation, the conservation activity could not be implemented successfully.

Overall, an amount of Rs. 234 lakhs was allotted to the circle with a financial achievement of 92.45 per cent.

Social forestry central circle, Eranakulam (2018 - 2019)

Three different activities were undertaken in the circle. The distribution of activities is as follows:

Component	Particulars of work
Forest Fire Management	Engaging Fire Gang
Biodiversity Conservation	Bird survey and conservation Sea Turtle Conservation

I. Forest fire management

a. Engaging fire gang

Work Details	Ranges
Fire awareness programme	KFS
Coffee mug printed with fire awareness message	Arattukadavu VSS Kaprikkad VSS Panamkuzhy VSS Alattuchira
Engaging fire watchers	Kurisumudy

The activities were verified through inspection of records and found correct.

II. Biodiversity conservation

a. Bird survey and conservation

S.No	Bird Conservation	Locations
1	Bird awareness camp	Samuham HSS, Paravur
2	Bird awareness camp	VHSS, Kaitharam
3	Bird conservation	Providing water drinking pots for birds in summer season

b. Sea turtle conservation

S.No	Turtle Conservation & Awareness	Locations
1	Awareness camp	KMEA college, Pookattupadi
2	Turtle Conservation	Printing the picture of turtle on mugs
3	Awareness camp	MES Marampilly
4	Awareness camp	Hithayath Islam HSS, Edavanakkadu
5	Awareness campaign	Pamphlets and brochures on Kadalama to students
6	Conservation Activities	Pappaly- Andathode Beach

The following four new activities outside the APO were undertaken

A. Distribution of seedlings

a. Vetiver seedlings were raised for river bank stabilization in Vazhathoppe, Kattappana and Idukki ranges.VSS were involved in river bank stabilization in Kaprikkad and Arattukadavu.

b. Seedlings were distributed to Panchayats, Schools, Govt. Institutions, NGOs.

c. A cage for Sambar deer was constructed in Kaprikkad range while snake catching equipment were procured for Thodupuzha, Kattappana, Peerumade and Munnar ranges.

B. Fire awareness campaign

The SF wing also implemented various fire awareness programmes. These were a part of the spillover activities of 2014-18.

Details of the programme	Location
Forest fire awareness camp	Govt. HS Vattavada
Forest fire awareness camp	Govt. UP School Chempan Kuzhi Govt. UP Parekkavala
Cleaning camp	Philomina School Upputhara in SF Range, Peermade
Fire banners fixing	All fire sensitive areas
Mass Rally Programme	General public
Forest fire awareness camp	Ernakulam
Forest fire awareness camp	Silent valley

The activities were verified through inspection of records and found correct.

C. Plant diversity

The Social Forestry Division was also involved in the production and maintenance of seedlings of various species as detailed below.

Name of the species	Range	Seedlings produced
Big basketted Nakshathravanam Seedlings	Chalakudy, Social Forestry Range	1350
Medicinal Species Seedlings (Dasapushpam, Thripala etc.)	Chalakudy, Social Forestry Range	5000
Mangrove seedlings	Peringnad, SFR Thrissur	5000
Mulching with coconut husk for miscellaneous species	Pazherikkandam-Blathykkavala	150

Vouchers were verified and found correct. The seedlings were distributed to Panchayats, Schools, Govt. Institutions, NGOs.

A Nature and Fire Awareness Programme was conducted in all ranges of the circle.
A training on forest code and office procedures for RFOs and SFOs of central circle was also imparted.

D. Avenue planting

Avenue Planting was undertaken along Vengallur- Kollam Road during 2018 in Thodupuzha range covering a distance of 3km.

GPS coordinates of centre of plot	Species	No. of plants planted	Condition of plants		Avg. height of live plants (in m.)	Avg. collar girth (in cm)
			No. of live plants	No. of dead plants		
N09°54'26.60" E76°40'07.30"	Elanji	90	81	9	4.04	29.82
N09°54'24.40" E76°42'06.40"	Manimaruthu					
N09°54'20.10" E76°42'01.20"	Aryaveppu					
N09°54'03.00" E76°41'54.20"	Kambakom					

Other Activities include construction of nursery shed at central nursery Kudayathoor in Thodupuzha SF Range.

Overall, an amount of Rs. 4.63 lakhs was allotted to the circle which was fully utilised.

Social forestry, Northern circle, Kozhikode (2018-19)

The CAMPA activities undertaken at Kasargode, Kannur, Wayanad and Kozhikodee specially for students includes environmental protection, fire awareness programme, fire awareness campaign rally, planting of medicinal plants, river bank cleaning and rain water harvesting. Permanent nursery expected to be established at Malappuram as per the APO has been shifted to 2020-21. The evaluation team verified all the related documents, such as expenditure vouchers and photographs.

Kasargode: At the GHSS, Kasargode, various activities conducted in school surrounding areas with 69 participants. School teachers provided information during the survey and produced relevant photographs and documents. GHSS, Iriyani organized different activities utilizing CAMPA fund. The activities includes the vegetable crops occupying 4 cents areas inside the school campus, mother bed preparation of bamboo, distribution of excess seedlings to the villagers and local people which were verified and found correct. The Government Higher Secondary School at Panathady (Balanthode) had done, protection of seedlings and fire awareness rally with 50 students as a part of fire awareness programme. Photos and vouchers were verified. All the 10 sites of Kasaragode district where activities related to nature conservation and awareness generation were surveyed and documents verified. Vouchers were tallied.

Kannur: Two social forestry ranges namely Kannur and Thalassery with the support of schools, conducted fire awareness campaigns in the form of bike and cycle rallies. Nature camps were also conducted in different Schools and towns. Seven sites were surveyed regarding fire awareness campaign in Kannur district. The Government Tribal UP School at Kannavam organized fire awareness rally with 122 student participants. Relevant photos of the programme were produced during the survey. Another fire awareness camp took place in Kannavam Town with 400 participants organized by forest officials. The Santhome Higher Secondary School at, Kolakkad organized rally with 60 participants. All related documents were verified and work was found satisfactory.

Wayanad: Fire awareness campaigns were organized in nine sites of the Wayanad district by three social forestry divisions namely Mananthavady, Sulthan bathery and Kalpetta. Activities carried out were rallies and workshops arranged by schools, colleges, public library, civil station and sport club in various locations. Civil Station at Kalpatta conducted one day Fire awareness programme. The organizers produced necessary documents during the evaluation.

Kozhikode: Seven sites under four social forestry ranges namely Vadakara, Koyilandy, Thamarassery territorial and Kozhikode organized activities like fire awareness campaign in schools and Vana Samrekshan Samities in different locations of the district. Vana Samrakshan Samiti at Vanaparvam organized an one day awareness camp on 'the mitigation of Man – animal conflict' with VSS members where nearby school students and local people participated. Same year, St. Joseph High School organized the one day fire awareness camp with 80 participants. Higher Secondary School, Kallachi also took part in the campaign in same year with same strength of student participants.

Malappuram: The district was expected to set up a Permanent Nursery as per the APO. Civil works for the Permanent nursery in Mathottam forest office were shifted to 2020-21.

Overall, an amount of **Rs. 10 lakhs** was allotted to the circle during the period which was fully utilised.

4. Recommendations and suggestions

The proposed evaluation had multiple objectives. Inter alia, this evaluation examined the impact of various activities in terms of increase in vegetation spread, soil and water conservation measures , infrastructure development, capacity building and the extent to which the objectives of CAMPA were achieved. The qualitative data were used to support further analysis of variations across regions and categories. The following are the recommendations and suggestions arising out of this present monitoring and evaluation of CAMPA activities in Kerala

(a) **Soil & Water Conservation (SWC) Works:** Most SWC works carried out in the forest areas are effective. The SMC activities, in most places, have increased the vegetation, indicating the moisture retention impacts. However, certain SWC structures are very crucial as they connect different ranges within a division. Such chappaths deserve special attention.

(b) Due to heavy flooding, heavy wear and tear was observed in most SMCs. The depth and width of rivers has increased in many sections. Such SMCs need to be replaced with concrete structures. Most of the water-holding structures are old, and not capable of holding water to the designed potential. Such structures may be reworked.

(c) The river stabilisation process in many circles could be encouraged in the coming years as severe erosion was observed in many stretches.

(d) Regional and state level workshop could be organized for prioritation of species for afforestation/ enrichment planting in the forest areas by involving local communities, field staff of SFDs, forestry research institutions, NGOs and other stakeholders.

(e) Technical support can be obtained from forestry research institutions for transferring/developing seed handling techniques and nursery technologies for indigenous species prioritized for afforestation / enrichment planting.

(f) In remote locations and in locations with high damages to the planted seedlings by wild animals, manual seeding of indigenous species using seed ball technologies can be attempted.

(g) Maintenance costs should be linked to survival rates and strict guidelines should be framed regarding replanting in failed sites.

(h) Protection measures were not effective in many places. It is essential to provide maintenance provisions for five years so that the purpose is well achieved.

(I) Fodder plantations should be prioritied in elephant corridors which would act as deterrents to their entry into human-habitation.

(j) Protection of Forests and Wildlife: Anti-Poaching Camps (APC) have been established throughout the state in almost all divisions. The APCs are sufficienfly equipped with staff and modern equipment for protection activities. There is a need to regularly support the staff with protective gears and field survival kits.

(k) GIS-based forest survey monitoring has been attempted in the state. The staff report that this has helped prevent, contain and douse forest fires in many places. All staff

have to be provided basic training in the use of advanced methods of monitoring for protection. The procedures of fire management / fire protection can be extended to the forest fringe area inhabitants in addition to school/ college students.

(l) Provisions need to be made in the budget for procuring more field vehicles, as a dearth in availability of these was observed.

(m) In almost all divisions, the maintenance of buildings, roads, SMCs are taken up regulalry. A fixed cycle could be adopted for maintenance and repair of civil works, rather than taking a routine annual maintenance.

(n) A decentralised allotment to the social forestry wings may be thought of, to meet the local needs for each division.

(o) Incentives to temporary staff associated with the department's activities for more than ten years.

(p) Digitisation of records would enable easy access to information.

(q) Internal evaluation needs to be strengthened and a database must be established to monitor the changes. This would enable regular assessment of seasonal works like protection camps, fire protection works etc. Further, this report should also be made available during third party monitoring and evaluation.

(r) Permanent structures created should be acknowledged through suitable markings to ensure proper visibility of CAMPA-funded activities.

ANNEXURES

Annexure I

Minutes of meeting

Third Party Evaluation of State CAMPA Activities in Kerala

23rd November 2021

Venue: VC Hall, IFGTB

Participants:

IFGTB	Kerala Forest Department
Dr. C. Kunhikannan, Director IFGTB Dr. R. Yasodha, Scientist G & GCR Dr. JP Jacob, Scientist G – *on leave* Shri. Rajesh Gopalan IFS - *online* Dr. C. Buvaneswaran, Scientist F Dr. Kannan CS Warrier, Scientist F Dr. A. Karthikeyan, Scientist F Dr. D.R.S. Sekar, Scientist F – *not attended* Dr. Rekha R Warrier, Scientist F Dr. S. Saravanan, Scientist F Dr. A. Rajasekaran, Scientist F	Shri. Rajeesh Ravindran IFS, CEO CAMPA & APCCF Ms P. T. Sreelekha, ACF, SA&NO, CAMPA

An online meeting was held on 23rd November 2021 at 10.00 am to discuss the modalities of third party evaluation of CAMPA-related works undertaken in Kerala by Kerala Forest Department.

Under CAMPA, various activities have been taken up to accelerate preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works.

Shri Rajesh Ravindran, CEO-CAMPA listed the different circles where CAMPA activities have been taken up. He sought evaluation of different protection activities, labour deployed for watch and ward, fire protection, and site suitability, especially regarding

ecorestoration of monoculture plantations, the species planted and their performance, etc.

Dr. S. Saravanan, Scientist F, presented the need for third-party evaluation to assess the various activities taken under State CAMPA. He elaborated on the requirements of the National CAMPA Authority concerning the monitoring while carrying out the evaluation.He also detailed the methodology for the evaluation process and the extent of sampling for the different activities taken under CAMPA based on the guidelines provided by the IIFM, Bhopal with necessary modifications. He also informed that IFGTB has experience working towards the evaluation of NAP of the NAEB in Kerala and providing consultancies to various industries. A team has been formed for the execution of the work.

This was followed by a discussion on the modalities for execution of the evaluation. The following points emerged.

1. An MoU would be signed between the Kerala Forest Department and IFGTB towards the activity. IFGTB would complete the evaluation within a period of six months from the date of release of funds.
2. State CAMPA would provide information, plantation journals, maps, measurement books, and all relevant records pertaining to the CAMPA works from 2009 to the present. Co-ordination in the state, local travel, lodging, and field support of personnel would also be provided by the Department.
3. The Department looks forward to APO-wise reports. Thus, six reports are envisaged at the end of the evaluation.
4. The sampling intensity was agreed upon.
5. A proposal including financial requirements and draft MoU would be sent to the CEO-CAMPA for perusal.
6. The CEO-CAMPA would visit IFGTB during the last week of November, 2021 for a detailed discussion and finalising the proposal.

Annexure II

Timelines of the Evaluation

Milestone	Activity
September 2021	Identification of ICFRE-IFGTB for third party monitoring
November 2021	Finalisation of activities under the third party monitoring
January 2022	Acceptance of project proposal of ICFRE-IFGTB for monitoring and evaluation of CAMPA activities in Kerala. Approval of the MoU.
March 2022	Signing of the MoU and release of the first instalment
April to June 2022	Field works
July to September 2022	Report preparation
September 2022	Release of the second instalment
October 2022	Submission of final report

Annexure III

APO-wise components implemented in various Circles

Components	Particulars
Biodiversity Conservation	Bird survey and conservation
	Eradication of Exotic weeds/ Obnoxious weeds
	Sea Turtle Conservation
Capacity Building	Conducting Nature Camps
	Training and workshops
	Training to protective staff in batches of 20 to 30 persons (in a batch)
	Awareness Program
Compensatory Afforestation Funds	Compensatory Afforestation Works
	Preparatory work for setting up Permanent Nursery in 2 Districts
	Setting up Permanent Nursery
	Setting up Permanent Nursery Works (Balance work)
Forest and Wildlife Protection	Better connectivity including bridges roads communications
	Construction and MTCE of check dams
	Construction of Chappath/Bridge
	Construction of rain water harvesting/water retension structure
	Creation of Kayyalas
	Digging water holes/Ponds
	Interior campsheds
	Mtce of trek path/Patrolling Route
	Organising Joint Patrolling and Raids
	River Bank Stabilization
	Soil and moisture conservation / Gully Plugging
Forest Fire Management	Engaging Fire Gang
	Fire Watch Station
Human Animal Interace	Creation of Elephant Proof Trench
	Preparation of detailed GIS based system for managing Human animal interface
	Provision for elephant corridor
Infrastructure Development	Providing basic infrastructure to tribal settlement

Annexure IV

Monitoring and evaluation teams

Teams Region	1 Southern Circle, Kollam (1)	2 Southern Circle, Kollam (2)	3 High Range Circle, Kottayam (1)	4 High Range Circle, Kottayam (2)	5 FD PT, Kottayam (1)
Team Co-ordinators (Dr/Mr/Ms)	C. Buvaneswaran	Rekha R Warrier	Kannan CS Warrier	K. Murali Shankar	S. Saravanan
Team Leaders (Dr/Mr/Ms)	A. Balasubramanian	R. Sumathi	K. Gireesan	A. Mayavel	S.P.Subramani
Member	N. Sivadasan	L.Vivek	K. Sureshkumar	J. Soosairaj	K. Senthil
Member	V. Mareeswaran	S. Sudha	K. Gopalakrishnan	P. Vignesh	M. Suryaprakash
Member	S.S. Abijith	R.G. Anitha	T. Pradeep	K.R. Shankar	R.Ariharasuthan
Member			C. Muthumanikam	M. Vishnu	M. Mahalingam
Team Co-ordinator (KFD)	Fen Antony, ACF	Fen Antony, ACF	KS Subash, ACF	Subash, ACF	Sandeep.S, ACF

Teams Region	6 FD PT, Kottayam (2)	7 Agasthyavanam biological park Circle	8 Social Forestry, Southern Region, Kollam	9 Central Circle, Thrissur	10 Social Forestry, Central Region, Thrissur
Team Co-ordinators (Dr/Mr/Ms)	N.V. Mathish	A. Rajasekaran	A.C. Surya Prabha	D. Raja Suguna Sekar	J. SriramTeam
Leaders (Dr/Mr/Ms)	S.P. Subramani	Muhammad Ali Noushad	P. Chandrasekar	B. Deeparaj	A. Mayavel
Member	K. Senthil	P. Manoharan	J. Soosairaj	P. Malliga	R. Abinaya
Member	M. Suryaprakash	L. Mahalingam	P. Vignesh	S. Pragadeesh	C.V. Vijayam
Member	R.Ariharasuthan	S. Selvakumar	K.R. Shankar	R. Kalaiselvi	R. Sathishkumar
Member	M. Mahalingam	N. Vijayanand	M. Vishnu	C. Thamotharan	Rudranath, V.R.
Team Co-ordinator (KFD)	Sandeep.S, ACF	Ajith.N , ACF	Rohini. GR, ACF	V.P. Jayaprakash, ACF	Chinnu Janardhanan, ACF

Teams Region	11 Social Forestry, Northern Region, Kannur	12 Northern Circle, Kannur	13 Eastern Circle, Palakkad	14 Wildlife Circle, Palakkad	15 Research Division N and S, & Headquarters
Team Co-ordinators (Dr/Mr/Ms)	Madhavraj G. R	A. Karthikeyan	Rekha R Warrier	Rekha R Warrier	JP Jacob
Team Leaders (Dr/Mr/Ms)	K.N. Ashirth	R. Archana	S.Lalitha	A. Shanthi	K. Shanthi & Muhammad Ali Noushad
Member	Srijita Ganguly	C. Rajesh	M. Ganesan	R. Velumani	M.V.Vineetha
Member	M. Jeyakumar	S.M. Paulraj	N. Sudha	A. Sathish	P. Vipin
Member	V. Abirami	Remya T Radhan	Mishra Avinash	K. Rajasekaran	C. Kandasamy
Member	C.K. Suresh	M. Manikandan	S. Ajay		T. Govindaraj
Team Co-ordinator (KFD)	Sunil Kumar. K, ACF	Ajith K Raman, ACF	K. Manoj, ACF	Sanall.P., ACF	Adersh.M, ACF

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Third Party Monitoring and Evaluation of CAMPA Plantations and Other Activities

for the period
2020-2021

Submitted to
Kerala Forests & Wildlife Department (CAMPA)

ICFRE - INSTITUTE OF FOREST GENETICS AND TREE BREEDING
(Indian Council of Forestry Research and Education)
Coimbatore – 641002

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ICFRE-INSTITUTE OF FOREST GENETICS AND TREE BREEDING
भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्
Indian Council of Forestry Research & Education
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
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Preface

The State of Kerala established the Compensatory Afforestation Management and Planning Authority (CAMPA) scheme in 2009 to encourage afforestation, reforestation, and restoration/regeneration activities to compensate for forest land diverted for non-forest purposes and to enhance the state's forest cover. The Kerala Forests & Wildlife Department prepared the Annual Plan of Operations (APO) for the year 2020-2021, which the MoEFCC, GoI approved. As per the APO, the state planned various activities, including compensatory afforestation, soil and moisture conservation, biodiversity conservation, awareness campaigns on forests, wildlife and the environment, eradication of invasive alien weeds, river bank stabilisation, protection of research plots and seed production areas, creation of fire breaks and other essential maintenance activities towards forest conservation. All these activities were spread across the forest divisions of the state, including wildlife sanctuaries. The success and sustainability of these CAMPA activities, including structures established and plantations raised in terms of planning, implementation, the quantity of inputs, condition of health and survival, and outcomes, need to be evaluated and documented for monitoring purposes by an independent agency. Accordingly, ICFRE-IFGTB, Coimbatore, was awarded the monitoring and evaluation of CAMPA activities undertaken. A team of ICFRE-IFGTB staff, including forest officers, scientists and technical personnel,have been involved in the work since March 2022. The sampling methodology approved by MoEFCC was broadly followed, and a detailed survey, monitoring and evaluation exercises were conducted to represent all the forest circles and plantation models adopted in a given year. In total, over 140 project sites were identified, and about 200 activities during 2020-2021 were monitored and evaluated. Overall the CAMPA activities supported the forests and contributed to enhancing forest health in Kerala. I would like to acknowledge the Kerala Forests & Wildlife Department for their support and assistance in bringing out this document in a comprehensive manner.

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ICFRE - IFGTB

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FACT SHEET

S. No.	Item	Details
1.	Scope of evaluation	Third-party monitoring and evaluation of the CAMPA Activities of Kerala Forests and Wildlife Department (2020-2021)
2.	Period of evaluation work	Signing of MoU – March 2022 Field works – April to June 2022 Report preparation – July to December 2022
3.	Focus	Quality of conservation and development works. Assessment of compensatory afforestation activities. Public awareness campaigns.
4.	Number of evaluation teams	15 Evaluation teams and one editorial team.
5.	Objectives	• To evaluate different plantations established under CAMPA in different forest divisions of Kerala. • To evaluate the civil structures (buildings and soil & water conservation structures) established under CAMPA in different forest divisions of Kerala. • To suggest for improvement in quality of plantations for future.
6.	Area covered	25 territorial forest divisions, 14 social forestry divisions and 11 wildlife divisions.
7.	Sample size	**Plantation:** 20% plantation randomly selected from various divisions. Sampling intensity for evaluation is nearly 10% for block plantations. For every hectare of plantation, the evaluation to be done on a 30 x 30 m plot. In the case of a linear plantation, evaluation of every 10th tree/planted sapling of each row for 25% of its length per running km basis. **Soil and Moisture Conservation (SMC) activities:** 20% of SMC works evaluated in each division based on random selection from measurement book (M-book). **Eradication of weeds:** Density assessment and plot transects. **Forest protection:** 10% of all firelines evaluated in each division.
8.	Findings	• The average survival rate in ecorestoration activities is 65-70%. Damage by wild animals is high in some divisions. The activities mostly involved maintenance. • The quality of other departmental works was mostly high (80%). • Check-dams and gullies are the major SMC works taken up. • The APO focussed more on the maintenance of exisiting eco-restoration works and SMC structures.

S. No.	Item	Details
		• The involvement of the Vana Samrakshana Samidi in various department activities has ensured a participatory approach to the protection and conservation of forests.
		• The APO focussed on maintenance of various genetic assets, the first since implementation of CAMPA in 2009, mainly the experimental plots, permanent preservation plots and demo trials which is a welcome move towards the conservation of the FGRs.

EXECUTIVE SUMMARY

The Forest (Conservation) Act (1980) was enforced to conserve and protect forest resources. The Act mandated that whenever forest land is diverted for non-forestry purposes usually the conditions relating to transfer, mutation and declaration as Reserve Forest/Protected Forest, the equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation etc. are to be imposed. Additional conditions such as maintaining a safety zone area, fencing and regeneration etc. are prescribed for mining purposes, and catchment area treatment plans are stipulated for big and medium irrigation projects. Further, the Act provided that the non-forest land for Compensatory Afforestation (CA) was to be identified contiguous to or close to Reserved Forest or Protected Forest. The funds for CA are received from the user agencies based on the rates fixed by the State Forest Department, which are site-specific and vary according to the species, type of forest and site. The fund received for compensatory afforestation, additional compensatory afforestation etc. has to be used as per site-specific schemes submitted by the state along with the approved proposals for diversion of forest land. After receipt of the fund, State Forest Department has to accomplish the afforestation for which money is deposited in the CA fund within a period of one year or two growing seasons.

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Kerala has been constituted with the objective of conservation, protection, regeneration and management of existing natural forests, wildlife and their habitat and raising site specific compensatory afforestation, penal compensatory afforestation etc. As per the provisions of CAMPA guidelines, the state CAMPA has been formulating Annual Plans of Operation (APO) since 2009-10.

The Government of India approved and released **Rs. 1578.90 lakhs** for the period 2020-21 to implement CAMPA activities.

The Assignment

As a range of activities were taken up under CAMPA, a technical evaluation of the activities by a third party was considered essential. ICFRE-IFGTB was identified to carry out third-party monitoring of all the CAMPA interventions since 2009-10 (File No. FC5-1433/2021 dated 28.01.2022). The broad scope of evaluation comprised all the components and sub-components of CAMPA implementation in Kerala.

Study Area

The evaluation study covered 50 forest divisions of Kerala (25 Territorial, 14 Social Forestry and 11 Wildlife Divisions) under 11 forest circles. In addition, Research Divisions where CAMPA funds were utilised are also covered in the study.

Study Approach and Methodology

Various CAMPA interventions were evaluated using appropriate sampling criteria, data collection approaches and, in view of diversity, nature of component and stakeholders involved. The study approach and methodology have been adopted from the evaluation formats of the MoEFCC, GoI.

Details of Data Collection

- **Primary Data:** First-hand information was obtained using separately designed formats for different components and subcomponents.
- **Secondary Data:** Secondary data relating to various activities undertaken in CAMPA were collected from the circle, division and range offices in pre-designed formats and checklists.
- **Focussed Group Discussion (FGD):** FGDs with the members of the VSS were conducted to evaluate peoples' perceptions and participation levels in implementing CAMPA activities in a given locality.
- **Consultation with Forest Officials:** Consultations were undertaken with a range of forest officers involved at various stages- planning and decision making, implementation, monitoring and evaluation. This included Divisional Forest Officers (DFOs), Forest Range Officers (FROs), Section Forest Officers, Forest Beat Officers (FBOs), etc.
- **Field Observation:** Data on survival, field measurements to assess growth in different plantations, condition of physical structures in SMC activities and weed density in plantation sites were collected. Notes were prepared on various activities under CAMPA implementation, which provided the basis for the entire evaluation process.

Performance of CAMPA during the period 2020-2021

- The total funds received from the Ad hoc CAMPA during 2020-21 stands at Rs. 15.79 crores and the expenditure ending March 2021 was 10.88 crores which is 68.93 % of the funds received. The core activities undertaken with the CAMPA funds comprise plantations, creation of SMC structures, forest protection, wildlife management and assistance to tribal VSS.
- The non-core activities comprised biodiversity conservation, capacity building, infrastructure development, forest IT, monitoring, evaluation and accounting.
- Major components addressed were protection of plantations and forests, and protection of research plots and Seed Production Areas (75%). This period also focussed on activities such as improving connectivity and fire protection (20%), followed by soil and moisture conservation activities and assistance to tribal VSS. The VSS members were engaged in almost all the activities.
- Maximum activities were carried out in Southern Circle Kollam, followed by Central Circle, Thrissur and High Range Circle, Kottayam.
- Various SMC structures in CAMPA APOs included check dams, contour trenches, gully plugging etc. SMC structures undertaken by frontline forest officers under CAMPA are site-specific as per the site requirement.
- Maintenance works for ecorestoration were taken up. Most activities were done departmentally, an economical and time-saving approach.
- River stabilisation was taken up by nine sites, an improvement over the earlier APOs.

- Conservation of fauna was also prioritised in this period, with the social forestry wings focussing on bird and sea turtle conservation.
- Under infrastructure development, efforts were taken to repair / improve dilapidated structures. Connectivity was also improved through the creation of trek paths, maintenance of forest roads and construction of bridges.
- Inclusion of VSS members in patrolling, fire break creation, developing infrastructure in interior forest areas, has encouraged their active participation in conservation activities.
- During this period, permanent nurseries set up in the earlier APOs provided seedlings for various planting activities.
- Training and capacity development programmes focussed on imparting training sessions and awareness among general public.

Recommendations & Suggestions

1. Species should be selected on the basis of floristic composition of the forest types and prevailing local soil condition of the afforestation / plantation site.
2. De-centaralized local nurseries for production of forest type specific planting stocks may be promoted.
3. Maintenance and watch and ward may be continued for 4 to 5 years for better establishment.
4. Number of watchers should be increased proportionate to the size of the plantation site.
5. There should be provision in CAMPA APOs for the periodic maintenance of SMC structures as most SMC structures are subject to heavy wear and tear due to recurrent floods.
6. Buildings / structures constructed during this period needs to be repaired and maintained. In some cases, renovation / refurbishing may also be done based on a fixed schedule.
7. It is better to avoid plantations deep inside forests, with heavy movement of wildlife, as monitoring of the plantations is difficult. Instead, manual seeding may be done by adopting seed ball technology. Seeds to be broadcast should match the floristic composition of the respective forest types.
8. The frontline staff may be trained on seed handling and nursery technologies of native tree species.

Monitoring and Evaluation of CAMPA Plantations and Other Activities (2020-2021)

1. Introduction

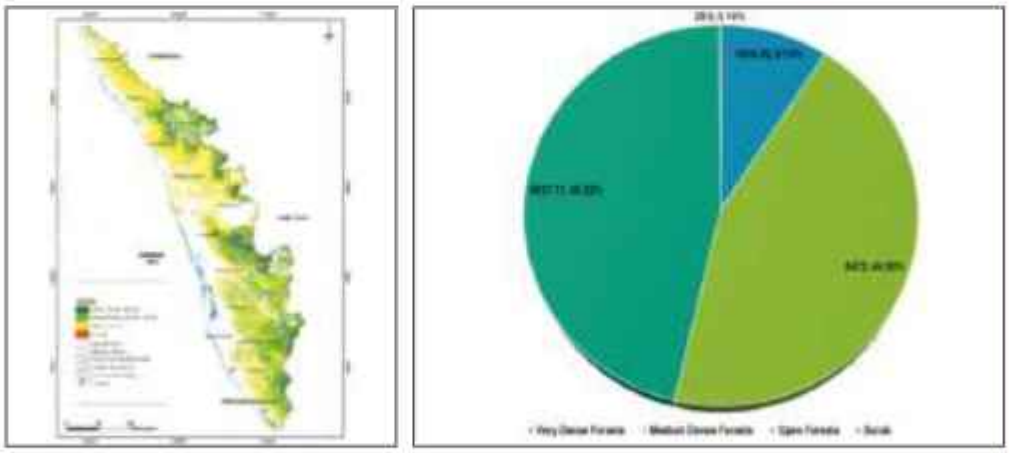
1.1 Background

Forests in India comprise diverse forest types and reserved areas accounting for about 24.62 % of the country's geographical area. Forest provides livelihood support to the people living in and adjoining forests. Forests are the most significant natural carbon sinks and regulate water regimes. Given that the forest sector provides goods and services to humankind, forest land is diverted for developmental activities for non-forestry purposes, consequently leading to considerable shrinkage of forest cover.

Kerala is endowed with rich natural resources. The conducive tropical climate favours forests with rich biodiversity and endemism. The Western Ghats, one of the Biodiversity hotspots, runs all along the eastern boundary of Kerala. Unfortunately, the increasing population and changing lifestyles exert tremendous pressure on forests. The greatest challenge today is to accommodate developmental needs by minimising the destruction of its pristine forests.

1.2 Forest cover in Kerala

The forest cover in the state based on the interpretation of the Forest Survey of India (FSI) 2021 is 21,253.49 sq km which is 54.7% of the state's geographical area.



Source: *ISFR, 2021*

Forest Cover in the State has increased by 109 sq km compared to the previous assessment reported in ISFR 2019. Among forest canopy density classes, the state has 1944.32 sq km area under very dense forest, 9472 sq km area under moderately dense forest and 9837.17 sq km area under open forest.

1.3 Forest Cover in Kerala From 2015 to 2019

Forest cover in the state has been increasing over the years. Forest conservation and afforestation activities are the key reasons for the improvement.

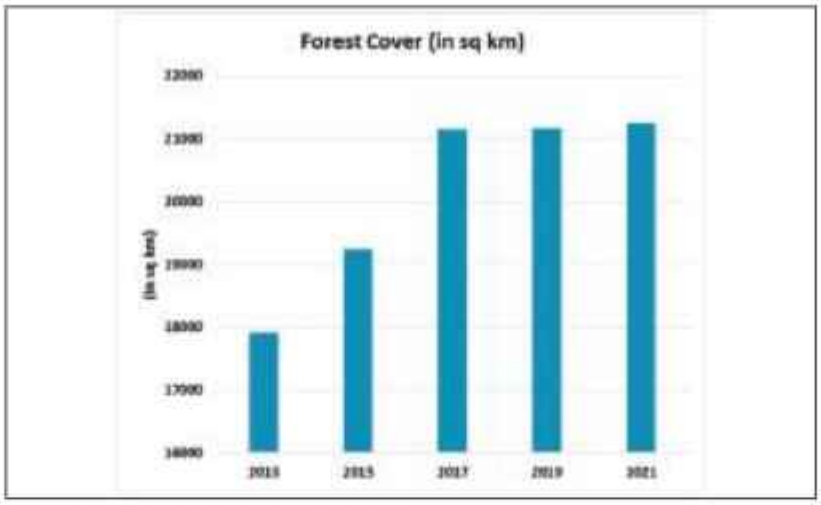


Figure 1.1Forest Cover in Kerala from 2013 to 2021

1.4 District-wise Forest Coverage in Kerala

The tree map at Fig 1.2 provides the distribution across districts.

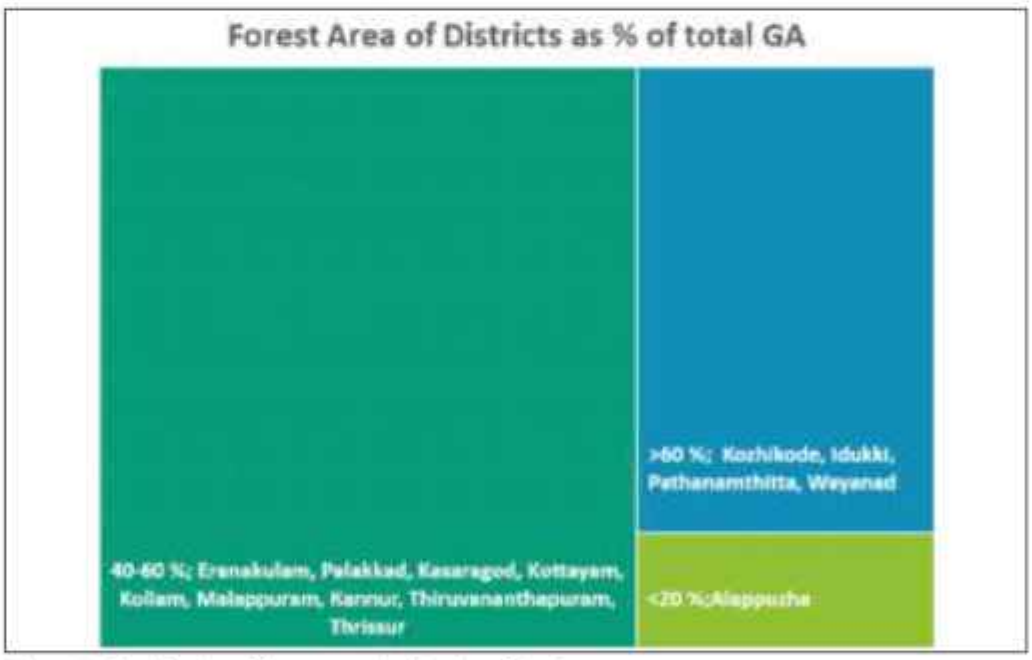


Figure 1.2 Distribution of forest cover in districts of Kerala

Comparing district-wise area cover in Kerala, Idukki has the largest forest cover (3155 sq km) in the state, followed by Palakkad (2104 sq km), Malappuram (1984 sq km), Pathanamthitta (1949 sq km) and Kannur (1669 sq km). In terms of percentage of forest cover concerning the total geographical area, Wayanad with 74.2 % has the highest forest cover, followed by Pathanamthitta (73.49%), Idukki (72.44%), Kozhikode (61.74%) and Thiruvananthapuram (60.17%). Data reveals an increase in forest cover by 109 sq km in 2021 compared to 2019 (Kerala ENVIS, 2022).

Nearly 60 lakh ha of forest is degraded with less than 40% canopy density. This is the target area for the afforestation programmes. Forest plantations extend over 1.56 lakh ha, teak being the major species, covering almost 50 % of the total plantation area, followed

by mixed plantations and Eucalyptus. The natural forests, plantations and homestead gardens contribute to the state's green cover, and all these are required in forest management.

2. Project profile

Compensatory Afforestation Programmes in the state were initiated in 1993, and plantations were maintained until 2002-03. The Government of India notified The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in April, 2004. The State CAMPA receives funds collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980. Kerala State CAMPA was constituted in November 2009.

Kerala Forests & Wildlife Department (KFD) has been receiving funds since 2009 from CAMPA, MoEFCC, GoI for various developmental activities such as afforestation programs, soil and moisture conservation works, capacity building for staff and local communities, the establishment of civil structures, etc. in various forest divisions of Kerala. The funds are spent for compensatory afforestation, biodiversity conservation, soil and moisture conservation, etc. The Chief Executive Officer, CAMPA, Kerala, is responsible for preparing the schemes, Annual Plan of Operations (APO) for CAMPA, and getting it approved by the Executive Committee, Steering Committee and the Government of India, followed by implementation of the approved APO. After receiving the fund allotment under State CAMPA, the implementing officers, the District Forest Officers (DFOs) execute the assigned activities as per the APO. Under each major heads, there are different subheads available, which vary according to site conditions and needs.

The total outlay of the CAMPA activities during 2020-21 is Rs. **15.78** crores. The details of the Divisions, and the number of activities against different years are in Annexure-III.

3. Methodology

Physical verification of activities

I. Plantation - methodology

- 10% plantation randomly selected from various divisions.
- Sampling intensity for evaluation - 10% for block plantations.
- For every hectare of the plantation, the evaluation was done on a 30 x 30 m plot.
- Each plot was marked on a map of the plantation area, and GPS co-ordinates of all such (30 x 30 m) plots were collected.
- In case of linear plantation, every 10th tree/planted sapling of each row was evaluated for 25% of its length per running km basis (5 intermittent line transects – each for 5% of length per running km).
- The evaluation was done on 0.1 ha by laying a 30 x 30 m plot based on random sampling.

II. Soil and water conservation measures

(a) The teams obtained the norms and expenditure of SMC activities taken up in the plantation site from the respective offices.

(b) The teams assessed the quantity/ present condition/ treatment plans of the different SMC works. 20% sampling was carried out.

© For civil works, 50% M&E was carried out, based on random selection from Measurement Books from various divisions.

III. Eradication of weeds

Density assessment - plot counts

- Three or more plots (quadrats) of size 10 x 10m (located randomly over the site) were marked, and the number of plants within the plots was counted.
- To get the actual number per hectare, multiplied the average number of plants in the plots by 100.

Plot transects

- Marked out 100m transects, keeping them parallel to one another (10-50m apart). Using a 2 x 2m plot frame (using a rope) plots were placed at intervals along the transect.
- The number of plants within the plot was counted. The values were converted to density measure by averaging the number of plants in each of the plots (i.e. individuals per hectare)

IV. Forest protection

- 10% of all firelines were evaluated in each division based on random selection from Measurement Books from various divisions.

V. Qualitative Aspects

Focussed group discussion (FGD): FGD was conducted for 10% of the villages in which CAMPA works were undertaken with at least 15 villagers in a common place within the village. The group comprised office bearers of JFMC, BPL households, and village residents.

Ranking of individual projects

The criterion below was used to evaluate the project needs since the site parameters, species and inputs provided vary from site to site.

Site suitability	High	Medium	Low
Suitable area with favourable site condition rainfall, soil, etc.	7 to 10	>3 to<7	≤3
Medium quality forest sites	>5	2-5	≤2
Poor forest sites	> 4	2-4	≤2

Criteria for classifying a site into suitable site, medium site and poor site

(a) Suitable site: soil depth more than 61cm, rainfall range between 1270 to 3810mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(b) Medium site: Soil depth ranges between 30.4 to 61cm, rainfall ranges between 889 to 1270mm, average prevalence of adverse biotic factors, gentle to moderate slopes.

(c) Poor site: Soil depth less than 30.4cm, rainfall less than 889mm and excessive prevalence of mist and fog during monsoon, prevalence of adverse biotic factors and steep slopes.

This approach involved aggregating the percentage of readings falling into the three higher ratings (3-5) under the 'satisfactory' heading and the two lower ratings (1-2) under 'unsatisfactory'. The introduction of these two broad categories allowed better tracking of performance trends. The ranking table is provided below

Score	Assessment	Category
5	Highly satisfactory	Satisfactory
4	Satisfactory	
3	Moderately satisfactory	
2	Unsatisfactory	Unsatisfactory
1	Highly Unsatisfactory	

Physical verification

Each of the selected plots were visited by the monitoring team and the following details documented in the field.

- Plot location with GPS co-ordinates and area
- Plantation type and design (wherever available)
- Year of establishment
- Number of saplings planted initially (species wise)
- Height of the saplings when planted
- Number of plants surviving at the time of monitoring
- Average height of surviving plants
- Species composition and distribution
- Protection measures and maintenance
- Anthropogenic pressure, etc.

Parameters considered during M&E

- **For plantations**

  a. **Qualitative** – site suitability (both climatic and edaphic factors), condition of the plantation, choice of species, etc.

  b. **Quantitative** - Total seedling/tree height, collar girth/GBH, survival percentage, etc.

  c. **Other parameters** – Management practices, biotic and abiotic factors, etc.

- **For civil constructions**

  a. Verification (sketch and dimensions) based on the original documents and M-book.

Deliverables and time schedule

Work plan submission	One week after signing the agreement
Field Data Collection	Two - three months
Draft report submission	One month after field data collection
Final report submission	Two months after draft report submission
Total Duration	6 months

4. Evaluation details of the circles and divisions

The details of various circles and divisions evaluated are presented below.

	Circles	Divisions
Territorial Circles and Divisions	Northern Circle, Kannur	Kannur, North Wayanad, South Wayanad and Kozhikode Forest Divisions
	Eastern Circle, Palakkad	Nilambur North, Nilambur South, Mannarkkad, Palakkad and Nemmara Forest Divisions
	Central Circle, Thrissur	Thrissur, Chalakkudy, Vazhachal and Malayattoor Forest Divisions
	High Range Circle, Kottayam	Kothamangalam, Mankulam, Munnar, Marayoor and Kottayam Forest Divisions
	Southern Circle, Kollam	Ranni, Konni, Punalur, Thenmala, Achankovil and Thiruvananthapuram Forest Divisions
Wildlife Circles and Divisions	Wildlife, Palakkad	Aralam, Wayanad, Parambikulam, Peechi and Silent Valley National Park Wildlife Divisions.
	Field Director Project Tiger, Kottayam	Munnar, Idukki, Periyar Tiger Reserve East and Periyar Tiger West Wildlife Divisions.
	Agasthyavanam Biological Park, Thiruvananthapuram	Shendurney and Thiruvananthapuram Wildlife Divisions.
Social Forestry Circles and Divisions.	Social Forestry, Kozhikode	Kasargode, Kannur, Wayanad, Kozhikode and Malappuram Social Forestry Divisions.
	Social Forestry, Ernakulam	Palakkad, Thrissur, Ernakulam and Idukki Social Forestry Divisions.
	Social Forestry, Kollam	Alappuzha, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram Social Forestry Divisions.
Research Circles & Research Divisions	Working Plan & Research	Kozhikode, Palakkad, Munnar, Punalur and Kollam Working Plan Divisions as well as Research Division, Thrissur Research Division

Northern Circle, Kannur (2020-21)

The evaluation covered four forest divisions of the circle. They include

1. Kannur
2. Kozhikode
3. North Wayanad
4. South Wayanad

Fifteen different activities were envisaged in the circle under six components. The distribution of activities is as follows:

Component	Particulars of work
Better connectivity	Maintenance of trek path/patrolling route
Capacity Building	Awareness Program/ training to staff and VSS/EDC members
	Conducting nature camps to school and college children
Forest Fire Prevention and control operation	Engaging fire gang through participatory forest management
	Fire awareness campaign
	Fire fighting equipment
Human Animal Conflict Mitigation	Engaging watchers to mitigate human-animal interface
	Protective gears for wildlife conflict mitigation staff
Improvement of Wildlife Habitat	Bird survey and conservation
	Eradication of exotic weeds
	Maintenance of Vayal
Protection of plantations and forests	Field survival kits and field equipment
	Interior campshed maintenance
	Organising joint patrolling and raids along inter-divisional and interstate boundaries
	Provision of field ration for interior camps

I. Protection of plantations and forests

a. Field survival kits and field Equipment

Location / Range / Division	Items procured	Quantity	Remarks
Irulam and Pulpally FS / Chedleth Range/ S. Wayanad	Camera traps	1	In good condition, verified the records and found correct.
Meppady Range/ S. Wayanad	Body protector jacket, lathi etc	8	All are in good condition, verified the records and found correct
Idiyamvayal/ Kalpetta section/ S. Wayanad	Essential articles for camping station	15	All are in good condition, verified the records and found correct

Location / Range / Division	Items procured	Quantity	Remarks
Mandamala campshed/ Kalpetta section/ Kalpetta range/ S. Wayanad	Sanitary & other kitchen articles	20	All are in good condition, verified the records and found correct
Kalpetta Range/ S. Wayanad	Equipment for RRT and protective staff	1	All are in good condition, verified the records and found correct

The equipment purchased were evaluated for physical existence and quality. They were checked by verifying the vouchers. The equipment are in good condition and used regularly.

Field Equipment (Power driller) and Safety Equipment

b. Interior campshed maintenance

Location	GPS Coordinates	Type of activity	Remarks
Thollayiram campshed under Mundakkai FS /S. Wayanad	N11°49'45.45" E76°14'21.27"	Erection of sheet roof and painting works	The structure is in good condition, verified the records and found correct
Karinkanny campshed Padinjarethara /S. Wayanad	N11°66'88.43" E76°94'00.51"	Installing pumpset and facilitating drinking water	The structure is in good condition, verified the records and found correct
Vellaramkunnu APC, Vellamunda forest Section	N11°14'02.84" E76°13'66.46"	Mini solar home lights	The lights are functioning well, verified the records and found correct
Thavalapara APC, Vellamunda forest Section	N11°14'02.84" E76°13'66.46"	Mini solar home lights	The lights are functioning well, verified the records and found correct
Perinjerimala APC, Makkiyad Forest Section	N11°14'02.84" E76°13'66.46"	Mini solar home lights	The lights are functioning well, verified the records and found correct

The works were evaluated for physical existence and quality. The inspection team verified the records and the vouchers for erection of roof, pumpset installation and for the procurement of mini solar lights for campsheds and found correct.

c. Organising joint patrolling and raids along inter-divisional and interstate boundaries

Location / Range / Division	Type of activity	Remarks
Kanhangad Range/Kasaragode Division	Joint patrolling & combing operations	Bills and vouchers verified and found correct.
Kanhangad Range/Kasaragode Division	Interstate /division joint patrolling combing operations	Bills and vouchers verified and found correct.
Kasaragode Range/Kasaragode Division	Interstate /division joint patrolling combing operations	Bills and vouchers verified and found correct.
Kanhangad Range/Kasaragode Division	Division joint patrolling combing operations	Bills and vouchers verified and found correct.
Inter divisional and inter state boundaries Pulpally FS/S. Wayanad	Organising joint patrolling and raids	Bills and vouchers verified and found correct.
Irulam forest station FS/S. Wayanad	Organising joint patrolling and raids	Bills and vouchers verified and found correct.
Interdivision areas Kalpetta Range/S. Wayanad	Organising joint patrolling and raids	Bills and vouchers verified and found correct.
Varayal F.S, Peria range/ N. Wayanad	Special joint patroling	Bills and vouchers verified and found correct.
Inter division border of Begur range /N. Wayanad	Joint Patrolling and raid in interstate divisions	Bills and vouchers verified and found correct.
Thrissileri & Begur FS/ N. Wayanad	Joint patrolling and raid	Bills and vouchers verified and found correct.

The activities were verified through inspection of records and found correct.

d. Provision of field ration for interior camps

Location	Type of activity	Remarks
APC Choothupara/ Kozhikode	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct
APC Athikode/ Kozhikode	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct
APC Sankaranpuzha/ Kozhikode	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct
Poozhithode block of Peruvannamuzhi/ Kozhikode	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct
Vayalada-Kottakunnu block of Peruvannamuzhi/ Kozhikode	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct

The records and vouchers were verified and found correct.

II. Improvement of wildlife habitat

a. Bird survey and conservation

Location	Type of activity	Remarks
Kanhangad Range/ Kasaragode	Conducting bird survey	The files and vouchers were verified and found correct.
Ranipuram Eco-tourism area/ Kasaragode	Complete assessment of bird diversity	The files and vouchers were verified and found correct.
Ranipuram/ Kasaragode	Complete assessment of bird diversity	The files and vouchers were verified and found correct.
Ranipuram/ Kasaragode	Complete assessment of bird diversity	The files and vouchers were verified and found correct.
Begur range/N. Wayanad	Bird census	The files and vouchers were verified and found correct.
North Wayanad	Books on bird survey	The files and vouchers were verified and found correct.
North Wayanad	Bird bath	The files and vouchers were verified and found correct.

The files and vouchers were verified and found correct.

b. Eradication of exotic weeds

Eradication of exotic weeds undertaken in Wayanad Division was verified based on the records. The exotic weeds such as lantana, Eupatorium etc. were removed.

Location	GPS Locations	Area/ number	Type of activity
Kuruva Island area / Pulpally FS /S.Wayanad	N11°82'68.8" E76°09'54.7"	10 ha	Removal of exotic weeds, Lantana, Eupatorium etc
Pambra - Moonanakuzhy area Irulam FS /S. Wayanad	N11°73'37.46" E76°19'86.19'	5 ha	Removal of exotic weeds, Lantana, Eupatorium etc
Maramala area Irulam FS / S. Wayanad	N11°76'14.04" E76°20'03.99"	5 ha	Removal of exotic weeds, Lantana, Eupatorium etc
Pakkom- Chekady road area Pakkom Kuruva VSS Pulpally FS /S. Wayanad	N11°80'77.29" E76°10'09.64"	4.5 ha	Clearing protection path either side of the coupe road
Irulam and Pulpally FS Chedleth Range /S. Wayanad	N11°75'09.28" E76°22'04.40"	1 ha	Removal of exotic weeds, Lantana, Eupatorium etc

Evaluation of weed eradication in South Wayanad

c. Maintenance of vayal

Location / Range / Division	GPS Coordinates	Remarks
Kottapady, Thirunelli Forest Section, Begur Range / N. Wayanad	N11°54'39.3" E75°59'53.4"	The vayals are maintained well.
Chiravattom Hariland,Varayal FS /N. Wayanad	N11°84'86.5" E75°82'36.2"	The vayals are maintained well.

The files and vouchers were verified and found correct.

III. Forest fire prevention and control operation

a. Engaging fire gang through participatory forest management

Location / Range / Division	Activity
Settukunnu area in Kalpetta section/S. Wayanad	Engaging fire gang
Valaramkunnu area in Kalpetta section/S. Wayanad	Engaging fire gang
Arukamthode area in Kalpetta section/S. Wayanad	Engaging fire gang
Aranamala in Mundakkai FS Meppady Range/S. Wayanad	Engaging fire mazdoors
Cholamala Mundakkai FS Meppady Range/S. Wayanad	Fire gang
Kelamangalam area in Pulpally FS Chedleth Range/S. Wayanad	Fire gang
Chekady area in Pulpally FS Chedleth Range/S. Wayanad	Fire gang
Anapanthy area in Irulam FS Chedleth Range/S. Wayanad	Fire gang
Irulam area in Irulam FS Chedleth Range/S. Wayanad	Fire gang
Moonanakuzhy area in Irulam FS Chedleth Range/S. Wayanad	Fire gang
Vattapady area in Irulam FS Chedleth Range/S. Wayanad	Fire gang
Padiri area in Pulpally FS/S. Wayanad	Fire gang
Vettathoor area in Pulpally FS Chedleth Range/S. Wayanad	Fire gang
Kanhangad Range/ Kasaragode	Engaging fire gang watchers
Maruthom Section / Kasaragode	Engaging fire gang watchers
Panathady Section, Kanhangad Range/ Kasaragode	Engaging fire gang watchers
Bandaduka section,Kasaragode Range/ Kasaragode	Engaging fire gang watchers
Bheemanady Section, Kanhangad Range/ Kasaragode	Engaging fire gang watchers
Panathady Section, Kanhangad Range/ Kasaragode	Engaging fire gang watchers
Karadukka Section, Kasragod Range/ Kasaragode	Engaging fire gang watchers
Karadukka Section/ Kasaragode	Engaging fire gang watchers
Panathadi Section/ Kasaragode	Engaging fire gang watchers
Vayalada area of Kakkayam FS/Kozhikode	Engaging man mazdoor for fire protection works
Karingad fire block of Vilangad section of Kuttiady /Kozhikode	Engaging man mazdoor for fire protection works
Panom to Panniyeri fireblock of Vilangad section of Kuttiady / Kozhikode	Engaging man mazdoor for fire protection works

Location / Range / Division	Activity
Choorani fireblock of Pashukkadavu section of Kuttiady / Kozhikode	Engaging man mazdoor for fire protection works
Pakramthalam fireblock of Pashukkadavu section of Kuttiady / Kozhikode	Engaging man mazdoor for fire protection works
Poothampara fireblock of Pashukkadavu section of Kuttiady / Kozhikode	Engaging man mazdoor for fire protection works
Kandivathukkal fireblock of Pashukkadavu section of Kuttiady / Kozhikode	Engaging man mazdoor for fire protection works

Fire protection works undertaken in Wayanad, Kasaragode and Kozhikode Divisions were verified based on the records.

b. Fire awareness campaign

Location	Type of activity	Remarks
Mundakkai FS Meppady Range	Conducting fire awareness classes for staff and Public	Records were verified
Kalpetta Range /S. Wayanad	Conducting training class in connection with incident response systems, fire suppression & personal safety	Records were verified
Makkiyad Forest Section, Manathavady range	Fire Awareness Programe-Training fire & rescue staffs	Records were verified

c. Fire fighting equipment

Location / Range / Division	Items procured	Numbers
Irulam and Pulpally FS Chedleth / S. Wayanad	Providing bag, water bottle and items related to fire protection	42
Vythri, Mundakkai FS and Baderi section / S. Wayanad	Fire fighting equipment	1
Kalpetta range /S. Wayanad	Back pack and blower for extingushing forest fire	1

The activities were verified through inspection of records and found correct.

IV. Human animal conflict mitigation

a. Engaging watchers to mitigate human animal interface

Location / Range / Division	Activity
Chundale area/ Kalpetta section/ Kalpetta Range/ S. Wayanad	Engaging watchers for protection and perambulation
Karinkanny area Padinjharathara section/ S. Wayanad	Engaging protection and elephant scaring watchers
Kurichiyarmala area/ Kalpetta section/ S. Wayanad	Engaging protection and elephant scaring watchers

Location / Range / Division	Activity
Sugandhagiri Kalpetta section /S. Wayanad	Engaging protection and elephant-scaring watchers
Banasuramala VF & EFL area Padinjharathara section /S. Wayanad	Engaging daily wage watcher cum driver for upkeep of dept boat
Mandamala area Kalpetta section /S. Wayanad	Engaging protection and elephant-scaring watchers
Udiramchery area /Sugandhagiri section / S. Wayanad	Engaging protection and elephant-scaring watchers
Koodaloor area Irulam FS /S. Wayanad	Mazdoor for protection and perambulation
Madapallikunnu area Pulpally FS /S. Wayanad	Mazdoor for protection and perambulation
Karapuzha area Muttil Section /S. Wayanad	Mazdoor for protection and perambulation
S. Wayanad	Mazdoor for capturing snake and other animals transport them to the rescue centre and relocation
Pakkom area Pulpally FS /S. Wayanad	Man mazdoor for assisting section staff to drive away wild elephants
Parathode and Koncherikunnu Areas Sugandhagiri section /S. Wayanad	Man mazdoor for assisting section staff to drive away wild elephants
Kolavally- Parudeesa Kavala- Seethamount area Pulpally FS /S. Wayanad	Man mazdoor for assisting section staff to scare tigers
Chunda, Ammara Kalpetta section /S. Wayanad	Man mazdoor for assisting section staff to drive away wild elephants
Kochumala, Kunnumpuram in Sugandhagiri section /S. Wayanad	Man mazdoor for assisting section staff to drive away wild elephants
Punchavayal- Panamaram area Chedleth Range / S. Wayanad	Man mazdoor for assisting section staff to drive away wild elephants infiltrating into human settlement
Kunnembetta, Vythiri FS /S. Wayanad	Funeral expences towards loss of life by wild elephant attack
Vythiri FS /S. Wayanad	Man mazdoor for assisting section staff to drive away wild elephants infiltrating into human settlement
Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants
Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants
Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants
Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants
Karadukka section / Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants

Location / Range / Division	Activity
Karadukka section / Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants
Karadukka section / Kasaragode	Man mazdoor for assisting section staff to drive away wild elephants
Pasukkadavu section of Kuttiady	Man mazdoor for assisting section staff to drive away wild elephants
Edathara section of Thamarassery	Man mazdoor for assisting section staff to drive away wild elephants
Peruvannamuzhi station area	Man mazdoor for assisting section staff to drive away wild elephants

The activities were verified through inspection of records and found correct.

b. Protective gears for wildlife conflict mitigation staff

Location / Range / Division	Activity
Kalpetta Range/S. Wayanad	Purchasing postmortem kit
Kalpetta section under Kalpetta Range/S. Wayanad	Purchasing snake and animal rescue articles
Padionjharethara section under Kalpetta Range/ S. Wayanad	Purchasing snake and animal rescue articles
Sugandhagiri section under Kalpetta Range/ S. Wayanad	Purchasing snake and animal rescue articles
Chedleth Range/S. Wayanad	Protective gears for wildlife conflict mitigation staff
Meppady Range/S. Wayanad	Crackers for driving away elephants
Meppady Range/S. Wayanad	Search lights
Pulpally FS Chedleth Range/S. Wayanad	Head lights
Irulam FS Chedleth Range/S. Wayanad	Head lights
Meppady Range/S. Wayanad	Construction of temporary machans in interior forest areas
Thamarassery	Medical equipment to veterinary surgeon's office.
Thamarassery	Supply of computer to animal rescue centre and veterinary office
Thamarassery	Purchasing of computer UPS and extension box for the use in veterinary office

The activities were verified through inspection of records and found correct.

V. Better connectivity

a. Maintenance of trek path/patrolling route

Location	GPS Co-ordinates	Type of activity	Dimension (km)	Observation of the evaluation team
Chullikkad to Alliyangal gate area area of Pulpally FS Chedleth /S. Wayanad	N11°40'54.27" E75°56'12.44"	Making new trek path	5	Bills and vouchers were found correct
Punchirimattam to Mallika through Aranamala VSS/ Meppady Range / S. Wayanad	N11°41'20.22" E75°55'57.75"	Clearing protection path	2.5	Bills and vouchers were found correct
Meppady Range / S. Wayanad	N11°41'31.3" E75°55'18.7"	Clearing protection path from Kadassery to Parappanpara through Palachuram VSS	3	Bills and vouchers were found correct
Vilangadi- Vettathoor area Pulpally FS / S. Wayanad	N11°37'42.6" E75°59'21.2"	Maintenance of trek path	2	Bills and vouchers were found correct
Chandroth Anapanthy area Pulpally FS / S. Wayanad	N11°37'20.4" E75°58'40.8"	Maintenance of trek path	2	Bills and vouchers were found correct

The activities were verified through inspection of records and found correct.

VI. Capacity building

a. Awareness program/ training to staff and VSS/EDC members

Location	Type of activity
Idiyamvayal camping station at Kalpetta section and Thariyode section HQ in Sugandhagiri section / S. Wayanad	Installation of awareness board
Valaramkunnu Thndiyode Bappanam area in Padinjharethara section kalpetta /S. Wayanad	Installation of awareness sign board
Udiramcheri, Chekuthanpalam Parathode area Sugandhagirri section Kalpetta /S. Wayanad	Installation of awareness sign board
Irulam Pambra Vattapadi Pokalamalam area in Irulam FS / S. Wayanad	Maintenance of existing sign board

The activities were verified through inspection of records and found correct.

b. Conducting nature camps to school and college children

Location	Type of activity
Kottanchery / Kasaragode	Conducting nature camp to school children
Patla / Kasaragode	Conducting nature camps for GHSS Patla School students

The activities were verified through inspection of records and found correct.

Fifteen activities were taken up during 2020-21 in the circle. The circle implemented all the activities listed in the APO. No spillovers were observed.

Overall, an amount of Rs. 67.57 lakhs was allotted to the circle during the period of which 95.14 percent financial achievement was observed.

Eastern Circle, Palakkad (2020-2021)

The evaluation covered five forest divisions of the circle. They include

1. Mannarkkad
2. Nenmara
3. Nilambur North
4. Nilambur South
5. Palakkad

Fifteen different activities have been undertaken under eight different components in the circle. The distribution of activities is as follows:

Component	Particulars of work
Better connectivity	Maintenance of trek path/patrolling route
Capacity Building	Awareness program/ training to staff and VSS/EDC members
	Conducting nature camps to school and college children
Compensatory Afforestation Funds	Compensatory Afforestation Works (Creation - Preparatory works)
Catchment Area Treatment Plan Fund Part	River Bank Stabilization
Forest Fire Prevention and control operation	Engaging fire gang through participatory forest management
	Fire awareness campaign
	Fire fighting equipment
Human Animal Conflict Mitigation	Engaging watchers to mitigate human animal interface
	Equipment/ ration for Rapid Response Teams (RRTs)
Improvement of Wildlife Habitat	Eradication of exotic weeds
Protection of plantations and forests	Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works
	Field survival kits and field equipment
	Interior campshed maintenance
	Organising joint patrolling and raids along inter-divisional and interstate boundaries

I. Protection of plantations and forests

a. Ecorestoration activities in monoculture plantations

Location/ Range/ Divisions	Area (ha)/ Planting	Species	Survival (%)	Remarks
Thannipoyil / Edavanna range/ Nilambur north	1.712	*Gmelina arborea, Lagerstroemia lanceolata, Terminalia arjuna, Pongamia pinnata*	90	Gap plantation was under taken. Casualty replacement was done. Verified vouchers and found correct.

Evaluation team at Thannipoyil, Edavanna Range, Nilambur North

Plantation details at Thannipoyil, Edavanna Range, Nilambur North

Species survival in the eco-restoration plot in Edavanna

b. Construction and maintenance of campshed

Location/ range/ Division	GPS Location	Dimensions (m)	Remarks
Edavani campshed/ Pudur/ Attappadi/ Mannarkkad	N11°10'25.829" E76°33'55.075"	12.5x6.5x2.5	Repairs and purchase of consumables etc. was undertaken in the temporary sheds in Attappady and Agali ranges. Vouchers were verified and found correct.
Ayyappan thodu campshed/ Walayar	N10°52'47.3" E76°48'09.0"	4.7x6.2x5.0	Repairs and purchase of consumables etc. was undertaken Vouchers were verified and found correct.
Panapuzha camp shed/ Karulai /Nilambur south	N11°4'19" E76°4'26.0"	-	Works like window replacement; toilet renovation, door replacement; purchase of utensils were carried out. Vouchers were verified and found correct. Items wherever possible were physically verified.
Vattikkal camp shed/ Karulai/Nilambur south	N11°17'44.2" E76°21'36.4"	-	Purchase of utensils; repair work repair of windows and doors were undertaken. Vouchers were verified and found correct.

The camp sheds are maintained well and used by front line staff. The evaluation team checked for the physical correctness. Verified the records and vouchers and found correct.

Campshed at Ayyappanthodu, Walayar

c. Interior campshed ration

Location	Type of activity	Remarks
Attapadi, Agali and Mannarkkad ranges	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct
Olavakkode, Ottapalam range/palakkad	Providing field ration to staffs and watchers	The records and vouchers were verified and found correct

d. Field survival kits and field equipment

Location / Range / Division	Items procured	Numbers	Present Status
Palakkad Division	Mahindra Arjun-Novo 605 D I Tractor	1	The tractor is in good condition

Kits were also procured in the Olavakkode and Walayar ranges. The vouchers were verified and found correct.

Mahindra Arjun-Novo 605 D I Tractor in Palakkad Division used for field work

e. Organising joint patrolling and raids along inter-divisional and interstate boundaries

Range/Division	Activity
Pudur, Murugala, Kulladpanjakad in Attapadi / Mannarkkad	Joint patrolling and raids
Olavakkode range/Palakkad	Joint ratrolling and raids
Edavanna range, Nilambur north	Joint patrolling and raids
Karulai range, Nedungayam, Padukka forest station, Nilambur South	Joint patrolling and raids

The activities were verified through inspection of records and found correct.

II. Improvement of wildlife habitat

Eradication of exotic weeds : Weed eradication was taken up in Edavana Range, Nilambur North Division.

Plot No.	GPS coordinates of the worked plot	Species	Weed density (%)
1	N11°18' 8.24" E76°23' 59.54"	*Lantana camara* *Eupatorium* sp. *Chromolaena odorata* *Glycosmis pentaphylla*	**10** **4** **15** **10**
2	N11°18' 18.32" E76°23' 61.17"	*Lantana camara* *Eupatorium* sp. *Chromolaena odorata* *Glycosmis pentaphylla*	**5** **2** **20** **8**
3	N11°18' 19.51" E76°23' 64.82"	*Lantana camara* *Eupatorium* sp. *Chromolaena odorata* *Glycosmis pentaphylla*	**5** **4** **10** **15**
4	N11°18' 20.51" E76°23' 66.47"	*Lantana camara* *Eupatorium* sp. *Chromolaena odorata* *Glycosmis pentaphylla*	**8** **1** **10** **5**
5	N11°18' 21.56" E76°23' 68.73"	*Lantana camara* *Eupatorium* sp. *Chromolaena odorata* *Glycosmis pentaphylla*	**12** **2** **15** **8**

The exotic weeds such as *Lantana camara*, *Eupatorium* sp., *Chromolaena odorata* and *Glycosmis pentaphylla* were eradicated effectively. The records and vouchers were verified and found correct.

III. Compensatory afforestation funds

Maintenance was undertaken in some ecorestoration zones in the division. Minor soil and mositrue conservation activities, protection, watch and ward were also undertaken.

Location/range/division	GPS coordinates	Remarks
Ecorestoration zone, Elival, Olavakkode, Palakkad	N10°51'54.28" E76°38'14.532"	The teak plantation is dominated by *Grewia tilifolia, Albizia lebbeck, Xylia xylocarpa, Terminalia paniculata, Delonix regia, Lagerstroemia speciosa*. Gullies (20.324 m^3) were physically verified and found in good condition.
Ecorestoration zone, Olavakkode, Palakkad	N10°53'2.01" E76°38'33.83	The gullies were physically verified and found in good condition. The Teak plantation is dominated by *Grewia tilifolia, Albizia lebbeck, Xylia xylocarpa, Terminalia paniculata, Delonix regia, Lagerstroemia speciosa*. Gullies (27.628 m^3) were physically verified and found in good condition.
Thanuppan Chola/ Vazhikkadavu/Nilambur north	N11°24'51.6" E76°22'41.7"	Species like *Terminalia arjuna*, Puvam, Pali, Pullani, Irul, *Melia dubia*, Bamboo, Reeds were planted. 30% eucalyptus and 10%grass land. 3 gullies of dimensions 4.1x2.5x1.7 m, 9x1.5x2.5 m, 9.5x2.5x1.5m were constructed.
Thanuppan Chola/ Vazhikkadavu/Nilambur north /1996 TP	N11°24'58.4" E76°22'40.9"	Species like *Terminalia arjuna*, Puvam, Pali, Pullani, Irul, *Melia dubia*, Bamboo, Reeds were planted. 2 gullies of dimensions 5.4x1.5x2.5m and 4.9x1.7x2.5m were constructed.
2002 Thottappala/ Vazhikkadavu/Nilambur north Eucalyptus eco restoration zone	N11°21'33.2" E76°20'2.2"	Species like Mahogany, Marudu planted in the zone in an area of 3.08 ha.
Udumboyil / Vazhikkadavu / Nilambur north/ Eucalyptus eco – restoration zone	N11°23'15.55" E76°16'56.54"	The Eucalyptus plantation has been planted with indigenous species and was maintained during this period.
Manchalkkode Eucalyptus plantation eco - resoration	N11°25'44.92" E76°19'26.29"	Species like Mahogany, Marudu planted in the zone in an area of 3.08 ha. Protection watchers were engaged for maintenance. Vouchers were checked and found correct.
Nedumgayam eco restoration zone / Karulai / Nilambur south	N11°17'15.88" E76°20'50.10"	An area of 28 ha was maintained, Fire line work & engaging watchers. Most of the trees dried due to water logging which were removed. Vouchers were checked and found correct. SMC works like gully plugging (266.59m^3) was carried out.
Vattikkal ecorestoration zone Karulai / Nilambur south	N11°19'59.3" E76°19'15.1"	Species such as *Terminalia paniculata, Terminalia arjuna, Xylia xylocarpa* etc. were planted in an area of 28 ha, Fireline, weeding works were carried out by engaging watchers. Vouchers were checked and found correct.

Inspection of gullies at Eco-restoration zone, Olavakkode

IV. Catchment area treatment plan fund part

a. River bank stabilization/ protection

Location/range/ Divisions	GPS Coordinates	Species	Survival (%)	Remarks
Chemmannor to Mukkali / Attapadi range/ Mannarkkad	N11° 02' 26.9" E76° 42' 46.6"	Bamboo, *Pongamia pinnata,Terminalia arjuna, Terminalia bellirica*	**90**	Watchers were deployed for the work.

Bamboos established in river bank stabilisation efforts

V. Better connectivity

a. Maintenance of trek path

Location/range/ division	GPS Location	Year of Construction	Dimensions (m)	Remarks
Attapadi range (Coupe road From Pottikkal plantation To Mukali)	N11° 4' 17.18" E76° 33' 4.88"	2020-2021	8km ; Width 3.5m	The works were evaluated for the physical existence and for the quality.
Irulkunnu trek path/ Kanjirapuzha forest station/Nilambur north	N11°25'0.72" E76°13'28.01"	2020-2021	5km; 3.8m extends upto Mulukuparathodu	The works were evaluated for the physical existence and for the quality.
Choovalatti to Manakadavu in Nedungayam forest station, Karulai range/ Nilambur south	N11°18'33.6" E76°27'03.8"	2020-2021	21km; 1.5m width	The works were evaluated for the physical existence and for the quality.

Coupe road in Attapadi

Observations of the evaluation team

Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Trek path/Attapadi range (Coupe road from Pottikkal plantation To Mukali)	The trek path is maintained well.	The path is useful for the frontline staff.	7	High

Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, ⩽3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Irulkunnu trek path/ Kanjirapuzha forest station/Nilambur north	The trek path is maintained well.	The path is useful for the frontline staff.	7	High
Trek path/Choovalatti to Manakadavu in Nedungayam forest station , Karulai range/ Nilambur south	The trek path is maintained well.	The path is useful for the frontline staff.	7	High

The trek path is maintained well and useful for the frontline staff. The works were evaluated for the physical existence and for the quality.

VI. Forest fire prevention and control operation

a. Engaging fire gang through a participatory forest management

Location/ Range/ Division	Remarks
Attapadi, Agali and Mannarkkad ranges	Engaging man mazdoors for fire protection work at fire-prone areas.
Kollengode, Nelliampathy, Alathur ranges	Engaging man mazdoors for fire protection work at fire-prone areas.
Olavakkode and Walayar range	Engaging man mazdoors for fire protection work at fire-prone areas.
Kariamuriam, Kampadam etc/ Edavanna range/ Nilambur north	Engaging man mazdoors for fire protection work at fire-prone areas.
Pattakkarimbu, Kallamoola, Vettathur, Amarambalam, Saivilla etc./ Nilambur south	Engaging man mazdoors for fire protection work at fire-prone areas.

The activities were verified through inspection of records and found correct.

b. Fire awareness campaign

Location/range/division	Work
Attapadi, Agali & Mannarkkad ranges	Organizing fire awareness programmes in forest station.
Nilambur North	Organizing fire awareness programmes in forest station

The activity was verified through verifying records and vouchers and found correct.

c. Fire fighting Equipment

Location / Range / Division	Items	Remarks
Attapadi, Agali and Mannarkkad ranges/Mannarkkad	Fire extinguishers, safety jackets, water spraying pumps and PPE	The items are in good condition.
Olavakkode and Walayar range/ Palakkad		
Kollengode, Nelliampathy, Alathur ranges/Nemmara		
Karulai range, Nilambur south		

The activities were verified through inspection of records and found correct.

VII. Capacity building

a. Awareness program/training to staff and VSS/EDC members.

Location/ Range/division Range	Activity
Nilambur North	Conducting awareness program and training to staff and VSS
Karulai range, Nilambur south	Conducting awareness program and training to staff and VSS

The activities were verified through inspection of records and found correct

b. Conducting nature camps to school and college children

Location/ Range/division Range	Activity
Nilambur North	Conducting Nature Camps to School and College children
Olavakkode &Walayar range	Conducting Nature Camps to School and College children

The activity was verified through inspection of records and found correct

VIII. Human animal conflict mitigation

a. Engaging watchers to mitigate human animal interface

Range	Activity
Attapadi, Agali and Mannarkkad ranges	Engaging mazdoor for driving away wild elephants from human habitation.
Olavakkode and Walayar range	Engaging mazdoor for driving away wild elephants from human habitation.
Nilambur north: different areas of Edavanna range	Engaging mazdoor for driving away wild elephants from human habitation.
Different forest stations (Karulai range, Nedungayam, Padukka) of Nilambur South	Engaging mazdoor for driving away wild elephants from human habitation.
Kollengode, Nelliampathy, Alathur ranges/ Nemmara	Engaging mazdoor for driving away wild elephants from human habitation.

The activity was verified through inspection of records and found correct.

a. Equipment/ration for Rapid Response Team: Field ration was provided to the RRTs of

1. Attapadi, Agali/ Mannarkkad ranges
2. Olavakkode, Ottapalam range/ Palakkad
3. Edavanna range/ Nilambur North
4. Karulai range, Nedungayam, Padukka forest station/Nilambur south
5. Kollengode, Nelliampathy, Alathur ranges/Nemmara

The vouchers, bills and records was verified and found correct

In addition, activities related to Soil and Moisture Conservation (gully plugging) were also undertaken.

A. Gully plugging

Location/ range/ Division	GPS coordinates	Dimensions (m)	Remarks
Mayiladumparitha, Thiruvazhiyad section of Nelliyampathy range/ Nemmara	N11^{0} 09' 56.06" E76^{0} 37' 26.41"	307 m^3	The gullies were physically verified and found in good condition.
Thiruvazhiyad section of Nelliyampathy range/ Nemmara	N10^{0}32'24.16" E76^{0}33'47.27" N10^{0}32'24.06" E76^{0}33'47.46" N10^{0}32'23.44" E76^{0}33'47.94"	6.3 X 3.0 X 1.2 6.0 X 2.5 X 1.5 5.0 X, 2.0 X 1.5	The gullies were physically verified and found in good condition.
Thiruvazhiyad section of Nelliyampathy range/ Nemmara	N10^{0}33'13.54" E76^{0}33'21.23" N10^{0}33'11.88" E76^{0}33'22.52" N10^{0}33'11.67" E76^{0}33'22.89"	3.9 X 3.1 X 1.5 3.2 X 2.8 X 1.5 5.5 X 4.0 X 1.2	The gullies were physically verified and found in good condition.

Gully Plugging in Nemmara

Observations of the evaluation team

Type of Assets/ Division / Range / Place	Type of current use/Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Gully plugging/ Division/ 1963 EP Mayiladumparitha, Thiruvazhiyad section of Nelliyampathy range/Nemmara	The gullies were constructed in 2020-21 is in good condition.	Water retention is good	7	High
Gully plugging/ 1964 TP Mayiladumparitha, Thiruvazhiyad section of Nelliyampathy range/Nemmara	The gullies were constructed in 2020-21 is in good condition.	Water retention is good	7	High
Gully plugging/ 1965 TP Mayiladumparitha, Thiruvazhiyad section of Nelliyampathy range/Nemmara	The gullies were constructed in 2020-21 is in good condition.	Water retention is good	7	High

Fifteen different activities have been undertaken under eight different components in five divisions of the circle. The circle implemented all the activities listed in the APO. No spillovers from past APOs were observed. Additional activities were also undertaken.

Overall, an amount of Rs. 173.17 lakhs was allotted to the circle during the period which was fully utilised for the different activities.

Central Circle, Thrissur (2020-21)

The evaluation covered four forest divisions of the circle. They include

1. Chalakkudy
2. Malayattoor
3. Thrissur
4. Vazhachal

Nineteen different activities were undertaken under nine components in the circle. The distribution of activities is as follows.

Component	Particulars of work
Better connectivity	Maintenance of trek path/patrolling route
	Maintenance of forest roads
Capacity Building	Awareness program/ training to staff and VSS/EDC members
	Conducting nature camps to school and college children

Component	Particulars of work
Compensatory Afforestation Funds	Compensatory Afforestation Works (Maintenance)
Catchment Area Treatment Plan Fund Part	River Bank Stabilization
Forest Fire Prevention and control operation	Engaging Fire Gang through participatory forest management
	Fire Awareness Campaign
	Fire Fighting Equipment
Human Animal Conflict Mitigation	Engaging watchers to mitigate human animal interface
Improvement of Wildlife Habitat	Bird survey and conservation
	Eradication of Exotic Weeds
	Sea Turtle Conservation
Protection of plantations and forests	Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works
	Field survival kits and field Equipment
	Interior Campshed maintenance
	Organising Joint Patrolling and Raids along inter-divisional and interstate boundaries
	Provision of field ration for interior camps
Forest and Wildlife Protection	Soil and Moisture Conservation, Gully Plugging etc.

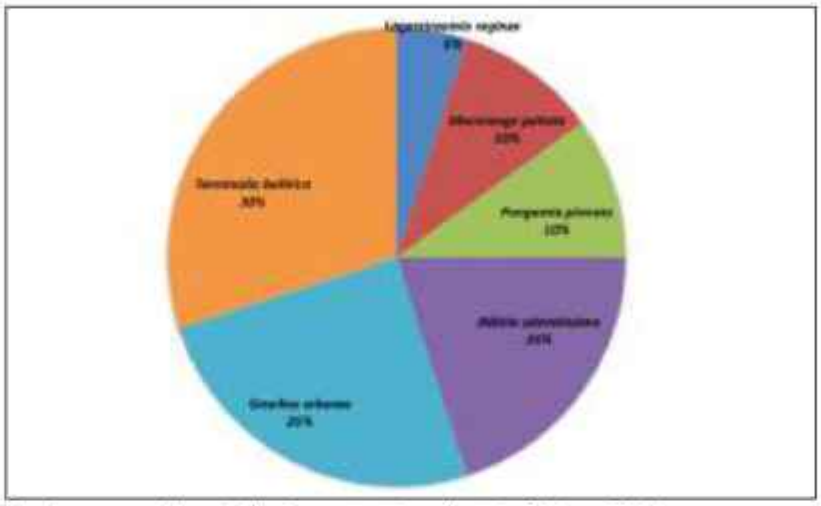
I. Protection of plantations and forests

a. Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works

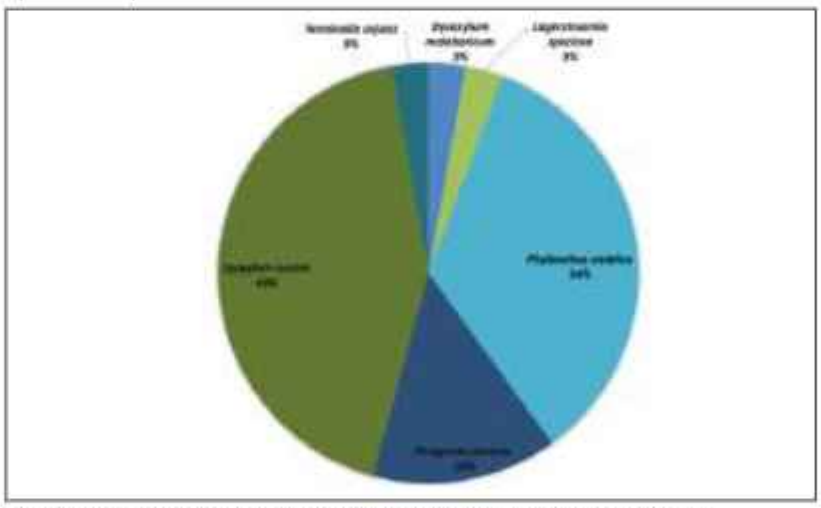
Location/ range/ division	Geo coordinates	Area (ha)/ Planting	Species	Survival (%)	Remarks
Thekkumpadam eco restoration in Pattikad Range- Thrissur Division. 1958 TP	N10° 32' 48.6" E76° 21' 14.3"	10.0 / Gap planting	*Terminalia bellirica, Gmelina arborea, Lagerstroemia reginee, Albizia odoratissima, Macaranga peltata Pongamia pinnata*	80	Plantation is in good condition. First weeding was carried out after 3 months of planting noticed stem borer in *Gmelina*, leaf gall and leaf spot diseases in pungam.
Panjanamkuththu eco restoration zone- Vazhachal Division. 1995 TP	N10.31009 E76.57600	5 Ha / Gap planting	*Syzygium cumini, Lagerstroemia speciosa, Pongamia pinnata, Phyllanthus emblica, Terminalia arjuna, Madhuca longifolia,*	85	Planted seedlings browsed by Sambar deer and Wild boar. Consequent weeding was carried out in first and second year. Leaf hoppers infestation was

Location/ range/ division	Geo coordinates	Area (ha)/ Planting	Species	Survival (%)	Remarks
			Dysoxylum malabaricum		noticed in *Syzgium*, *Terminalia* and larval damage in *Syzygium cumini*. Plant protection Measures is nil and plantation journal is maintained well.
Kuttanchira eco restoration zone - Chalakkudy. 2011 TP	N10° 26' 32" E76° 20' 36"	14 Ha / Gap planting 2000 plants	*Phyllanthus emblica*, Bamboo, *Swietenia mahagoni*, *Pongamia pinnata*, *Bombax ceiba*, *Syzygium cumini*, *Morinda pubescens*, *Garcinia gummi-gutta*, *Madhuca longifolia*, *Cinnamomum verum*, *Aporosa lindleyana*, *Persea macrantha*, *Cassia fistula*, *Holoptelea integrifolia*, *Terminalia elliptica*, *Acacia tripesia*, *Alstonia scholaris*, *Coryphaum braculifera*, *Colocasia esculenta*, *Terminalia bellirica*, *Terminalia arjuna*, *Macaranga peltata*	81	Regularly damage of plants by elephants and deers. Leaf scorching was noticed in Pungam and leaf spot, leaf and shoot blight disease in *Gmelina*. Plantation journal is maintained well
Karikkadavu (Pariyaram Range) eco restoration zone planting –Chalakkudy. 2012 TP		10 Ha / Gap planting	*Terminalia bellirica*, *Phyllanthus emblica*, *Bambusa bambos*, *Swietenia macrophylla*, *Albizia odoratissima*, *Gmelina arborea*	89	Leaf gall infestation and marginal leaf scorching were noticed in Pungam, of Pungam and leaf hopper damage in *Phyllanthus*. Plantation journal maintained well

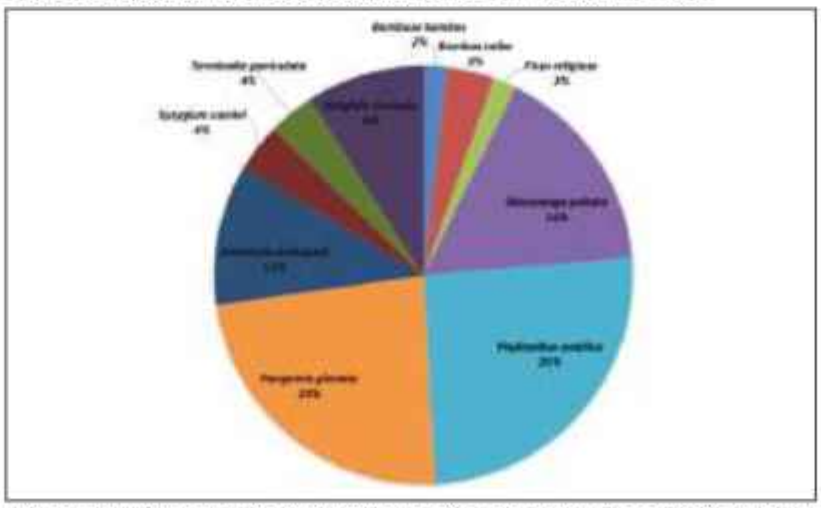
Eco-restoration activity by planting indigenous/micelloneous species was carried out in Vazhachal, Chalakkudy and Thrissur divisions followed by regular weeding. But plants were damaged due to trampling by elephants and browsing by deer and diseases. The activity was verified through inspecting vouchers and records by the inspection team and found correct. Plantation journals are maintained well and updated.



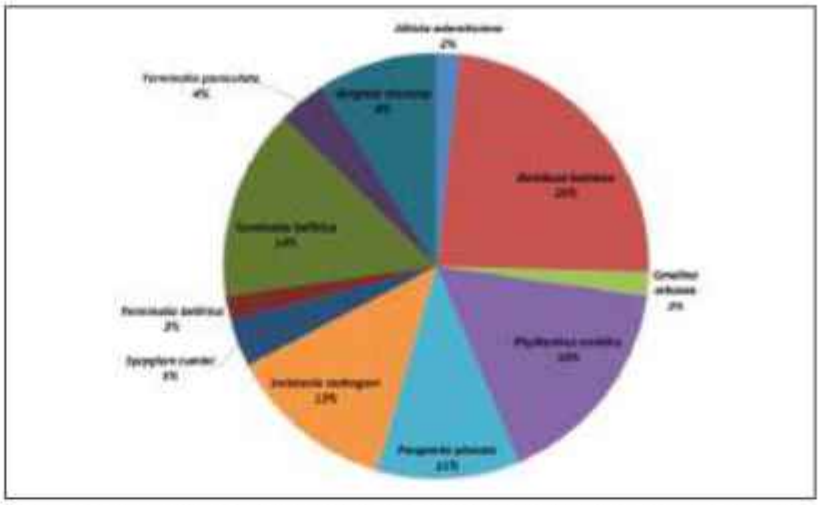
Species composition of the Ecorestoration efforts in Thrissur Division



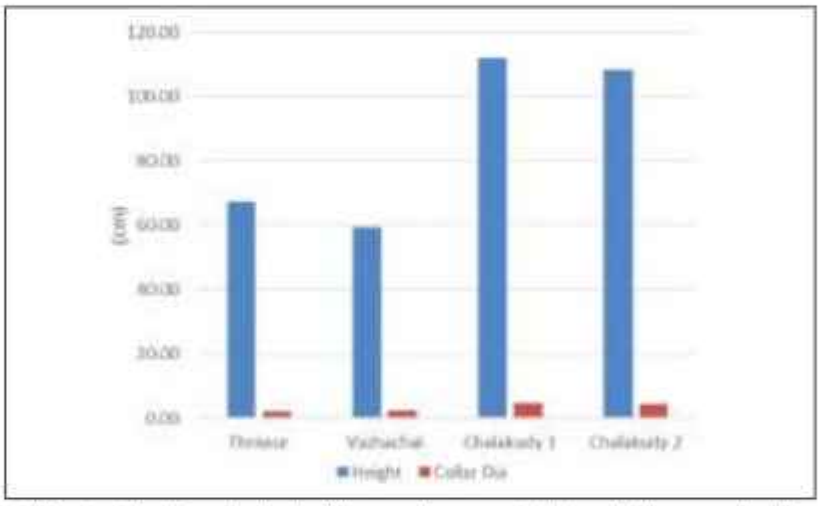
Species composition of the ecorestoration efforts in Vazhachal Division



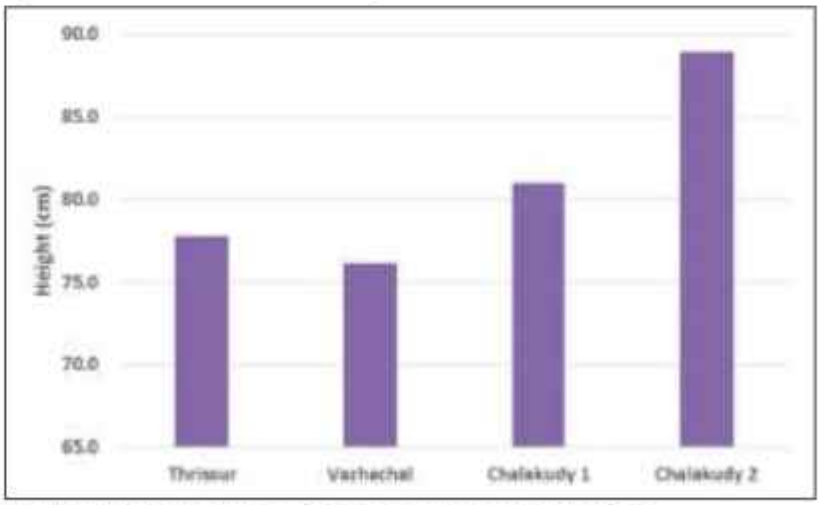
Species composition of the ecorestoration efforts in Pariyaram range of Chalakudy Division



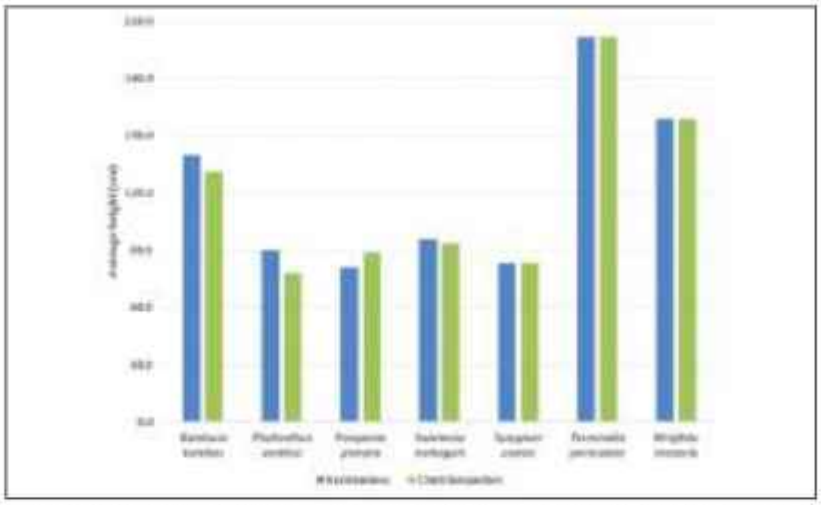
Species composition of the ecorestoration efforts in Chattilampadam of Chalakudy Division



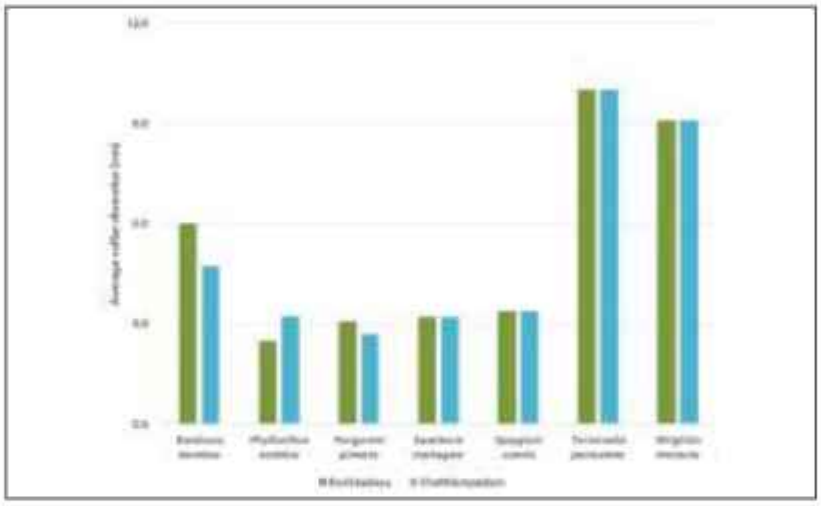
Average height and collar diameter (cm) of the species across divisions in the ecorestoration efforts



Average Height (cm) of the common species, *Pongamia pinnata*, across sites



Across site comparison of growth performance in terms of height (cm) of common species in Chalakudy Division



Across site comparison of growth performance in terms of collar diameter (cm) of common species in Chalakudy Division

Assessment of survival at Kuttanchira Ecorestoration plot

b. Raising nursery

Location/range/ division	Species produced	Numbers	Remarks
Vaniyampara FS in Patttikad Range Thrissur Division	*Terminalia bellirica, Gmelina arborea, Lagerstroemi areginee, Albizia odoratissima, Macaranga peltata, Pongamia pinnata*	7000	The plants were raised and planted in the field
Athirappilly Range Vazhachal Division	*Syzygium cumini, Lagerstroemia speciosa, Pongamia pinnata, Phyllanthus emblica, Terminalia arjuna, Madhuca longifolia, Dysoxylum malabaricum, Albizia odoratissima, Macaranga peltata*	14000	Seedlings raised at Athirappilly Station for planting at 1997 TP. A temporary nursery was established for raising the seedlings for the River bank stabilization works in the Vazhachal range.
Charpa Range Vazhachal Division	*Syzygium cumini, Lagerstroemia speciosa, Pongamia pinnata, Phyllanthus emblica, Terminalia arjuna, Madhuca longifolia, Dysoxylum malabaricum*	6500	Seedlings for planting at 1994 Panjanamkuthu TP in Kannamkuzhi FS.
Vazhachal Range Vazhachal Division	*Madhuca longifolia, Psidium guajava, Pongamia pinnata, Syzygium cumini, Lagerstroemia speciosa, Pongamia pinnata, Phyllanthus emblica, Garcinia cambogia, Bambusa vulgaris, Azadiracta indica*	8000	Seedlings for planting at Poringal river bank areas in Vazhachal Range. The plants were raised and planted in the field

Physically verified the records/vouchers and found correct

c. Construction & maintenance of campshed

GPS Location	Dimensions	Location/ Division/ Range	Remarks
N10° 17' 01.40" E 76° 37' 44.30"	15 x 8 m	Pachilavalam/ Kollathirumedu range/ Vazhachal division	Purchase of furniture for Pachilavalam camp shed
N10° 15' 25.56" E76° 38' 35.70"	700 sq ft	Repra/ Kollathirumedu/ Vazhachal division	Purchase of furniture for Repra camp shed

GPS Location	Dimensions	Location/ Division/ Range	Remarks
N10° 35219" E76.63096	800 sq ft	Karamthodu/Vazhachal/ Vazhachal division	Construction of kitchen for Karamthodu camp shed and the structure is good.
N10°17'.014" E076° 37' 44.3"	15 x 8m	Pachilavalam/ Kollathirumedu/ Vazhachal division	Purchase and installation of solar Inverter Unit in Pachilavalam campshed
N10° 11' 46.1" E076° 50' 48 1.5"	8.80 x 8.20m	Thundathil Range / Malayattoor	Purchase of portable generator and GPS for command control room.

Activities and expenditures are verified through office records.

Observations of the evaluation team

Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, ≤3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Purchase of furniture/ Pachilavalam/ Kollathirumedu range/ Vazhachal division	The assets are maintained well.	Useful for the frontline staff.	7	High
Purchase of furniture/ Repra/ Kollathirumedu/ Vazhachal division	The assets are maintained well.	Useful for the frontline staff.	8	High
Construction of kitchen/ Karamthodu/ Vazhachal/ Vazhachal division	The assets are maintained well.	Useful for the frontline staff.	9	High
Purchase & installation of solar Inverter Unit/ Pachilavalam/ Kollathirumedu/ Vazhachal division	The assets are maintained well.	Useful for the frontline staff.	8	High
Purchase of portable generator and GPS/ Thundathil Range / Malayattoor	The assets are maintained well.	Useful for the frontline staff.	9	High

The equipment and furniture purchased for various camp sheds were evaluated for physical existence and quality. They were checked by verifying the vouchers. The equipment/ furniture are in good condition and used regularly by frontline staff.

d. Organising Joint Patrolling and Raids along inter-divisional and interstate boundaries

Range/Division	Activity
Machad / Thrissur	Joint patrolling and raids in Akkamala FS
Pattikad/ Thrissur	Joint patrolling and raids in Pattikad Range
Wadakkanchery / Thrissur	Joint patrolling and raids in Mayanur FS
Pattikad/ Thrissur	Joint patrolling and raids in Vaniyampara FS
Pattikad/ Thrissur Joint	Patrolling and raids in Vazhani FS
Athirappilly / Vazhachal	Combing and halting in interior forest area of Athirappilly FS
Charpa / Vazhachal	Combing and halting in interior forest area of Charpa Range
Charpa / Vazhachal	Special combing by Vazhachal Division staff and watchers through Charpa Range
Kollathirumedu / Vazhachal	Combing and halting interior forest areas of Kollathirumedu FS
Vellikulangara / Chalakkudy	Organizing joint patrolling and conducting combing operations in the Vellikulangara range
Palappily / Chalakkudy	Items for joint patrolling and raids
Palappily / Chalakkudy	Inter division joint patrolling and raids
Malayattoor Division	
Thundathil / Malayattoor	Organizing camping and combing operations in Edamalayar FS
Thundathil / Malayattoor	Organizing camping and combing operations in Vadattupara FS
Thundathil / Malayattoor	Organizing camping and combing operations in Bhoothathankettu FS
Thundathil / Malayattoor	Organizing camping and combing operations in Karimpani FS

The records were perused and found correct.

e. Interior Campshed & Ration: Provision of field Ration for interior camps was undertaken in Thrissur, Vazhachal, Chalakkudy and Malayatoor divisions.

Site (Range/ Division)	Particulars (Field Ration)
Pattikad Range	Providing field ration to fire gang, watchers of Pattikad Range
Pattikad Range	Providing field ration to fire gang, watchers of Vaniyambara FS
Pattikad Range	Providing field ration to fire gang, watchers of Puthor, Chakkapara, and Marotichal block of Mannamangalam station
Pattikad Range	Providing field ration to watchers of Chirakode, Varikulam, Pullamkadam of Ponganamkadu FS
Palappilly Range	Providing field ration to watchers of Palappilly Range
Machad Range	Providing field ration during fire season in Machad Range
Machad Range	Providing field ration to fire gangs of Machad Range

Site (Range/ Division)	Particulars (Field Ration)
Machad Range	Providing field ration to fire gang, watchers of Elanad Forest Station of Machad Range
Machad Range	Providing field ration to fire gang, watchers of Akamala Forest Station
Wadakancherry Range	Field ration to Wadakancherry range forest watchers
Poongode FS	Providing field ration to watchers of Poongode forest station
Mayanur FS	Providing field ration to fire gang, watchers of Mayanur forest station
Erumapatty FS	Providing field ration to fire gang, watchers of Erumapatty forest station
Wadakancherry Range	Providing field ration to watchers of Fire gang watchers in Wadakancherry range
Sholayar Range	Field ration for combing and halting interior forest area of Sholayar Range
Sholayar Range	Field ration for perambulation and interior area camping in the areas of Mukkumpuzha FS
Vazhachal Range	Field ration for perambulation and interior area camping in the areas of Vazhachal FS
Kollathirumedu	Field ration for camping and halting in interior forest areas of Kollathirumedu FS
Pariyaram Range	Field ration for interior camping
Pariyaram Range	Field ration for interior camping in Chaipankuzhy FS
Pariyaram Range	Field ration for interior camping in Pariyaram Range
Vellikulangara	Provision of field ration and utensils for interior patrolling and camping stations
Kuttampuzha Range	Providing camping ration for personals involved in combing and perambulation in remote areas (including both Anakkulam/Pooyamkutty F.S.) under Kuttampuzha Range

Vouchers verified and found correct. The supply and items were verified through inspection of records and found correct.

f. Equipment-Field Survival Kits and field equipment

Location / Range / Division	Items procured	Numbers	Present Status
Pariyaram Range	Field survival kits	1	Good
Palapilly Range	Field survival kits	15	Good
Sholayar	Shoes & other items for trekking and camping	10 10	Good
Malakkappara	Shoes & other items for trekking and camping	10	Good
Athirappilly	Safety kit for field staff	2	Good
Charpa	Chainsaw	2	Good
Charpa	Safety kit for field staff	1	Good
Vazhachal	Safety kit for field staff	1	Good
Kollathirumedu	Safety kit for field staff	1	Good

Location / Range / Division	Items procured	Numbers	Present Status
Vellikulangara	Life safety tools for snake handling with regards to the snake rescue operation	4	Good
Vellikulangara	Field survival equipment	1	Good
Pariyaram	Field survival kits	1	Good
Pariyaram	Field survival kits	1	Good
Palapilly	Field survival kits	1	Good

II. Compensatory Afforestation Funds

a. Compensatory Afforestation Works (Maintenance)

Location/ Division	Latitude & Longitude (GPS Coordinates)	Activities carried out	Species planted	Status (Well maintained/ Not maintained)
Chattilampadam Miscellaneous plantation – Chalakkudy Division	N10°22'07.9" E76°20'11.8"	3rd-year maintenance of Chattilampadam miscellaneous plantation	*Terminalia elliptica, Artocarpus lakoocha, Artocarpus heterophyllus, Pongamia pinnata, Terminalia paniculata, Azadirachta indica, Artocarpus hirsutus, Wrightia tinctoria, Ailanthus excelsa, Dalbergia latifolia*	Well maintained

The activity carried out was physically verified, records perused and found correct.

Verification of maintenance activities in Chattilampadam, Chalakkudy

III. Catchment Area Treatment Plan Fund Part

a. River Bank Stabilization

Location/ Division	GPS location	Dimension	Species	Survival (%)	Remarks
Poringal River Bank/Vazhachal Division	N10.307062 E 76.611579	18 km length (8000 seedlings)	*Madhuca longifolia, Psidium guajava, Pongamia pinnata, Syzygium cumini, Lagerstroemia speciosa, Pongamia pinnata, Phyllanthus emblica, Garcinia cambogia, Bambusa vulgaris, Azadiracta indica*	**90**	800 bamboo seedlings planted for casualty replacement. FYM and biofertilizer were applied during planting.

The activity carried out was physically verified, records perused and found correct.

IV. Better connectivity

a. Maintenance of trek Path / new trek path / patrolling route

Creation of new trek paths and maintenance of trek paths in Sholayar and Vazhachal ranges in Vazhachal Division and Pariyaram and Vellikuangara ranges in Chalakkudy Division and maintenance of coupe road in Vazhachal and Chalakkudy Divisions. The activities were verified through inspection of records by the team and found correct

A. Creating New Trek Path

Location/Range/division	Dimension
Parakadavu/ Palapilly/ Thrissur	20 km (1.5m width and 15cm depth)
Parakkadavu/Pariyaram/Chalakkudy	23 km (50m width, 15cm depth)

B. Maintenance of trek path / patrolling route

Range/Division	Location	Activity
Sholayar / Vazhachal	Kummatty-Mechappilly, Mechappilly Chooralvalichappara	Construction of new trek path in all blocks in Sholayar Range
Vazhachal/ Vazhachal	Mukkumpuzha	Renovation of trek path under Mukkumpuzha FS
Pariyaram/ Chalakkudy	Kottamala-Valara	Maintenance of trekpath from Kottamala-Valara VSS
Pariyaram/ Chalakkudy	Konnakuzhy FS	Engaging man mazdoors for maintenance of trek paths in Konnakuzhy FS area
Pariyaram/ Chalakkudy	Thenittampara	Maintenance of trek path through Thenittampara VSS
Pariyaram/ Chalakkudy	Kottamala-Valara	Maintenace of trek path through Kottamala-Valara VSS
Pariyaram/ Chalakkudy	Nirappel-Tholmelppara	Maintenance of trek path in Nirappel-Tholmelppara through Pillappara VSS

Range/Division	Location	Activity
Vellikuangara/ Chalakkudy	Maithanam-Pathukalangara	Maintenance of trek path from Maithanam to Pathukulangara, Punnakuzhy to Mukkanamkuththu and Boardkunnu-Padinjakkapara (50 m width, 15 cm depth, 23 km length)

C. Maintenance of Forest Coupe Roads

Range/ Division	Activity
Athirapally/ Vazhachal	Maintenance of various roads in Athirapally FS
Charpa / Vazhachal	Maintenance of Badappara-Kammatty coupe road (4 Km)
Sholayar/ Vazhachal	Maintenance of Anamadamkuththu coupe road (4 Km)
Vellikulangara/Chalakkudy	Maintenance of coupe road in Areswaram to Mattathur
Vellikulangara/Chalakkudy	Maintenance of coupe road from Pathukulangara to Thaloopadam to Chokkana and boundary

V. Capacity Building

a. Awareness program/ training to staff and VSS/EDC members

As part of assistance to the tribal VSS, the VSS members of Pokkalappara Kadar colony were involved in various activities. The Vazhachal Division assisted the tribal Vana Samrakshana Samidi in the form of employment through engaging Vana Samrakshana Samidi members in river bank stabilization, planting, weeding, creating trenches between reserve forests and villages and fire line creation. The activities were verified through inspection of vouchers by the monitoring team and found correct.

Evaluation team with VSS members of Pokkalappara Kadarcolony and Department staff

b. Conducting nature camps to school and college children

Vazhachal Forest division has conducted one nature camp for school students in Charpa range during 2020-2021. The details were verified through records.

VI. Forest and Wildlife Protection

a. Soil and Moisture Conservation, Gully Plugging etc.

A. Pond desiltation at Vazhachal Division

Location/ Range/Division	GPS Details	Dimensions (m)	Remarks
Chandanthodu/ Sholayar/ Vazhachal Sholayar Range	N10°30' 40.9" E76° 77' 43.9"	20 x 20 x 1.50	De-silting of pond
Thumbikaippara/ Sholayar/ Vazhachal Range	N10°16' 24.09" E76°42' 32.10"	20 x 20 x 1.50	De-silting of pond
Mechapally/ Sholayar/ Vazhachal Range	N10°16' 36.20" E76° 43' 05.84"	20 x 20 x 1.50	De-silting of pond
Pathaddipallam/ Sholayar/ Vazhachal Range	N10°17'19.75" E76°48' 54.79"	20 x 20 x 1.50	De-silting of pond
Kummatty/ Sholayar/ Vazhachal Range	N10°30' 21.8" E76° 70' 22.01"	20 x 20 x 1.50	De-silting of pond
Kalakkallu/ Kollathirumedu/ Vazhachal	N10° 16' 16.00" E076° 39' 30.13"	20 x 20x 1.5	De-silting of pond
Parakkulam/ Kollathirumedu/ Vazhachal	N10° 17' 34.0" E076° 39' 12.60"	25 x20x1.50m	De-silting of pond
Vachumaram/ Kollathirumedu/ Vazhachal	N10° 16' 590" E076° 40' 27.8"	20 x 20	De-silting of pond
Vachumaram-Karadippara/ Kollathirumedu/ Vazhachal	N10° 16' 59.0" E076° 40' 27.8"	20 x 20 x 1.50	Digging a Pond for drinking water facility for wild animals
Idinjapallam/ Vazhachal/ Vazhachal Range	N10°17'41.18" E076°37'20.19"	12 x 15	De-silting of pond
Ikkashed/ Vazhachal/ Vazhachal	N10°20'11.74" E076°38'10.18"	19 x 11.5	De-silting of pond
Medicinal pocket/ Vazhachal/ Vazhachal	N10°18'24.15" E076°36'14.29"	15 x 14.5	De-silting of pond
Lakshmikulam/ Vazhachal/ Vazhachal	N10°21'21.54" E076°36'54.45"	26 x 26	De-silting of pond
Karadippara/ Vazhachal/ Vazhachal	N10°17'31.20" E076°36'31.52"	18 x 14.5 z	De-silting of pond

In five different locations in Sholayar range, three locations at Kollathirumedu range and five locations at Vazhachal range of Vazhachal division desilting of pond was done and digging a pond was carried out at Vachumaram-Karadippara in Kollathirumedu range Vazhachal division to augment the drinking water facility to wild animals. These activities were verified physically and dimensions were measured and confirmed with the vouchers/records.

B. Gully plugging at Malayattoor Division

Location	GPS/ Location	Dimensions (m)	Remarks
Mattungalthodu Karimpani F.S./ Malayattoor (1973 TP)	N10° 11 .122' E076° 40.281	5.80 x 2.47 x 0.94	Gully structure is physically damaged due to flood
Pampinkuzhy/ Malayattoor (1973 TP)	N10° 11.143' E076° 40.158	7.45 x 2.78 x 1.02	Gully structure is physically damaged due to flood
Chekuthammukk / Malayattoor (1973 TP)	N10° 11.160' E076° 40.169	0.98 x 5.60 x 2.65	Gully structure is physically damaged due to flood
Marypara /Malayattoor (1973 TP)	N10° 11.196' E076° 40.205	1.13 x 6.93 x 2.52	Gully structure is physically damaged due to flood
Ottakallu / Malayattoor (1978 TP) Edamalayar F.S.	N10°10'27.4" E076°40'56.1"	0.98 x 6.10 x 2.30	Gully structure is physically damaged

Gullies at 5 locations in Malayattoor division were inspected physically by the evaluation team and observed that most gullies were damaged due to flood (Verified through M. Book). These activities were verified physically and dimensions were measured and confirmed with the vouchers/records.

C. Gully -Vegetative Barrier at Thrissur

Location	GPS Reading	Dimensions (l x b x h m)	Type of vegetative materials used	Remarks
Kuranchery, Thrissur	N10°44'57.758" E76°9'44.106"	5 x 5 x 5	*Bambusa bambos*	Bamboo planted in flood affected areas is in good condition.

* Work was not executed in Kolenchery instead the work is executed in the Kuranchery location. The activity carried out in Kuranchery, Thrissur division was verified through vouchers/records and found correct.

D. Construction of Chappath bridge at Malayatoor Division

Chappath/Bridge and dry-stone pitching for water-logged area					
Location	Size (l x b x h) in M. Book (M)	Actual Size (l x b x h) in field	% variation (+/-)	vegetative materials used	Present Condition of the structure
Pannipara to Ponginchuvadu in Edamalayar FS, Malayattoor division	47.20 x 1.10 x 3.00 m	Damaged	Physically damaged	Nil	Damaged during 2021 flood

Chappath constructed at Pannipara to Ponginchuvadu area in Edamalayar FS, Malayattoor division was damaged due to flood. Vouchers/records and found correct.

VII. Improvement of Wildlife Habitat

a. Bird survey and conservation

Range/Division	Activity
Wadakancherry / Thrissur	International Forest day celebration under Vazholippadam – Vallangipara Vana Samarakshana Samithi, Mayanur FS
Pattikkad / Thrissur	Forest day awareness programme under Vallur-Marottichal Vana Samrakshana Samithy Mannamangalam Forest Station
Wadakancherry / Thrissur	Forest day – quiz programme and awareness class, Thayyur-Pazhavur- Patturuthysamithi
Wadakancherry / Thrissur	Forest day quiz programme and awareness programme in Bhalghadu fighter's area under Puttankadapuram, Punnayur, Mandalankunnu Turtle VSS
Wadakancherry / Thrissur	World forest day celebration at Poongode FS through Kadanchira VSS
Wadakancherry / Thrissur	World forest day celebration for Thejes Engineering College students, Poongode FS

The records and vouchers were perused and found correct.

b. Eradication of exotic weeds-Vazhachal Division

Location/range/division	Activity (Weeding)
Neelappara/ Kollathirumedu/ Vazhachal Division	Eradication of exotic weeds (Mikania and Eupatorium)
Anamukku Dumping Depot/ Kollathirumedu/ Vazhachal Division	Eradication of exotic weeds (Mikania and Eupatorium) in in Kollathirumedu Range
Vackolippara/ Kollathirumedu/ Vazhachal Division	Eradication of exotic weeds (Mikania and Eupatorium) in in the Kollathirumedu Range
Thoduthoni- Mechappilly/ Sholayar/ Vazhachal Division	Eradication of exotic weeds (Mikania and Eupatorium)

Eradication of exotic weeds undertaken in Kollathirumedu and Sholayar ranges of Vazhachal Division was verified based on the records. The exotic weeds such as Mikania and Eupatorium were eradicated.

c. Sea turtle conservation

Range	Activity
Wadakanchery / Thrissur	Engaging mazdoor for the turtle protection works at Blanghadu fighter's area under Blanghadu fighters turtle Protection SamithyErumapatty forest station
Wadakanchery / Thrissur	Purchasing of essential equipment for protection watchers, Punnayur Turtle Protection Samithy
Wadakanchery / Thrissur	Purchase essential equipment for watchers at Blanghadu Turtle VSS

Range	Activity
Wadakanchery / Thrissur	Purchase essential equipment for watchers at Puthankadappuram Turtle VSS
Wadakanchery / Thrissur	Purchase essential equipment for watchers at Punnayur Mannalamkunnu Turtle VSS

The records and vouchers were perused and found correct.

VIII. Forest Fire Prevention and control operation

a. Engaging fire gang through participatory forest management

Location/ Range/ Division	Remarks
Enkakkad-Vazhani /Machad/ Thrissur	Engaging man mazdoors for fire protection work at fire-prone areas.
Elanad forest station Machad/ Thrissur	Fire protection activities
Pattikad FS Pattikad / Thrissur	Engaging mazdoor for fire protection works through Poovanchira VSS
Porasserikunnu Wadakkanchery / Thrissur	Engaging mazdoors for fire protection at 2018 CA plantation (maintenance)
Poongode FS Wadakkanchery/ Thrissur	Fire protection activities
Thayyur-Pazhavoor Wadakkanchery/ Thrissur	Engaging mazdoors for fire protection through Erumapatty VSS and Puthuruthi VSS
Mayanur FS Wadakkanchery/ Thrissur	Engaging Vazhalipadam VSS as mazdoors for fire protection
Erumapatty FS Wadakkanchery/ Thrissur	Fire protection
Kunnamkuzhi Charpa/ Vazhachal	Engaging fire protection watcher in Forest Station Area
Pokalappra/ Vazhachal/ Vazhachal	Engaging fire gang
Odangayam Vazhachal/ Vazhachal	Engaging fire gang at Mukkumpuzha FS
Sholayar / Vazhachal	Engaging fire protection watchers
Kollathirumedu / Vazhachal	Engaging watcher
Malakkappara/ Sholayar/ / Vazhachal	Engaging mazdoor for driving away wild elephants from human habitation in Malakkappara FS
Sholayar/ Vazhachal	Engaging watcher in Sholayar FS
Chungal and Muttathukulangara, Vellikulangara, Chalakkudy	Engaging fire gang
Nagathanpara, Chandanakunnu, Mechira and Kanakamala/ Vellikulangara/ Chalakkudy	Engaging fire gang
Anapantham and Punnakuzhy Vellikulangara/ Chalakkudy	Engaging fire gang in block
Vellikulangara/ Chalakkudy	Engaging daily waged mazdoors as fire gang in emergencies
Pariyaram/ Chalakkudy	Engaging mazdoor for fire prevention and protection activities under PFM
Pariyaram/ Chalakkudy	Engaging fire gang in Pandaranpara fire
Pariyaram/ Chalakkudy	Engaging NMR watchers for fire prevention (3 members)
Palappily Pariyaram / Chalakkudy	Engaging fire gangs in various areas

The activities were verified through inspection of records and found correct.

b. Fire awareness campaign

A. Fire awareness programme - Thrissur

Location/range/division	Work
Pattikad FS / Pattiikad/ Thrissur	Organizing fire awareness programmes in forest station.
Pattikad FS/ Pattikad / Thrissur	Organizing fire awareness programmes in forest station
Poongode / Pattikad / Thrissur	Organizing fire awareness programmes in forest station
Ponganamkad/ Pattikad / Thrissur	Fire awareness programme at forest station
Wadakancherry / Thrissur	Organizing fire awareness programme in Poongode FS
Machad/ Thrissur	Fire awareness/publicity in Machad Range
Mayanur/ Wadakancherry/ Thrissur	Organizing fire awareness at Mayanur FS

B. Fire awareness and publicity Thrissur Division

Location/range/division	Work
Location/ Range/division	**Particulars of work**
Machad FS/ Machad/ Thrissur	1. Fire awareness banner, notice, poster
Mayanur FS/ Wadakanchery/ Thrissur	2. Mike set and lighting
Poongode FS/ Wadakanchery/ Thrissur	
Poongode FS/ Pattikad/ Thrissur	
Pattikad FS/ Pattikad/ Thrissur	

C. Fire awareness programme–Vazhachal Division

Location/ Range/ division Range	Work
Charpa/ Vazhachal	Fire awareness banner through Vazhachal VSS in Charpa Range
Charpa / Vazhachal	Fire awareness banner through Athirapally VSS in Charpa Range
Kollathirumedu/ Vazhachal	Preparing fire awareness cloth banner through Vachumaram VSS in Kollathirumedu Range
Charpa / Vazhachal	Conducting fire awareness programme at Vazhachal in Charpa Range
Charpa / Vazhachal	Conducting IInd phase fire awareness class for Kannamkuzhi FS staff & watchers in Charpa Range
Charpa / Vazhachal	Conducting training on fire management and firefighting techniques for Vazhachal Division Staff at Vazhachal Dormitory through Charpa Range
Sholayar / Vazhachal	Providing food for the meeting conducted on forest fire prevention and awareness class at Malakkappara FS in Sholayar Range through Malakkappara AVSS
Charpa / Vazhachal	Writing name board at Charpa Range Office and Kannamkuzhi FS in Charpa Range
Alhirappilly Range	Conducting fire awareness class for staff and watchers at alhirappilly Range
Vazhachal / Vazhachal	Conducting fire awareness programme in Vazhachal Forest Station in Vazhachal Range

D. Fire Awareness Campaign – Chalakkudy/ Malayattoor

Range/Division	Work
Pariyaram/ Chalakkudy	Conducting fire awareness and preparedness training for field staff
Palappily/ Chalakkudy	Fire training class for fire gang in Palappilly range
Vellikulangara/ Chalakkudy	Fire awareness, publicity for VSS members, field staff
Pariyaram/ Chalakkudy	Conducting fire awareness and preparedness training for field staff
Palappily/ Chalakkudy	Fire training class for fire gang in Palappilly Range
Thundathil/ Malayattoor	Conducting mock fire drill in Thundathil Range

The fire awareness campaign activity was conducted in all divisions successfully. Verified the records and found correct.

E. Creation of Fire Line/ Fire break - Vazhachal Division

Range	Activity	Distance
Kollathirumedu/ Vazhachal	Firebreak works Sidhan Pocket to Vachumaram through Vachumaram VSS	8 km
Vazhachal/ Vazhachal	Firebreak works from Puliyilappara to Choozhimedu through Piliyilappara VSS	5 km
Charpa/Vazhachal	Firebreak works from Madhuvarachaal to Kundoormedu through Piliyilappara VSS	11 km
Athirappilly/ Vazhachal	Firebreak works around 1994, 1995,1996 TP through Ezhattumugham VSS in Ezhattumugham FS in Athirappilly	7.5 km
Athirappilly / Vazhachal	Firebreak works from Kuliramthodu to porkkunnuppara through Erumathadam VSS in Ezhattumugham FS in Athirappilly Range	3.5 km
Athirappilly / Vazhachal	Firebreak works from Porkkunnuppara to Thumboormuzhi through Ezhattumugham VSS in Ezhattumugham FS in Athirappilly	5.5 km
Sholayar / Vazhachal	Firebreak works from Thottappura to Pathadippalam area through Malakkappara AVSS in Sholayar	8 km

F. Fire break works in Athirapally Range- Vazhachal Forest Division

Fireline					
Fireline Id/No.	Size (Width * Length) in Measurement Book	Actual Size (Width * Length) in field	% variation (+/-)		Efficacy of fire line created in terms of number of times fire spread is prevented by the presence of fire line if any
1	500 m x 5 km	300m x 5 km	200m	Fire line length not measured	Moderately effective (Fast-growing weeds and grasses easily grown after a month of fire line creation)

Verified the records and found correct.

G. Engaging fire Mazdoors through participatory forest management- Malayattoor Division

Range/division	Work
Kuttampuzha/ Malayattoor	Engaging fire mazdoors in Kuttampuzha Range
Kuttampuzha/Malayattoor	Engaging fire mazdoors in Pooyamkutty FS
Thundathil/Malayattoor	Engaging one-man mazdor for Assisting Vadattupara FS

Verified the records and found correct.

H. Fire fighting equipment

Location / Range / Division	Items procured	Nos	Present Status
	Thrissur Division		
Machad Range	Pulluveeshi, racker, beater, tarpaulin sheet	1	Good
Wadakanchery Range	Fire rake with hand, Bill hook	2	Good
Wadakanchery Range	Petrol, engine oil, repair and service	1	Good
Wadakanchery Range	Fire rack, bell hook,	1	Good
Pattikad Range	Fire rack, bell hook, manvetti/ spade, torch, turbulence set, water can	1	Good
Pattikad Range	Fire rack, bell hook, manvetti/ spade, torch, turbulence set, water Can	1	Good
Wadakancherry Range	Fire rack, bell hook, manvetti/ spade, torch, turbulence set	1	Good
Pattikad Range	Fire Rack, bell hook, manvetti/ spade, torch, turbulence set, water Can	1	Good
Thrissur division	Fire rack, bell hook, manvetti/ spade, torch, turbulence set and backbags	1	Good
	Vazhachal Division		
Charpa Range	Steel chainsaw	2	Good
Athirappilly	Brush cutter, fire rack	2	Good
Kollathirumedu	Brush cutter, fire rack	2	Good
Sholayar Range	Brush cutter, fire rack	2	Good
Charpa Range	Brush cutter, fire rack	2	Good
	Chalakkudy Division		
Pariyaram	Brush cutter, fire rack	3	Good
Pariyaram	Brush cutter, fire rack, fire blower	2	Good
Pariyaram	Fire blower	2	Good
Malayattoor Division			
Thundathil	Fire rack, bell hook, manvetti/ spade, torch, turbulence set	6 set	Good

Location / Range / Division	Items procured	Nos	Present Status
Thundathil	Pulluveeshi, racker, beater, tarpaulin sheet	6 set	Good
Thundathil	Fire rack, bell hook, manvetti/ spade	6 set	Good
Thundathil	Fire rack, bell hook, manvetti/ spade, torch, turbulence set	6 set	Good
Thundathil	Brush cutter in thundathil range	2	Good
Thundathil	Chainsaw	2	Good
Thundathil	Repairing and maintenance of chainsaw and brush cutter	1	Good
Kodanad	Fire rack, bell hook, manvetti/ spade, torch, turbulence set	10 set	Good

The equipment purchased for Thrissur, Vazhachal, Chalakkudy and Malayattoor divisions were evaluated for physical existence and quality. They were checked by verifying the vouchers. The equipment are in good condition and used regularly.

IX. Human animal conflict mitigation

a. Engaging watchers to mitigate human-animal interface – Vazhachal Division

Range	Work
Sholayar / Vazhachal	Engaging mazdoor for driving away wild elephants from human habitation in Malakkapara FS
Thundathil / Malayattoor	Engaging four-man mazdors as wild elephant depredation squad in Thundathil Range
Kodanad / Malayattoor	Engaging tribal watchers at human-animal conflict areas of Pooyamkutty forest station

Verified the records and found correct.

X. Discrepancies observed (As per the datasheet provided by the CEO, CAMPA)

Division/Location	Activity	Remarks
Thrissur	Third Year maintenance of CA Plantation at Porasserikunnu in Wadakkanchery Range	Only fire protection works could be executed
Vazhachal	Third Year maintenance of misc.plantation at the Poringal Dam site area in Vazhachal Range	Only the river bank stabilization activity was completed.
Malayatoor	Raising and planting seedlings of bamboo, reeds, and miscellaneous species for river bank stabilization	Work was not executed

Division/Location	Activity	Remarks
Vazhachal	Preparatory works for planting bamboo, reeds, and indigenous seedlings	Work was not executed
Malayattoor	1983 Acacia Mekkapala 7 bits eco restoration zone (Felling of leftover Acacia, uprooting of regeneration at regular intervals, planting, weeding SMC works, and fire protection)	Felling of leftover Acacia is not complete.
Malayatoor	1996 evergreen plantation (TP) eco-restoration zone (SMC Works, removal of weeds, augmentation planting, fire protection, etc)	Work was not executed
Malayattoor	1997 Mulamkuzhi (TP) eco-restoration zone (SMC works, removal of weeds, augmentation planting, fire protection, etc)	Delay in allotment of funds. Hence shifted to 2021-22
Malayattoor	1978 TP Idamalayar Valley eco-restoration eone (SMC Works, removal of weeds, augmentation planting, fire protection, etc)	Delay in allotment of funds. Hence shifted to 2021-22
Malayattoor	1973 TP Chekuthanmukku eco-restoration zone (SMC Works, removal of weeds, augmentation planting, fire protection, etc)	Delay in allotment of funds. Hence shifted to 2021-22
Vazhachal – Athirapally Range	Soil and Moisture Conservation Vazhachal Division - 1997 TP Athirapally eco-restoration zone (SMC works, removal of weeds, augmentation planting, fire protection,etc).	A temporary nursery was established for raising the seedlings for the River bank stabilization works in the Vazhachal range.
Thrissur	Eradication of exotic weeds	Work was not executed
Malayatoor	Eradication of exotic weeds	Work was not executed
Thrissur – Kolenchery, Panamkutty	Soil and Moisture Conservation Thrissur, Division - bamboo Planting in flood-affected areas and their adjoining areas.	The work is executed in Kuranchery.

Nineteen different activities were undertaken under nine components in four divisions of the circle. The circle implemented all the activities listed in the APO. No spillovers from past APOs were observed. Funds were also utilised for improving forest stations at at Wadakkanchery and Pattikad in Thrissur Division. Overall, an amount of Rs. 255.58 lakhs was allotted to the circle during the period of which 63.39 percent financial achievement was observed. Many of the activities were shifted to 2021-22 due to a delay in release of the funds.

High Range Circle, Kottayam (2020 - 2021)

The evaluation covered five forest divisions of the circle. They include

1. Kothamangalam
2. Kottayam
3. Mankulam

4. Marayoor
5. Munnar

Sixteen different activities were undertaken seven different components in the circle. The distribution of activities is as follows:

Component	Particulars of work
Better connectivity	Maintenance of trek path/patrolling route
	Maintenance of forest roads
Capacity Building	Awareness program/ training to staff and VSS/EDC members
	Conducting nature camps to school and college children
Catchment Area Treatment Plan Fund Part	River bank stabilization
Compensatory Afforestation Funds	Compensatory Afforestation Works (Creation - Preparatory works)
Forest Fire Prevention and control operation	Creation of fire-break
	Engaging fire gang through participatory forest management
	Fire awareness campaign
	Fire fighting equipment
Human Animal Conflict Mitigation	Engaging watchers to mitigate human animal interface
	Equipment/ ration for Rapid Response Teams (RRTs)
Protection of plantations and forests	Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works
	Field survival kits and field equipment
	Interior campshed maintenance
	Organising joint patrolling and raids along inter-divisional and interstate boundaries
	Provision of field ration for interior camps

I. Better connectivity

a. Maintenance of trek path/patrolling route

Location/Range/Division	Geo coordinates	Remarks
Mattumantha to Oonjanpara/ Marayoor/ Marayoor	N10^{0}16' 51.20" W077^{0}09' 09.53"	Trek path/patrolling route is well maintained
Kalpanimala to Nellippetti/ Marayoor/ Marayoor	N10^0 16' 50.24" E077^0 08' 56.40"	Trek path/patrolling route is well maintained
Eettivalam Kombu to Kuthirippan Para/ Marayoor/ Marayoor	N10^{0}16' 45.78" E077^0 09' 07.38"	Trek path/patrolling route is well maintained
Kalappara to Chelamala and Kootickal/ Kothamangalam/ Kothamangalam	N10.12618° E76.68375°	Cleared 1.5m outside the area.

Under the component better connectivity, the activity maintaining trek path patrolling route is well executed in Marayoor and Kothamangalam. The evaluation team perused the records and vouchers and found correct.

Improvement of trek path from Kalappara to Chelamala and Kootickal

b. Maintenance of forest roads

Location/Range/Division	Geo coordinates	Distance	Remarks
Kalpanimala/ Marayoor/ Marayoor	N10°16' 46.59" E077°9' 08.23"	45m	Laying concrete road
Vannamthura Forest Station/ Kanthalloor / Marayoor	N10° 15' 54.90" E077° 11' 55.57"	100m	Laying concrete road
Nellipatty to Pothady/ Marayoor/ Marayoor	N10° 17' 02.12" E077° 08' 43.35"	1.5 km	Laying concrete road

Under the activity maintenance of forest roads concrete roads were laid in three locations in Marayoor and Kanthalloor ranges in Marayoor division. The evaluation team inspected the activity for its physical existence and records and vouchers and found correct.

II. Capacity Building

a. Awareness Program/ training to staff and VSS/EDC members

Location/Range/Division	Type of activity
Nellipatty VSS at Marayoor Range, Marayoor Division	Engaged tribal VSS for sowing grass seeds for ecorestoration activity.
Viripara VSS, Mankulam Range/ Mankulam Division	Conducted fire awareness classes

The activities were verified through inspection of records and found correct.

b. Conducting nature camps to school and college children

Conducted nature camps to college students at Ayyappancoil & Erumely range. The evaluation team also interacted with the participants. The activities were verified through inspection of records and found correct.

III. Compensatory Afforestation Funds

a. River Bank Stabilization

Location/ range/ division	Geo coordinates	Area/ Plants	Species	Remarks
Devikulam Range / Munnar Division,	N10° 04' 21.69" E077° 06' 01.26"	10,000 seedling	Shola species	Seedlings of Shola species were planted in 2021-22 as part of eco-restoration.
Devikulam Range / Munnar Division	N10° 04' 20.84" E077° 06' 02.13"	8 mother Beds	Shola Grass	Mother bed for raising seedlins of Shola grass for planting as part of eco restoration.
Idalimotta, Munnar/ Munnar	N10° 10' 32.57" E077° 09' 04.28"	11,200	*Berberis tinctoria* and indigenous grass	Ecorestoration trial plot

IV. Forest Fire Prevention and control operation

a. Creation of Fire Line/ Fire break

Location/ Range/ Division	Activity
KDHP Village/ Devikulam/ Munnar Division	Firebreak works Sidhan Pocket to Vachumaram through Vachumaram VSS for a distance of 5 Km X 5.2 m wide
Veloor (Various Places)/ Thodupuzha/ Kothamangalam	Creation of fire break at various locations in veloor station
Kulamavu (Various Places)/ Thodupuzha/ Kothamangalam	Creation of fire break at various locations in veloor station
Kothamangalam (Various Places)/ Kothamangalam/ Kothamangalam	Creation of fire break at various locations in veloor station
Kothamangalam (Various Places)/ Mullaringadu/ Kothamangalam	Creation of fire break at various locations in veloor station
Avolichal-Koovappara(Various Places)/ Kothamangalam/ Kothamangalam	Creation of fire break at various locations in veloor station

This activity was executed in various places in Thodupuzha, Mullaringadu and Kothamangalam ranges of Kothamangalam division effectively. The activities were verified through inspection of records and found correct.

Creation of fire break at both sides of Avolichal-Koovappara

b. Engaging fire gang through participatory forest management

Location/Range/Division	Type of activity
Kozhiyila/ Anakkulam / Mankulam through Kuzhiyilakudy VSS	Engaging fire gang
Pampadumpara / Anakkulam / Mankulam	Engaging fire gang
Neduvakkadu/ Kaliyar/ Kothamangalam	Engaging man-mazdoor as fire watchers
Neduvakkadu/ Kaliyar/ Kothamangalam	Engaging man-mazdoor as fire watchers
Paschima, Elivalikkara,Karimbinthodu, Plackathadam, Ponthenpuzha, Koyikkakavu-Pakkanam, Kalaketty and mangapett-504 colony/ Ayyappancoil and Erumely range	Engaging fire gang

The activities were verified through inspection of records and found correct.

c. Fire Fighting Equipment

Location / Range / Division	Items procured	Numbers	Present Status
Mankulam Division, Mankulam Range	Water sprayer	1	Working in good condition
Mankulam Division, Mankulam Range	Fire extinguisher	1	Working in good condition

The equipment procured for forest prevention and control operation are physically verified by the evaluation team for its existence and working condition and found working in good condition. Vouchers and records were verified and found correct.

V. Human animal conflict mitigation

a. Engaging watchers to mitigate human animal interface

Range/ Division	Activity
Erumely (RRT) range	Engaging watchers. Verified the vouchers and found correct.

The activity is verified through inspection of records and found correct.

b. Equipment/ration for rapid response teams (RRT)

Range/ Division	Activity
Kumily range	Purchased brush cutter, pick axe, tarpaulinetc.

The activity was verified through inspection of records and found correct

VI. Protection of plantations and forests

a. Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works

Location/ range/ division	Geo coordinates	Area/ Plants	Species	Remarks
(SMC Works, removal of weeds, augmentation planting, fire protection etc)				
Mankulam Range/ Mankulam Division,	N10^0 05' 17.35" E077^0 57' 26.34"	147.04 m^3		Under ecorestoration as SMC works gully was made through VSS for water storage.
Manjappetty, Nachivayal Sandal Reserve / Marayoor/ Marayoor	N10^0 15' 43.74" E077^0 09' 28.49"	15	*Lantana camara*	Eradication of *Lantana camara* as SMC work
1947 TP Thattekkadu eco-restoration zone Kothamangalam/ Kothamangalam	N10^{0}13'705" E76^{0}67'186"	53.73 m^3		Under ecorestoration as SMC works gully was made to store water at quarter level.
1948 TP Thattekkadu eco-restoration zone/ Kothamangalam/ Kothamangalam	N10°07'361" E76°41'133"	0.75m^3		Under ecorestoration as SMC works gully was made to store water at quarter level.

Location/ range/ division	Geo coordinates	Area/ Plants	Species	Remarks
1987 Acacia Kulamavu eco-restoration zone (felling of leftover acacia, up-rooting of regeneration at regular intervals, planting, weeding SMC works and fire protection)	N09°47.893" E76°53.669"	13.7 ha	Measured biometric characteristics of 1837 acacia trees.	Felling was shifted to 21-22 due to paucity of funds.
1992 acacia bit I Paremavu eco-restoration zone (SMC works, removal of weeds, augmentation planting, fire protection etc)	N09°47.893" E76°53.669"		Measured biometric characteristics of acacia trees.	Felling was shifted to 21-22 due to paucity of funds.

Under ecorestoration as SMC works the activities viz., gullies, erection of brushwood temporary checkdam, eradication of exotic weeds were executed. The activities were physically verified by the evalauation team. Verified the records and vouchers and found correct.

Construction of check dam at Kalaketty Parathode

Acacia plantation to be felled at Kolamavu

b. Field survival kits and field equipment

Location / Range / Division	Items procured	Present Status
Erumely range	LPG Stove, Aluminum Utensils, Pressure Cooker, GPS, Gasoline Chainsaw, Brush Cutter etc.,	Working in good condition
Nagarampara and Ayyappancoil range	First Aid Kid, Billhook, Torch, Trekking Shoe/ Gumboot, Fire Beater, Water Sprayer, Tarpolin etc.,	Working in good condition

c. Interior Campshed maintenance

GPS coordinates	Location/Range/Division	Activity/ Remarks
N10^0 16' 48.24" E077^0 09' 11.36"	Mattumantha, Marayoor/ Marayoor	It is in good condition and maintained well.
N10^0 15' 36.98" E077^0 09' 26.74"	Manjappetty/ Marayoor/ Marayoor	It is in good condition and maintained well.
N10.00077° E76.79721	Kottappara Neduvakkad forest station / Kaliyar/ Kothamangalam	Construction of wireless repeater station cum campshed. It is in good condition and maintained well.

Construction of wireless repeater station cum Campshedat Kottappara in Neduvakkad Forest Station

Observations of the Evaluation Team

Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, ⩽3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Campshed at Mattumantha, Marayoor Division, Marayoor Range	The shed is maintained well.	The shed is useful for the frontline staff.	9	High
Campshed at Manjappetty, Marayoor Division, Marayoor Range	The shed is maintained well.	The shed is useful for the frontline staff.	9	High

The campsheds were maintained well and they are useful to the frontline staff. The works were evaluated for physical existence and quality. The inspection team verified the records and the vouchers and found correct.

d. Organising joint patrolling and raids along inter-divisional and interstate boundaries

Range/ Division	Activity
Kaliyar/ Kothamangalam	Man-mazdoor engaged for interior patrolling and joint patrolling
Kaliyar/ Kothamangalam	Man-mazdoor engaged for interior patrolling and joint patrolling
Nagarampara range	Special camping Equipment viz. shoes, steel plates, 25 i can etc.
Erumely range	Providing materials for organizing joint patrolling
Ayyappancoil range	Procured vegetables, ration items etc during interior patrolling and joint patrolling

The inspection team verified the records and the vouchers and found correct.

e. Provision of field ration for interior camps

Range/ Division	Activity
Thatteckad, Perumannoor & Menthandu Blocks/ Kothamangalam/ Kothamangalam	Provoding of field ration to staff and mazdoor watchers for the protection of frorest from fire
Nagarampara and Erumely range	Provoding of field ration to staff and mazdoor watchers for the protection of frorest from fire
Mankulam Range, Mankulam Division	Provoding of field ration to staff and mazdoor watchers for the protection of frorest from fire

Vouchers and records were verified and found correct.

An additional activity of vista line clearance on either side of Koorikkulam-Kalappara road was undertaken in Kothamangalam and Punnekad–Thattekad road.

Location/Range/Division	Distance	Remarks
Koorikkulam-Kalappara road/ Kothamangalam/ Kothamangalam	1 km 5m on both side of the road	Vista line clearance on either side of the road
Punnekad–Thattekad road	1 km 5m on both side of the road	Vista line clearance on either side of the road engaging Chelamala VSS members.

Sixteen different activities were undertaken under seven different components in the circle during 2020-21. The circle implemented all the activities listed in the APO. Two new activities were also observed and evaluated. Overall, an amount of Rs. 247 lakhs was allotted to the circle during the period of which 92.72 percent financial achievement was observed.

Southern Circle, Kollam (2020 - 2021)

The evaluation covered six forest divisions of the circle. They include

1. Achankovil
2. Konni
3. Punalur
4. Ranni
5. Thenmala
6. Thiruvananthapuram

Sixteen different activities were envisaged in the circle under eight components. The distribution of activities is as follows:

Component	Particulars of work
Better connectivity	Maintenance of trek path/patrolling route
	Maintenance of forest roads
Capacity Building	Awareness program/ training to staff and VSS/EDC members
	Conducting nature camps to school and college children
Catchment Area Treatment Plan Fund Part	River Bank Stabilization
Compensatory Afforestation Funds	Compensatory Afforestation Works (Creation - Preparatory works)
	Compensatory Afforestation Works (Maintenance)
Forest Fire Prevention and control operation	Creation of fire-break
	Engaging Fire Gang through participatory forest management
Human Animal Conflict Mitigation	Engaging watchers to mitigate human animal interface
Improvement of Wildlife Habitat	Bird survey and conservation
	Eradication of exotic weeds
Protection of Plantations and Forests	Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works
	Interior Campshed maintenance
	Organising Joint Patrolling and Raids along inter-divisional and interstate boundaries
	Provision of field ration for interior camps

I. Better Connectivity

a. Maintenance of trek path/patrolling route

The trek paths/patrolling routes were well maintained in the four divisions,namely Ranni, Konni, Punalur and Achankovilof this circle. The vouchers and records were verified and found correct.

b. Maintenance of Forest Roads

Location	GPS Location	Remarks
Edapalayam, Thenmala Forest Division	N08°58'06.0" E77°06'57.2"	Coupe roads at Edapalayam, Thenmala Forest Range road is being used for fire gang, plantation maintenance and antipoaching, forest protection activities.
		The coupe road is good and maintained well.
		CB hydraulic excavator was used to make the coupe road with the help of the VSS members.
		Records and bills are maintained well.
99 Bhagam, Thenmala Forest Division	N08°58'07.4" E77°06'51.4"	Coupe roads at 99 Bhagam, Thenmala Forest range road is being used for fire gang, antipoaching, plantation maintenance and protection activities. The coupe is still good and maintained well.
		Some parts of the coupe is damaged due to flood.
		JCB hydraulic excavator was used to make the coupe road with the help of the VSS members.
Kuliyarkadu Road, Thenmala Forest Division	N09°00'54.6" E77°07'00.4"	Coupe roads at Kuliyarkadu road, Thenmala Forest range road is being used for fire gang, antipoaching, plantation and protection activities.
		The coupe is still good and maintained well.
		JCB hydraulic excavator was used to make the coupe road with the help of the VSS members.
		Records and bills are maintained well.
Eerattumukku to Moonnumukku, Tekkumala section, Kulathupuzha forest range	N08°47'48.65" E77°11'18.02"	Coupe road from Eerattumukku-Moonnumukku, Tekkumala section, Kulathupuzha forest range connected with Pandimukku, Tamil Nadu.
		This coupe road is being used for fire gang and antipoaching, protection activities.
		JCB hydraulic excavator was used to make the coupe road with the help of the VSS members.
		The coupe is still good and maintained well.
		The length of the coupe road is 17 km with 4 m width. Records and bills are maintained well.

Location	GPS Location	Remarks
Moonnumukku to Panthadikkalam, Tekkumala section, Kulathupuzha forest range	N08°47'27.71" E77°12'31.61"	Coupe road from Moonnumukku-Panthadikkalam, Thekkumala section, Kulathupuzha Forest Range to Tamil Nadu.
		This coupe road is being used for fire gang and antipoaching, protection activities.
		JCB hydraulic excavator was used to make the coupe road with the help of the VSS members.
		The coupe is still good and maintained well.
		The length of the coupe road is 17 km with 4 m width.
		Records and bills are maintained well.
		The last portion of the road is damaged due to heavy rainfall.

The forest roads were well maintained in all divisions of this circle as these roads are also used as a part of the public transportation. The vouchers and records were verified and found correct.

Current status of the coupe road at Edapalayam, Thenmala Forest Division

Current status of the coupe road at 99 Bhagam, Thenmala Forest Division

Current status of the Kuliyarkadu road, Thenmala Forest Division

Current status of the Achankovil-Konni forest road, Konni Forest Division

II. Capacity Building

a. Awareness program/ training to staff and VSS/EDC members

Location	Type of activity
Vadasserikkara	Installed a turmeric pulveriser through Pampini Vana Samrakshana Samathi and automatic pouch-making machine at Vadasserikkara range to assist the VSS.
	Forty families of the VSS are involved in the activities. The unit has a tie up with government market and departmental stores for marketing. Currently they are packing hair oil alspo.
	The tribals are also involved in honey collection, bag making, eco tourism, etc.
Angamozhy	A VSS was createdfor the Moozhiya tribes during 2020 and are involved in selling turmeric through Vanika Van Dhan.

The unit was inspected, and expenditure verified through vouchers and records by the evaluation team and found correct.

b. Conducting Nature Camps to School and College children

Location/Division	Type of activity
Rani, Konni, Punalur and Achankovil	Conducted 4-5 nature camps to school and college children

The activity was verified through vouchers and records by the evaluation team and found correct.

III. Catchment Area Treatment Plan Fund Part

a. River Bank Stabilization

Location/ Division	GPS location	Species	Survival (%)	Remarks
Tribal colony, Karibinthottam, Aryankavu, Thenmala	N08°58'56.6" E77°09'15.4" MSL-269 m	*Bambusa bambos*	**80**	Under CAMPA funding removed sand and flood debris for free flow of river water Effective, low cost method was adopted to protect river banks from the damage due to flash flood.
Mylamood Section, Kulathupuzha, TVPM	N08°53'45.6" E77°03'27.8"	11000 seedlings of *Bambusa bambos*, reed and other indigenous species	**90**	The seedlings are sourced from Central Nursery, Kulathupuzha. Plantation journal, records and bills are maintained well.
Beedikannu, Mylamood Section, Kulathupuzha	N08°51'29.81" E77°25'07.6"	4000 Nos. of naked seedlings of reeds and bamboo	**85**	The plants attain an average height of 85 cm. Plantation was done with forest officials without any additional labour.

This activity was effectively implemented by adopting a low-cost method to protect the river bank from damage from flash floods. The plantation journal, records and bills are maintained well.

Current status of the stabilized river bank at Tribal colony, Karibinthottam, Aryankavu, Thenmala Forest Division

Current status of River Bank Stabilization activity from Rockwood kadavu to Anavattachira, at Mylamood Section, Kulathupuzha

Current status of River Bank Stabilization activity from Rockwood kadavu to Anavattachira at Mylamood section, Kulathupuzha

IV. Compensatory Afforestation Funds

a. Compensatory Afforestation Works (Creation - Preparatory works)

Location/ Range/ Division	(GPS Coordinates)	Species planted	Area	Survival (%)	Remarks
Kadiyar/ Nuduvattamozhy/ Konni Division	N09°10'37.427" E76°55'32.483"	3000 bamboo seedlings	-	90	Casualty due to elephant grazing. The natural regeneration of *Gmelina arborea, Macaranga peltataand Macaranga indica* and the weeds such as Eupatorium, *Glycosmis pentaphylla*, Mikania and Lantana were noticed.
Vakkalar Vadasserikkara/ Ranni Division	N09.3307319 E76.8208531	3000 bamboo seedlings Miscellaneous species 9000 seedlings	10Ha 30 ha	85 85	The area is very dense with very few regions showing an open canopy for gap planting. The seedlings have attained a height of 20-50 cm. Weed eradication was not undertaken as the dense canopy does not favour weed growth. However, recently, spread of Kurinji (*Strobilanthes* sp.) is observed.

Location/ Range/ Division	(GPS Coordinates)	Species planted	Area	Survival (%)	Remarks
					Natural regeneration of *Hopea parviflora, Dysoxylum malabaricum, Terminalia bellirica, Aporosa lindleyana, Syzygium cumini, Lagerstroemia speciosa* and *Schleichera oleosawas* observed. *Dysoxylum malabaricum* and *Schleichera oleosahave* established well.

The activity has been implemented with a lot of effort as the team encountered wild animals at the time of planting. Plantation journals, records and bills are maintained well. The records and vouchers were verified and found correct.

Compensatory Afforestation at Vakkalar, Vadasserikkara in Ranni Division

a. Compensatory Afforestation Works (Maintenance)

In this circle in different eco restorations zones under the divisions, maintenance SMC Works, removal of weeds, augmentation planting, fire protection, selective removal of alien exotic weeds, gap planting and construction of staggered trenches for soil water conservation etc. were carried out under compensatory afforestation works. Verified vouchers and records and found correct.

V. Forest Fire Prevention and control operation

a. Creation of fire-break

Location/range/division	Distance (km)	Activity
Achankovil, Kallar, Kanayar Ranges	2 km	Fine break work was carried out
Padayanipara (Maniyara), Theruvappara Kotta	1.35 km long and 5.20 m wide	Fine break work was carried out with yearly maintenance.
Vakkalar	3.2 km long and 5.2 m wide	Fire line was laid at Vakkalar
Mundomoozhy/ Ranni	2 km	Fire lines were made

Verified vouchers and records and found correct.

b. Engagin fire gang through participatory forest management

Location/range/division	Activity
Kallar, Achankovil and Kanayar ranges	Majdoors were engaged for fire control measures and protection against fire, grazing by engaging protection watcher.
Ranni, Vadasserikkara, Goodrickal Ranges	Majdoors were engaged for fire control measures at Karikulam and erecting solar power fencing in Kurumpanmoozhy area under Kanamala during 2020-2021.
	NMR watchers were engaged for control burning at Ariyanjala Mannu, Kurumbam Mozhi at Kannamala during 2020-2021.
	Solar fencing was laid for 5KM and 2 KM to manage wild animals, elephants etc.
Pathanapuram and Anchal Ranges-Punalur	Fire protection solar fencing were made at Verukuzhy, Pathanapuram Punalur.
	Protection against fire, grazing by engaging protection watcher, fire protection through fire break at Verukuzhy, Pathanapuram Punalur
Konni, Naduvathumoozhy and Mannarappara Ranges	Majdoors were engaged for fire control measures and protection against fire, grazing by engaging protection watcher.

Verified vouchers and records and found correct.

VI. Improvement of Wildlife Habitat

a. Eradication of exotic weeds

Location/range/division	Activity (Weeding)
Goodrikkal, Vadasserikkara and Ranni Ranges	Weed eradication was not done, maintenance free since dense natural forest.
	Highly dense population of the only weed, Kurinji (Strobilanthes sp.) was found in the area.
Mannarappara, Konni and Naduvathumoozhy Ranges	Carried out removal of *Lantana, Eupatorium* and Mechil grass. *Lantana*-low occurrence
	Mechil grass-heavy spread prevents natural regeneration.
	Eupatorium – heavy growth in spite of repeated removal.

The activity carried out was verified through records and vouchers and found correct.

VII. Protection of plantations and forests

a. Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works

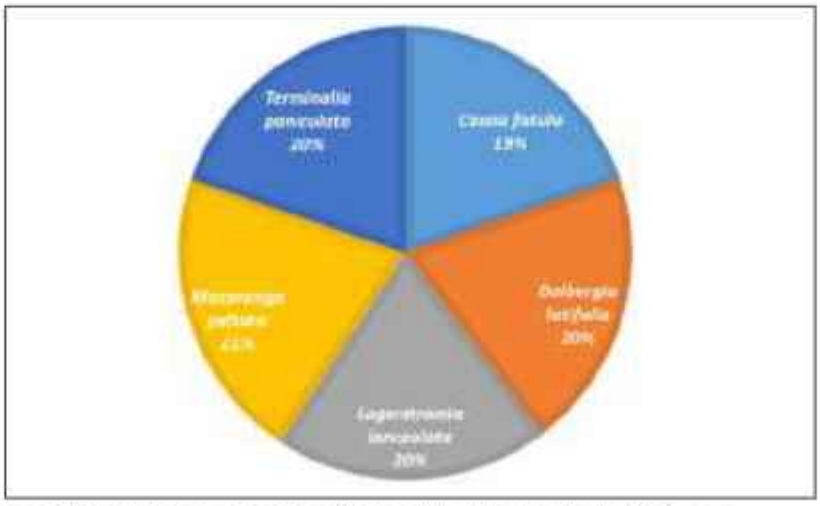
In this circle in different eco restorations zones under the divisions, maintenance SMC Works, removal of weeds, augmentation planting, fire protection etc were carried out.

Location/ Range/ Division	Species planted	Area (ha)	Survival (%)	Remarks
Aruvikkara Eco-restoration Zone/ Achankovil 2010 TP	Miscellaneous species	10 ha	85	Exotic weeds observed are *lantana*, Eupatorium, *Helictres isora*, Mikania, Riccinus, channa. Though weed eradication was done the field is heavily infested with weeds.
Mundomoozhi Eco-restoration Zone/ Konni 2008 TP	3000 plants of *Xanthophyllum flavescens, Elippa, Aporosa lindleyana, Calophyllum inophyllum, Actinodaphne malabarica, Persea macarantha, Artocarpus hirsutus, Lagerstroemia speciosa Grewia tilliifolia, Cassia fistula, Tamarindus indica, Dalbergia latifolia, Strychnos nux-vomica, Tectona grandis, Careya arborea, Pongamia pinnata, Homonoia riparia, Syzygium cumini* and *Terminalia paniculata.*	15	85	Seedling growth was good and reached a height of 1 to 1.5 m. Natural trees found were *Dalbergia latifolia, Aporosa cardiosperma, Actinodaphne bourdillonii, Macaranga paniculata, Terminalia paniculata, Tectona grandis, bamboo, Artocarpus hirsutus, Cassia fistula* and *Xylia xylocarpa* .The weeds such as *Chromolaena odorata, Asparagus racemosus, Curcuma angustifolia, Mikania micrantha* and *Ziziphus rugosa* and *Acacia caesia*. Cycas was available in plenty in Konni division.
Adichanpara Eco-restoration Zone / Konni. 2009 TP	4000 saplings of 7 species *Terminalia elliptica, Terminalia paniculata, Xylia xylocarpa, Lagestromia lanceolata, Terminalia bellirica, Dalbergia latifolia*	12.86	80	Natural regeneration found were *Terminalia paniculata, Grewia tiliifolia, Xylia xylocarpa, Macaranga indica, Cassia fistula, Terminalia elliptica, Macaranga paniculata* and *Gluta travancorica*. The weeds such as *Helictres isora, Lantana* and Cycasare available plenty in Konni division.
Kadamancode Eco-restoration Zone/ Anchaal range, Punalur. 1961 TP	Miscellaneous species	-	85	Activities carried out are selective removal of exotic alien weeds, gap planting and construction of staggered trenches for soil water

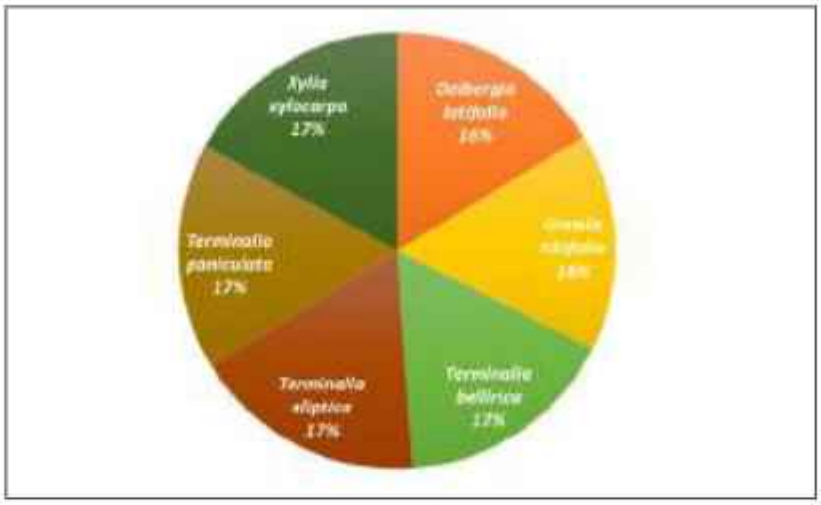
Location/ Range/ Division	Species planted	Area (ha)	Survival (%)	Remarks
				conservation and to hold seeds of forest tree species for further natural regeneration, protection against fire, grazing by engaging protection watcher, fire protection through fire break.
Iruthode Eco-restoration Zone / Pathanapuram Range Punalur. 1956 TP	Miscellaneous species predominantly of evergreen nature.	5	80	The factors of degradation were frequent due to forest fire, grazing, soil erosion and presence of exotic species. The existing trees in various plots includes *Olea dioica, Terminalia paniculata, Aporosa cardiosperma, Buchanania lanzan,Xylia xylocarpa, Tabernaemontana alternifolia, Macaranga peltata* and *Ailanthus triphysa*. The natural saplings includes *Calamus pseudotenuis, Artocarpus hirsutus, Aporosa cardiosperma, Xylia xylocarpa, Olea dioica, Cinnamomum malabatrum* and *Tabernaemontana alternifolia.* Natural regeneration happened in the plantation with new different species namely *Hopea ponga, Garcinia indica, Artocarpus hirsutus, Wrightia, Careya arborea, Xylia, Terminalia paniculata, Macaranga peltata, Vitex, Schleichera oleosa, Holarrhena antidysenterica, Trema orientalis, Aporosa lindleyana, Actinodaphne.* Activities which was carried out were selective removal of exotic weeds, gap planting and construction of trenches for soil water conservation and to hold seeds of forest tree species for further natural regeneration.
Verukuzhy Eco-restoration Zone Pathanapuram Range Punalur. 1957 TP	1000 nos of evergreen species like *Terminalia bellirica* (400), *Hopea parviflora* (250), *Xylia xylocarpa* (150), *Schleichera oleosa* (100)	10		1957 poorly stocked teak plantation with less than 50 trees per ha. The seedlings attained an average height of 30 cm which helps to improve canopy cover. Activities which were carried out

Location/ Range/ Division	Species planted	Area	Survival (%)	Remarks
	and *Artocarpus hirsutus* (100).			were selective removal of alien exotic weeds, gap planting and construction of staggered trenches for soil water conservation and to hold seeds of forest tree species for further natural regeneration, protection against fire, grazing by engaging protection watcher, fire protection through fire break. **The present condition** Due to proper protection activities forest fire got reduced, increase in soil retention and also increase in water discharge in nearby streams. Exotic alien was not noticed which was the success of maintenance of the plantation. Natural regeneration was very good. Amoug the natural regeneration bamboos, *Dalbergia* and *Phyllanthus emblica* were observed more. Heavy spread of Michel grass prevents natural regeneration and also noticed heavy growth of *Eupatorium* in spite of heavy removal and low occurrence of *Lantana*.

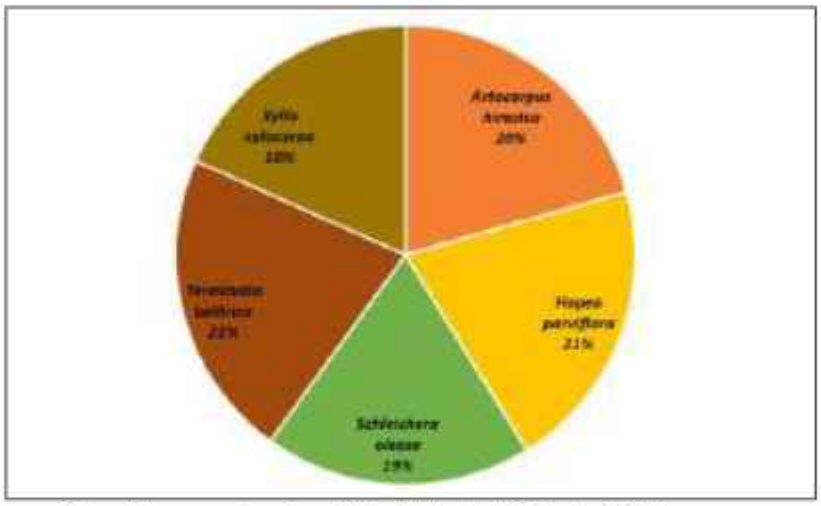
The plantations were maintained well. Due to proper protection activities, forest fire occurrence has reduced, increase in soil retention and also an increase in water discharge in nearby streams. Verified the vouchers and records and found correct.



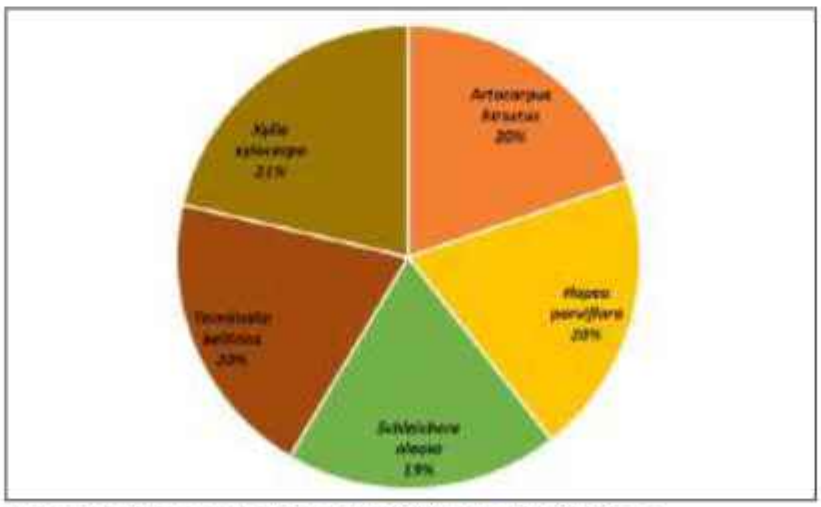
Species composition of the ecorestoration efforts in Aruvikkara, Achankovil Division



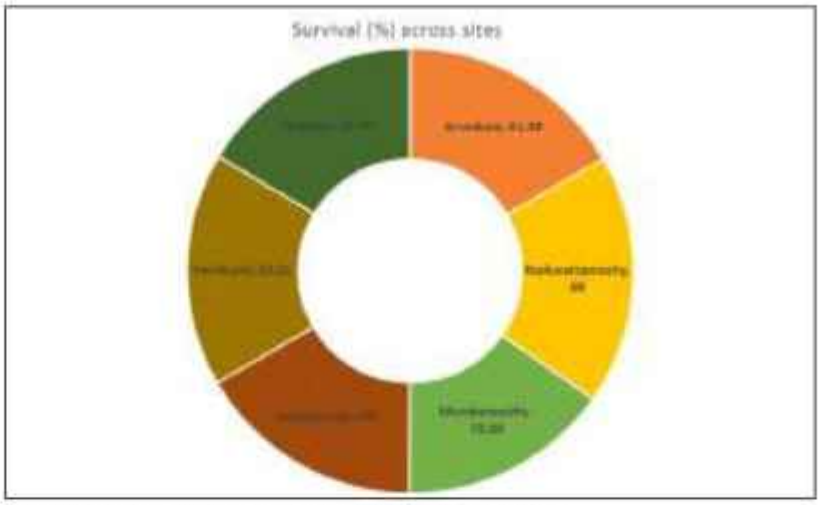
Species composition of the ecorestoration efforts in Nuduvattamozhy, Konni Division



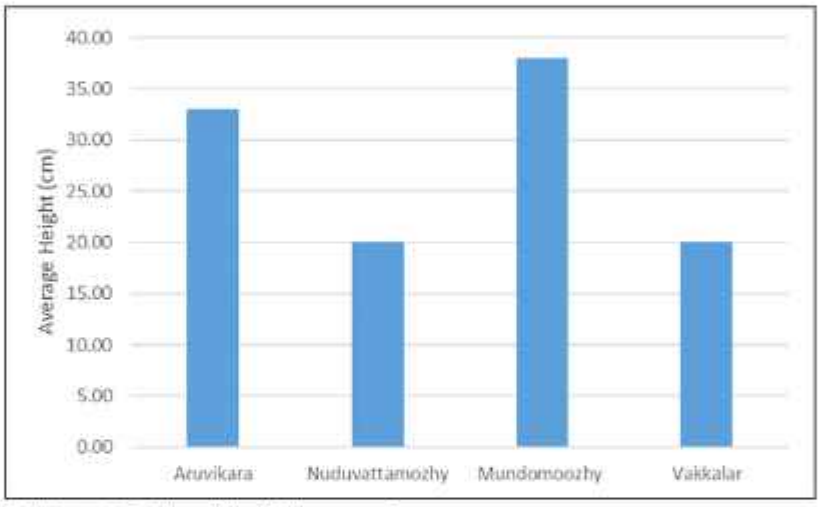
Species composition of the ecorestoration efforts in Verukuzhi, Punalur Division



Species composition of the ecorestoration efforts in Vakkalar, Ranni Division



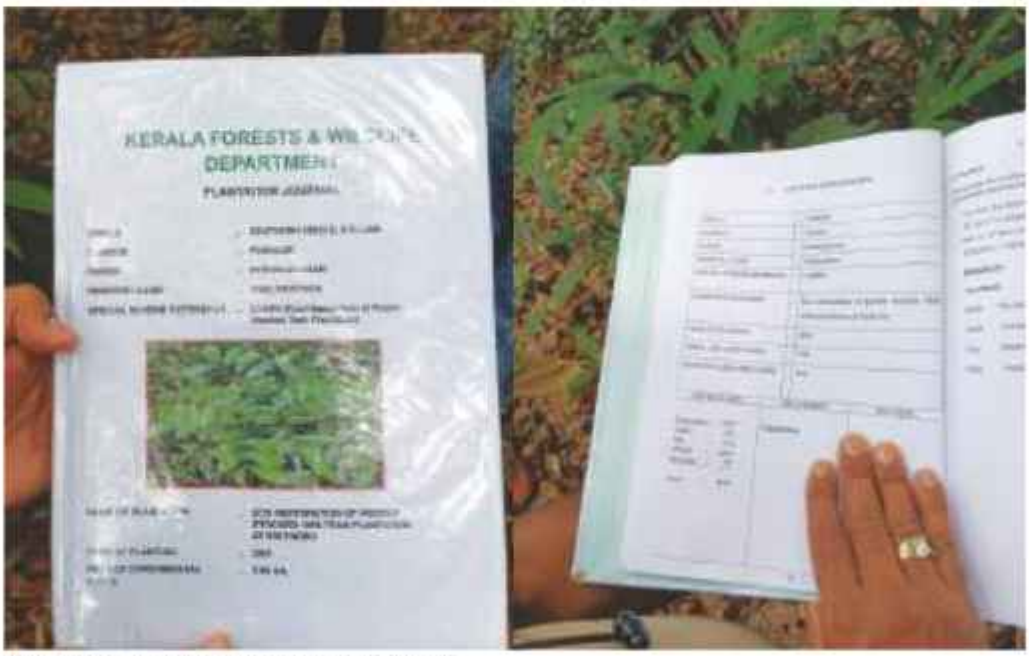
Survival per cent of the planted areas across sites in Southern Circle



Average height (cm) of *Dalbergia latifolia* across sites

Eco-restoration plantation in Iruthodu, Punalur Division

Recording of survival in Iruthodu, Punalur Division



Well maintained plantation journal of the sire

b. Interior campshed maintenance

Range/ Division	Geo coordinates	Size	Activity
Kodumudi/Ranni	N09°3'22.854" E76°88'73.66"	10 x 10 feet with the elephant fencing of size 50 feet x 3 x3 m on all sides.	Maintenance of campshed.

Range/ Division	Geo coordinates	Size	Activity
Aariyankavu, Thenmala Forest Division	N08°56'44.0" E77°09'00.9"	22 x 18.6 m	The doors are made using galvanized iron sheet and the length and width is 7 feet and 3 feet respectively.Four windows are made using galvanized iron sheet and the length and width is 4.8 feet and 3 feet respectively. Rest room facility has been created near the camp shed.Trench has been made around the camp shed to restrict elephants entry.

The activity carried out was physically verified, records perused and found correct.

Current status of the campshed at Aariyankavu

Current status of the campshed at Aariyankavu

c. Organising Joint Patrolling and Raids along inter-divisional and interstate boundaries

Range/ Division	Activity
Kallar, Kanayar ranges, Achankovil	Organised joint patrolling and raids along inter-divisional and interstate boundaries
Goodrikkal, Vadasserikkara and Ranni Ranges, Ranni	Organised joint patrolling and raids along inter-divisional and interstate boundaries
Pathanapuram and Anchal Ranges, Punalur	Organised joint patrolling and raids along inter-divisional and interstate boundaries
Mannarappara and Naduvathumoozhy Ranges, Konni	Organised joint patrolling and raids along inter-divisional and interstate boundaries

The activity carried out was verified through records and vouchers and found correct.

d. Provision of field ration for interior camps

Range/ Division	Activity
Kallar, Kanayar ranges, Achankovil	Providing of field ration for interior camps
Goodrikkal, Vadasserikkara and Ranni Ranges, Ranni	Providing of field ration for interior camps
Pathanapuram and Anchal Ranges, Punalur	Providing of field ration for interior camps

The activity carried out was verified through records and vouchers and found correct.

VIII. Infrastructure Development

a Providing basic infrastructure to tribal settlements

Divisions	Activity
Punalur	• Recruited as fire watchers and Beat Forest officers
	• Solar light, solar fencing, gas connection, ration etc.
	• Books, pencils, pens to students supplied by VSS Public Service Commission coaching center.
	• Vegetables & rice during COVID & festivals.
	• Rubber sheet machine
	• WiFi provide to tribes.
Konni	• CAMPA employment
	• Café shop, furniture, vehicle, stone, shop structure (9 people).
	• Ration, 50 gas connections
	• Books provided and educational material for students.
	• Tailoring unit.
	• Hand made products for eco-shop.
	• Tourism café promotion

Divisions	Activity
	• Solar lighting facility.
Achankovil	• Under VSS 33 families with 78 members were facilitated with honey collection, processing and marketing.
	• 11 tribes were employed as watchers and fire watchers and CAMPA employment.

Meeting with VSS members and forest officials at Karimdinthottam Tribal VSS Office, Peringamala panchayat, Kulathupuzha Forest range

Eco friendly bamboo cases were used instead of plastic bags for the nursery activities at Mylamood Section, Kulathupuzha

In addition to the sixteen different activities in the circle under eight components, infrastructure development to provide assistance to tribal VSS was also undertaken. The circle implemented all the activities listed in the APO. Overall, an amount of Rs. 279.14 lakhs was allotted to the circle during the period of which 67.77 percent financial achievement was observed. Many of the activities were shifted to 2021-22 due to a delay in release of the funds.

Field Director Project Tiger (FDPT), Kottayam (2020-21)

The evaluation covered four forest divisions of the circle. They include

1. Periyar East Division
2. Periyar West Division
3. Idukki WL
4. Munnar WL

One activity was undertaken in the circle.

Component	Particulars of work
Protection of plantations and forests	Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works

I. Protection of plantations and forests

a. Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works

As an eco-restoration activities in monoculture plantation of eucalypts, fire protection activity was executed through laying fire lines to protect the plantation and engaged man mazdoor for the work.

Location/ Range/ Division	Geo coordinates	Area (ha)	Remarks
1966 Vallakkadavu Eucalyptus Eco-restoration Zone/ Vallakkadavu Range (Planting, fire protection, weeding, engaging man mazdoor, SMC works etc.)	N09°31'40.807" E77° 6' 40.25"	0.75 6 km x 4 m	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1989 Circular road Eco-restoration Zone/ Vallakkadavu (Planting, fire protection, weeding, engaging man mazdoor, SMC works etc.)	N09°30' 23.64" E77° 7' 12.32"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1989 Circular road Eco-restoration Zone/ Vallakkadavu (Planting,	N09° 30' 17.94" E77° 8' 14.97"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level

Location/ Range/ Division	Geo coordinates	Area (ha)	Remarks
fire protection, weeding, engaging man mazdoor, SMC works etc.)			vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1990 Dam site Eco-restoration Zone/ Vallakkadavu (Planting, fire protection, weeding, engaging man mazdoor, SMC works etc.)	N09°31 57.30" E77°08 52.62"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1962 Uppupara Eco-restoration Zone/ Azhutha (Planting, fire protection, weeding, engaging man mazdoor, SMC works etc.)	N09° 29'53.105" E77° 5' 3.264"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1964 Seethakulam Eco-restoration Zone/ Azhutha (Planting, fire protection, weeding, engaging man mazdoor, smc works etc.)	N09° 24' 53.88" E77° 8' 21.7"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1980 Maniyadipalam Eco-restoration Zone/ Pamba (Planting, fire protection, weeding, engaging man mazdoor, smc works etc.)	N09° 29' 39.92" E77° 7' 16.76"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1963 Vamanakulam Eco-restoration Zone/ Pamba (Planting, fire protection, weeding, engaging man mazdoor, smc works etc.)	N09° 29' 6.68" E77° 7' 54.6"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.
1963 Towerline Eco-restoration Zone/ Pamba (Planting, fire protection, weeding, engaging man mazdoor, smc works etc.)	N09° 29'53.105" E77° 5' 3.264"	0.75	Fire protection activity was executed through a fire line. Man mazdoors were engaged for clearing ground level vegetation palatable grasses and weeds etc. No fire incidence was recorded.

Verified the record and vouchers and found correct.

Vallakkadavu Eucalyptus Eco-restoration Zone

On verification of records, it was observed that some more activities were taken up with the available CAMPA funds which are detailed below.

b. Interior campshed and ration

Sites	GPS Location	Dimensions	Remarks
Vagavanam	N09°44 31.87" E76°59 09.06"	10 x 16 ft, 10ft x 12 ft, Toilet renovated (5ft x 6ft), Top roof steel work (25ft x 20ft)	The structure is in good condition. Top roof steel work maintained very well.

The works were evaluated for the physical existence and for the quality. The specifications of both camp sheds were checked by verifying the old vouchers and the estimates.

Observations of the evaluation team

Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, <3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Camp shed (Vagavanam) / Idukki WL/ Idukki WLS	Maintenance like steel roof work over the existing campshed has been undertaken.	It is regularly used by the frontline staff.	7	High

II. Better Connectivity

a. Maintenance of trek path/patrolling route

Geo coordinates	Location/Range/ Division	Size	Remarks
N09°31 57.30" E77°08 52.62"	Dam site campshed to Kanamudiyoram/ Vallakkadavu/ Iddukki	6 km x 4 m	Only way to connect tribal hamlet to the dam site. Maintained well.
N09° 29'53.105" E77° 5' 3.264"	Uppupara to Setha kulam	6 km x 5.0 m	Maintained well.
N09° 24' 53.88" E77° 8' 21.7"	Mullakanam to Sethakulam	5.5 km x 3 m	Maintained well.
N09°28 34.44" E77°05 .57.92"	Jolymala/ Pampa/ Iddukki	13 Ha	4049 eucalypts trees were cleared in Trek path of 13 Ha

Verified the record and vouchers and found correct.

b. Construction of bridge

Geo coordinates	Location/Range/ Division	Size	Remarks
N09°34 07.50" E77°14 .29.70"	Kalyanappara/ Thekkady / Iddukki	18 x 6 x 6 m	This bridge mainly connected through Karadikkavala to Mavady, Methakanam, Mullathodu campshed. Wild animals pass through the bridge and during the rainy season it is useful for patrolling.

Bridge at Kalyanappara, Thekkady Range in Iddukki to improve connectivity

III. Forest Fire Prevention and control operation

a. Creation of fire-break

Geo coordinates	Location/Range/ Division	Size	Remarks
N09°28 34.42" E77°05.44.65"	Uppupara to Sethakulam/ Azhutha/Iddukki	5km X 5 m 4 mile	Last 5 year no fire incidence was recorded.
N09°28 24.16" E77°05.38.46"	Mullakanam to Sethakulam/ Azhutha/Iddukki	6km X 5 m	Last 5 year no fire incidence was recorded.
N09°24 24.77" E77°08.45.21"	Kochupampaa/ Pampa/ Iddukki	3.5km X 5 m	Last 5 year no fire incidence was recorded.

Thoughonly one activity was envisaged in the Circle, four new activities were taken up, which was verified by the team both physically wherever possible and through records and vouchers. The funds allocated to the circle were utilised fully.

Fireline creation in Thekkady Range

Agasthyavanam Biological Park (ABP) Circle (2020-21)

The evaluation covered both Shendurney and Thiruvananthapuram Wildlife Divisions of the circle. Four different activities were undertaken in the circle.

The evaluation covered both Shendurney and Thiruvananthapuram Wildlife Divisions of the circle. Four different activities were undertaken in the circle.

Component	Particulars of work
Better connectivity	Maintenance of trek path/patrolling route
Capacity Building	Awareness program/ training to staff and VSS/ EDC members
Forest Fire Prevention and control operation	Engaging fire gang through participatory forest management fire fighting equipment
Improvement of Wildlife Habitat	Bird survey and conservation
Protection of Plantations and Porests	Field survival kits and field equipment
	Organising joint patrolling and raids along inter-divisional and interstate boundaries
	Provision of field ration for interior camps

I. Better connectivity

a. Maintenance of trek path/patrolling route

Geo Coordinates	Location/ Range/ Division	Distance	Remarks
E08° 49' 49.6.1" N77° 13' 09.6	Pandimotta/ Shenduruney/ Shenduruney Wildlife	Pandimotta to Umayar (11 Km)	Trek path is well maintained. Maintenance of patrolling route. Verified the records and found correct.

Geo Coordinates	Location/ Range/ Division	Distance	Remarks
N08° 49' 49.6.1" E77° 13' 09.6"	Ettakkana/ Shenduruney/ Shenduruney Wildlife	Ettakkana to Vilakkumaram (6 Km)	Trek path is well maintained. Maintenance of patrolling route. Verified the records and found correct.

Trek path maintained at Pandimotta in Shenduruney Range

II. Capacity Building

a. Awareness Program/ training to staff and VSS/EDC members

Location/ Division	Type of Activity
ABP Range /Thiruvanthapuram Wlidlife	Tribals were engaged as fire watchers, in eco tourism related activities, maintaining trek path and patrolling routes etc. 2 awareness programs were organized for staff and VSS/EDC members.
Thenmala/ Shenduruney Wlidlife	Tribals were engaged as fire watchers, in eco tourism related activities, maintaining trek path and patrolling routes etc. awareness programs were organized for staff and VSS/EDC members.

Verified the records and vouchers and found correct

III. Forest Fire Prevention and control operation

a. Engaging Fire Gang through participatory forest management: Man mazdoors were engaged for fire protection work at fire-prone areas in both divisions.

Though eight activities were listed under five components, the team could evaluate only three of them. The funds allocated to the circle were utilised fully.

Wildlife Circle, Palakkad (2020 - 2021)

The evaluation covered four divisions of the circle. They include

1. Peechi
2. Parambikulam
3. Silent Valley
4. Wayanad

Eight different activities were undertaken under three different components in the circle. The distribution of activities is as follows:

Component	Particulars of work
Forest Fire Prevention and control operation	Creation of fire-break
	Engaging fire Gang through participatory forest management
	Fire Fighting Equipment
Human-Animal Conflict Mitigation	Engaging watchers to mitigate human animal interface
	Protective Gears for wildlife conflict mitigation staff
Protection of Plantations and Forests	Eco-restoration activities in monoculture plantations
	Field survival kits and field Equipment
	Provision of field ration for interior camps

I. Forest Fire Prevention and control operation

a. Creation of fire-break

Location	Year	Distance	Remarks
Muthanga, Tholpetti, Kurinchiyath, Sulthan Bathery Ranges/ Wildlife Division, Wayanad	2020-2021	20 Km	Fire break was made in various ranges of Wayanad division.

The activity was verified through inspection of vouchers by the monitoring team and found correct.

b. Engaging Fire Gang through participatory forest management

Location	Year	Remarks
MuthangaTholpetti, Kurinchiyath, Sulthan Bathery Ranges/ Wildlife Division, Wayanad	2020-2021	Engaging fire protection watcher for fire protection work at fire-prone areas.

- Creation of fire-break: Monthly meetings with tribals were carried out for their welfare activities
- Engaging Fire Gang through participatory forest management: Providing lunch, medical facility and job opportunities were provided.
- The activity was verified through inspection of vouchers by the monitoring team and found correct.

c. Fire fighting equipment

Location	Remarks
MuthangaTholpetti, Kurinchiyath, Sulthan Bathery Ranges/ Wildlife Division, Wayanad	Fire fighting equipment procured are in good condition.

The equipment purchased for Thrissur, Vazhachal, Chalakkudy and Malayattoor divisions were evaluated for physical existence and quality. They were checked by verifying the vouchers. The equipment are in good condition and used regularly.

II. Human Animal Conflict Mitigation

a. Engaging watchers to mitigate human animal interface

Location	Remarks
Muthanga, Tholpetti, Kurinchiyath, Sulthan Bathery Ranges/ Wildlife Division, Wayanad	Engaged watchers ti mitigate human animal interface

The activity was verified through inspection of vouchers by the monitoring team and found correct.

b. Protective Gears for wildlife conflict mitigation staff

Location	Remarks
Muthanga, Tholpetti, Kurinchiyath, Sulthan Bathery Ranges/ Wildlife Division, Wayanad	Verified the records.

The activity was verified through inspection of vouchers by the monitoring team and found correct.

III. Protection of plantations and forests

a. Eco-restoration activities in monoculture plantations

Location/ range/ division	Geo coordinates	Area (ha)/ Planting	Species	Remarks
1963 TP Tholpetty Eco-restoration Zone	N11° 56'36.096" E76° 3' 58.86"	0.75	*Senna spectablis* killing of senna trees, uprooting of senna seedlings,	Under this activity weed eradication work, killing and uprooting of senna trees through engaging mazdoors were carried out.

Location/ range/ division	Geo coordinates	Area (ha)/ Planting	Species	Remarks
1964 TP Tholpetty Eco-restoration Zone	N11° 56'53.988' E76° 4'30.036"	0.75	Senna spectablis killing of senna trees, uprooting of ' senna seedlings,	Under this activity weed eradication work, killing and uprooting of senna trees through engaging mazdoors were carried out.
Check dam/ Parambikulam/ Karimala range.	N10° 38'39.18" E76° 70'22.86"	13x0.5x3		As a part of the SMC works, a check dam was constructed. Verified records and vouchers.
Checkdam/Silent vally/Bhavani range /Keeripara	N11° 3'5.491" E76° 30'52.121"	5.5x1.2x0.5		As a part of the SMC works, a check dam was constructed. Verified records and vouchers.
Pond desiltation/ Silent valley/ Bhavani range	N11° 0.5'54.15" E76° 54'10.55"	15x10x8		Pond desiltation was carried out. Verified records and vouchers.

Only maintenance activities were carried out. The activities wereverified through inspection of vouchers and records by the team and found correct.

b. Interior Campshed & Ration

Sites	GPS Location	Year of Construction	Dimensions (m)	Remarks
1.	N10°27'12.121" E76°29'35.26"	2020-21 (one room with roof)	3.8x2.1x2	The shed has one room with G1sheet roof was maintained well.
2.	N10°25'53.4" E76°30'19.02"	2020-21 (only kitchen)	5.2x3	A kitchen was constructed in the shed and maintained well.

The works were evaluated for the physical existence and the specifications was checked by verifying the old vouchers and the estimates.

Observations of the Evaluation Team

Type of Assets/ Division / Range	Type of current use/ Observations	Impact	Score (Low, < 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
Campshed/Peechi /Chimony, Anaporu	The shed has one room with GI sheet roof, It is well maintained.	It is regularly used by the frontline staff.	7	High
Campshed/Peechi/ Chimony, Payampara.	A kitchen was constructed in the shed and maintained well	It is regularly used by the frontline staff.	7	High

c. Field survival kits and field Equipment

Location	Year	Remarks
Muthanga, Tholpetti, Kurinchiyath, Sulthan Bathery Ranges/ Wildlife Division, Wayanad	2020-2021	Verified the field Equipment and vouchers and found correct,

The inspection team verified the physical existence of the field equipment and records and vouchers and found correct.

Field Equipment

In this circle eight different activities were undertaken under three different components. The circle implemented all the activities listed in the APO. In addition, the following activities were also observed.

d. Construction & Maintenance of Camp Shed : There is a new Animal hospice centre & palliative care unit constructed.

GPS Location	Dimensions (m)	Remarks	Score (Low, ≤ 3, Medium >3 to<7, High 7 to 10	Assessment on the quality of the asset - Low, Medium or High
N11°42'48.91" E76°16'2.58"	17.2x13.3x30	An animal hospice centre & palliative care unit has been constructed in Kuriachiat range, Wayanad Division. The centre is maintained very well caters to animal health issues.	8	High
N11°4'59.27" E76°21'41.332"	11.5x3.7	A parking structure has been constructed in the shed with steel sheet at Uppukulam, Silent valley. It is useful for the frontline staff.	8	High

e. Construction of Solar Fencing

Location	Year	Remarks
Anakuzhy to Thannichadu, Peechi range	2020-21	The solar fencing was physically verified. Records were verified and found correct.
Podhuchodu to Thankatchipura, Peechi range.	2020-21	The solar fencing was physically verified. Records were verified and found correct.

f. Elephant Proof Trench

Location	Year	Remarks
Mannamangalam section, Peechi	2020-21	The trenches were physically verified.

An amount of Rs. 83.90 lakhs was alloted to the circle which was fully utilised.

Social Forestry, Central Circle, Eranakulam (2020-21)

I. Capacity Building

a. Awareness Program/ training to staff and VSS/EDC members: Implemented and conducted various awareness programmes related to fire protection, bird survey and World Forestry day.

II. Catchment Area Treatment Plan

a. **River Bank Stabilisation:** As part of CAT plan, vetiver was planted along the banks of Kaniyampuzha at Kaprikkad and Arattukadavu with support from the VSS of the two villages. The records were verified and found correct. Mangrove seedlings were produced at Thrissur and Chalakudy divisions, while Kattappana range produced bamboo seedlings for riverside planting. The records were verified and found correct.

III. Forest Fire Prevention and Control Operation

a. Engaging fire gangs through a participatory approach: Fire watchers were engaged in Kaprikkad and Abhayaranyam as part of fire control and prevention activities. The records were verified and found correct.

IV. Improvement of Wildlife Habitat

a. **Bird survey and conservation:** The social forestry range at Chalakkudy conducted bird survey at Thommana-Muriyad kole wetland while a pelagic bird survey was taken up at Thrissur range. The records were verified and found correct. Overall, an amount of Rs. 11.10 lakhs was allotted to the circle during the period, with 90 per cent expenditure.

Social Forestry, Southern Circle, Kollam (2020-21)

I. Capacity Building

a. Awareness Program/ training to staff and VSS/EDC members: Awareness programmes were conducted in Alappuzha during this period. The records were verified and found correct.

II. Improvement of Wildlife Habitat

a. **Bird survey and conservation**: This activity was taken up at Kollam. The records were verified and found correct.

b. **Sea Turtle Conservation**: This was taken up as an additional activity in Kollam and Alappuzha divisions. The records were verified and found correct.

Overall, an amount of Rs. 1.40 lakhs was allotted to the circle during the period, which was fully utilised.

Social Forestry, Northern Circle, Kozhikode (2020-21)

I. Improvement of Wildlife Habitat

a. **Sea Turtle conservation :** During 2020-2021, the SF division undertook sea turtle conservation programme utilizing CAMPA fund in five different fishing harbours namely Beypore, Vellayil, Puthiyappa, Koyilandy and Chembola of Kozhikode district. Torches were distributed to watchers for night observations, and sea turtle sticker were fixedon all the fishing boats to create awareness among fishermen. Each harbour was provided one display board with turtle conservation posters. An activity worth mentioning is that a 75 years old injured turtle was treated (leg amputation) by the department and allowed to recoup at Marine Turtle Interpretation Centre at Kolavi Palam.

Location/District	Activities carried out
Fishing Harbour, Beypore	Fixed display board to create awareness to conserve the sea turtle.
	Distributed torch to the watchers
Fishing Harbour, Vellayil	Fixed display board to create awareness to conserve the sea turtle
	Distributed torch to the watchers
	Distributed turtle conservation logo sticker for all the fishing boats
Fishing Harbour, Puthiyappa	Fixed display board to create awareness to conserve the sea turtle, distributed torch to the watchers
	Distributed turtle conservation logo sticker for all the fishing boats
Fishing Harbour, Koyilandy	Fixed display board to create awareness to conserve the sea turtle
	Distributed torch to the watchers
	Distributed turtle conservation logo sticker for all the fishing boats,
Marine Turtle Interpretation Centre	Rehabilitation support to the injured turtle for 4 months
Fishing Harbour, Chembola	Fixed display board to create awareness to conserve the sea turtle
	Distributed torch to the watchers
	Distributed turtle conservation logo sticker for all the fishing boats

II. Compensatory Funds

a. **Setting up Permanent Nursery:** During 2020-2021, civil works were taken up in the permanent nursery in Mathottam forest office under the CAMPA fund. The activity was a spillover of the APO 2018-19. It included the construction of new poly house and repair of the old shade house & poly house, fiber/coir pith root trainers (630 nos.), excavation work, weed cleaning and concrete floor preparation and furniture. The activities have been physically verified.

Overall, an amount of Rs. 1.50 lakhs was allotted to the circle during the period, which was fully utilised.

Working Plan and Research

I. Protection of plantations and forests

Protection of research plots and Seed Production Areas: Under the component protection of plantations and forests, the various research plots and seed sources of different species maintained by the forest department were maintained using CAMPA funds. This was the first tme the CAMPA funds were utilised to maintain the genetic assets available with the Department under the CAMPA. The research division has two circles. The north circle reported activities in 33 plots, while the south reported in 17 plots. Of the 33, 20 were assessed in the North, while all 17 were assessed in the south. The details with remarks of each plot are elaborated in the table.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Research (North), Division				
Maintenance of Bamboo trial plot at Venmani	N11°49'42.8" E75°55'45.7"	Venmani	5.25	The trial plot established in 2003 comprises 7 species of bamboo namely *Gigantochola migroaliata, Dendrocalarnus brandisii, D. giganteus, D. strictus, Thyrsostachys siamensis, Bambusa bambos, Bambusa membranaceous* in an area of 5.25ha. Protection to the trial has been ensured through creation of firelines (5.2 x 1100m). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of Simaruba glauca plot at Venmani	N11°49'37.5" E75°55'46.0"	Venmani	5	The Simaruba glauca trial plot formed in 2001-02 in an area of 5 ha. The average height was 7 m and girth 32 cm. Protection to the trial has been ensured

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				through creation of firelines (5.2 x 500 m). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of Permanent Preservation Plot Pine at Chandanathode	N11°50'97.5" E75°48'22.7"	Chandanathode	14	The pine trial plot established in 1955 in an area of 14 Ha. The species *Pinus oocarpa* planted in 2 ha in the year of 1955 and expanded the trial plot in 1986 by including the species *Pinus caribaea* in 12 Ha. The average height was 35 m and girth were 100 cm. No work was carried out in this trial using CAMPA fund.
Maintenance of Permanent Preservation Plot Andaman padoak at Nedumpoyil	N11°55'04.05" E75°45'11.5"	Nedumpoyil	0.36	The *Andarnan padau* trial plot was established in the year 1939 and formed as Permanent Preservation Plot in 1954 in an area of 0.36 Ha with live 63 trees. The average height was 38 m and girth were 149 cm. Protection to the trial has been ensured through creation of firelines (5.2 x 280 m). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of Permanent Preservation Plot Teak at Kolayad	N11°50'55.3" E75°40'97.0"	Kolayad	1	The teak trial plot was established in the year 1898 and formed as Permanent Preservation Plot in 1950 in an area of 1 Ha with remaining 107 trees. The average height was 38 m and girth were 212 cm. Protection to the trial has been ensured through creation of firelines (5.2 x 460 m). The trial is intact and well maintained. The records were verified and found correct.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of Permanent Preservation Plot arboratum at Vattapoyil	N11°50'18.3" E75°40'71.8"	Vattapoyil	0.25	The arboretum was established in an area of 0.25 ha with 49 evergreen tree species. The exact year of plantation was unknown. An estimate submitted under CAMPA for protection of the trial, but tender not processed due to low availability of fund.
Maintenance of Permanent Preservation Plot Rosewood at Pokalamalam	N11°44'10.1" E76°14'17.0"	Pokalamalam	5.25	The rosewood trial plot was formed as Permanent Preservation Plot in 1991 in an area of 5.25 ha with 65 trees per ha. Protection to the trial has been ensured through creation of firelines (5.2 x 625 m). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of Permanent Preservation Plot (Experimental garden-Bit I & II) at Begur	N11°53'73.2" E76°04'35.2"	Begur	7.94	The teak trial plot established year was unknown and it was formed as Permanent Preservation Plot in 1956 in an area of 7.94 ha. The average height was 36 m and girth were 178 cm. Protection to the trial has been ensured through creation of firelines (5.2 x 2.2 km). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of Permanent Preservation Plot Teak at Begur	N11°52'84.8" E76°04'66.6"	Begur	0.39	The teak trial plot was established in the year 1892 and formed as Permanent Preservation Plot in 1966 in an area of 0.39 ha with remaining 30 trees after the formation . The average height was 40 m and girth were 259 cm. An estimate has been submitted but no work have been carried out under CAMPA fund.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of Permanent Preservation Plot Mahagony at Kolayad	N11°50'53.6" E75°41'83.3"	Kolayad	10	The *Switenia macrophylla* plot was established in the year 1945 and was formed as Permanent Preservation Plot in 1992 in an area of 10 Ha. The average height was 24 m and girth were 310 cm. Protection to the trial has been ensured through creation of firelines (5.2 x 2130m). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of Research Plot at Mallankuzhy	N10°42'33.7" E76°08'59.9"	Mallankuzhy	6	Not assessed / evaluated
Maintenance of Research Plot at Madathikkunnu	N10°37'29.9" E76°17'28.7"	Madathikkunnu	8	Not assessed / evaluated
Maintenance of Research Plot at Kudampuli at Mundoor	N10°50'16.9" E76°34'8.3"	Mundoor	1.14	Not assessed / evaluated
Maintenance of Research Plot of Njaval at Puliyampully	N10°52'19.8" E76°35'36.3"	Puliyampully	2	The *S.cumini* trial established in 2006 was over an area of 4ha with 1000 plants /ha. Fire broke out two years back in the plantation and 2 ha was destroyed. The remaining 2ha area is maintained. Protection measures include seasonal employment of watchers, creation of a 540 x 5.2 m fireline. The trials is frequently grazed; hence protection from grazing needs to be addressed. Gap planting will be carried out during the planting season in 2021-22.
Maintenance of Research Plot of Bamboo at Kunnukadu	N10°50'51.0" E76°34'27.3"	Kunnukadu	4.18	Not assessed / evaluated
Maintenance of in-situ conservation plot at Vallikkode and Malampuzha	N10°48'55.5" E76°35'51.7"	Malampuzha	49.58	Not assessed / evaluated

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of Research Plot of Mavu at Munnoorkodu	N10°51'9.0" E76°22'36.9"	Munnoorkodu	2.5	Not assessed / evaluated
Maintenancae of research plot at Virippaka	N10°51'9.0" E76°17'26.7"	Virippaka	3	Not assessed / evaluated
Vadapuram Mavu Kudampuli Plot in Nilambur	N11°06'56.39" E76°07'34.39"	Nilambur	3	Not assessed / evaluated
Maintenance of Dalbergia plots at Vadapuram, Nilambur Range	N11°09'23.97" E76°07'34.36"	Vadapuram	0.8	Not assessed / evaluated
Teak trial Plot at Ramallur in Eadavanna Range	N11°12'58.60" E76°12'22.57"	Ramallur	2	Not assessed / evaluated
Maintenance of Seedling seed orchard & Clonal Seed Orchard 2000 at Old Amarambalam, Kalikavu Range	N11°08'01.79" E76°10'01.2"	Old Amarambalam	7.5	Not assessed / evaluated
Maintenance of plus trees plots (Thanni, Karimaruthu), Nilambur Range	N11°10'11.35" E76°10'19.09"	Nilambur	2.5	Not assessed / evaluated
Maintenance of 1986 Teak Provenance Trial Plot Nellikkuth, Vazhikadavu Range	N11°12'53.1" E76°12'37.33"	Nellikkuth	5	Not assessed / evaluated
Maintenance of 1976 TP -TSPA Mathamangalam of Chedalath Range	N11°45'08.7" E076°13'27.1"	Mathamangalam	41.2	The Teak trial plot was established in the year 1976 and converted in to Seed Production Area in 2012 in an area of 41.2 Ha. The average height was 20 m and girth were 110 cm. Protection of the trial has been ensured through creation of firelines (5.2 x 2775 m). The trial is intact and well maintained. The records were verified and found correct.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of 1977 TP -TSPA Mathamangalam of Chedalath Range	N11°45'46.4" E076°13'44.1"	Mathamangalam	38.1	The teak trial plot was established in the year 1977 and converted in to Seed Production Area in 2012 in an area of 38.1 Ha. The average height was 30 m and girth were 142 cm. Protection to the trial has been ensured through creation of firelines (5.2 x 3.02 Km). The trial is intact and well maintained. The records were verified and found correct.
Maintenance of 1977 TP -TSPA Changambam of Chedalath Range under Research Manathavady Range	N11°49'01.9" E076°08'12.2"	Changambam	61.5	The teak trial plot was established in the year 1981 and converted in to Seed Production Area in 2012 in an area of 61.5 Ha. The average height was 30 m and girth were 125 cm. 900 kg of seed collected from this trial and handed over to KFRI using CAMPA fund. The records were verified and found correct.
Maintenance of 1981 Bit 1TP -TSPA Begur of Begur Range under Research Manathavady	N11°52'57.52" E076°33'43.2"	Begur	51.5	The teak trial plot was established in the year 1981 and converted in to Seed Production Area in 2012 in an area of 51.5 Ha. The average height was 32 m and girth were 133 cm. 2004 kg of seed collected from this trial and handed over to KFRI using CAMPA fund. The records were verified and found correct.
Maintenance of 1970 TSPA, Nedunkayam, Karuli Range	N11°17.845 E076°20.114	Nedunkayam	55.4	The teak trial plot was established in the year 1970 and converted in to Seed Production Area in 2012 in an area of 55.4 Ha. The average height was 30 m and girth were 125 cm. 900 kg of seed collected from this trial and handed over to KFRI using

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				CAMPA fund. The records were verified and found correct.
Maintenance of 1973 TSPA,Nedunkayam Karulai Range	N11°16.940 E076°20.345	Nedunkayam	65	The teak trial plot was established in the year 1981 and converted in to Seed Production Area in 2012 in an area of 61.5 Ha. The average height was 30 m and girth were 125 cm. 900 kg of seed collected from this trial and handed over to KFRI using CAMPA fund. The records were verified and found correct.
Maintenance of 1970 TSPA, Poolakkapara, Karuali Range	N11°21.722 E076°22.031	Poolakkapara	43	The teak trial plot was established in the year 1981 and converted in to Seed Production Area in 2012 in an area of 61.5 Ha. The average height was 30 m and girth were 125 cm. 900 kg of seed collected from this trial and handed over to KFRI using CAMPA fund. The records were verified and found correct.
Maintenance of 1972 TSPA Nedumkayam	N11°16.943 E076°20.343	Nedumkayam	9	The teak trial plot was established in the year 1981 and converted in to Seed Production Area in 2012 in an area of 61.5 Ha. The average height was 30 m and girth were 125 cm. 900 kg of seed collected from this trial and handed over to KFRI using CAMPA fund. The records were verified and found correct.
Maintenance of 1971 TSPA, Cherupuzha, Karulai Range	N11°16.855 E076°12.555	Cherupuzha	20	The teak trial plot was established in the year 1981 and converted in to Seed Production Area in 2012 in an area of 61.5 Ha. The average height was 30 m and girth

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				were 125 cm. 900 kg of seed collected from this trial and handed over to KFRI using CAMPA fund. The records were verified and found correct.
Research (South), Division				
Maintenance of 2000 TCSO at Decentmukku	N08°50.48.4' E077°01.57.4'	Decentmukku	1.72	The teak trial was established in the year 2000 in an area of 1.72 ha with 600 plants, out of which 60 plants were dead. The average height was 13.2 m and girth were 66.2 cm. Protection measures include seasonal employment of watchers, creation of a 600 x 3m fireline. Efficiency of fire line created is good. Weeding was carried out whenever fund is released. When compared to the unworked adjacent plot the weeds were 32 percent less. The common weeds found were *Chromolaena odorata, Clidemia hirta, Glycosmis pentaphylla, Acacia caesia, Tabernaemontana alternifolia* and *Ziziphus oenoplia*. The trials are occasionally grazed; hence protection from grazing needs to be addressed.
Maintenance of 2000 Medical Demonstration Garden at Chozhiyakode	N08°54.11.2' E077°04.07.2'	Chozhiyakode	4.5	The medicinal plants garden was established in the year 2004 covering an area of 4.5 ha. The majir medicinal plant species observed were *Pterocarpus santalinus, Sesbania grandiflora, Gmelina arborea, Murraya koeinigi, Phyllanthus emblica, Terminalia bellirica, Dysoxylum beddomei, Baliospermum axilliure, Caesalpinia sappan, Butea*

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				monosperma, Aegle marmelos, Garcinias gummigutta, Oroxylum indicum, Pongamia pinnat and *Justicia adhatoda*. A fireline of 1km x 5.2m was created during the year 2020-2021 as protection measure. Weeding was also carried out during the same time. The common weeds found were *Curculigo orchioides, Chamaecostus* sps, *Tabernaemontana alternifolia, Ziziphus rugosa, Ziziphus oenoplia, Clidemia hirta.* When compared to the unworked adjacent plot the weeds were only 39 percent less.
Maintenance of 2016 TCSO at Central Nursery, Kulathupuzha	N08°54.02.2' E077°03.49.0'	Kulathupuzha	0.75	The teak trial was established in the year 2016 in an area of 0.75 ha with 770 plants, out of which 92 plants were dead. The average height was 10.8 m and girth were 36 cm. Protection measures include seasonal employment of watchers, creation of a 500 x 5.2m fireline. Weeding was carried out whenever fund is released. The common weeds found were *Acacia mangium, Glycosmis pentaphylla, Clerodendrum infortunatum, Croton hirtus, Axonopus compressus, Chromolaena odorata, Mimosa diplotricha, Tabernaemontana alternifolia, Spermacoce hispida, Lantana camara, Canthium sps, Urena lobata* and *Mimosa pudica.* When compared to the unworked adjacent plot the weeds were 26 percent less. So, the weeding is only partially effective.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of 2019 Trial Plots of Teak Clones under custody of KFDC Peringamala	N08°43.677' E077°03.744'	Peringamala	2	The teak tissue culture trial was established in the year 2019 in an area of 0.52 ha with 1000 plants, out of which 137 plants were dead. The average height was 4.35 m and girth was 10.9 cm. Protection measures include seasonal employment of watchers, creation of a 500 x 5.2m fireline. Weeding was carried out in the year 2020-21. The common weeds found were *Mimosa pudica, Mikania micrantha, Chromolaena odorata, Clerodendrum infortunatum, Hibiscus hispidissimus, Axonopus compressus, Cyperus rotundus*. When compared to the unworked adjacent plot the weeds were 19 percent less. So, the weeding is only partially effective. The weeds have started to grow back so weeding may be done more frequently.
Maintenance of 1980 Sandal Regeneration trial plot at Anakkalpetty	N10°14.767' E077°09.767'	Anakkalpetty	2	Naturally grown trees of sandal converted to sandal regeneration trial plot in the year 1980 in an area of 2 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 700 m). Collected 4.420 kg of seed using CAMPA fund and handed over to KFRI. No regeneration observed in the trial due to deer grazing; hence protection from grazing needs to be addressed. The records were verified and found correct.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of 1980-81 Sandal Seed Stand at Anakkalpetty	N10°14.780' E77°09.366'	Anakkalpetty	3.2	Naturally grown trees of sandal converted to sandal seed stand in the year 1980-81 in an area of 3.2 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 750 m). Collected 5 kg of seed using CAMPA fund and handed over to KFRI. The records were verified and found correct.
Maintenance of 1982 Sandal Regeneration Trial Plot at Nachivayal	N10°14.969' E077°09.392'	Nachivayal	5.9	Naturally grown trees of sandal converted to sandal regeneration trial plot in the year 1982 in an area of 5.9 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 1000 m). Collected 9.580 kg of seed using CAMPA fund and handed over to KFRI. No regeneration observed in the trial due to deer grazing; hence protection from grazing needs to be addressed. The records were verified and found correct.
Maintenance of 1983 Sandal Seed Stand at Nachivayal	N10°15.279' E77°09.489'	Nachivayal	4.4	Naturally grown trees of sandal converted to sandal seed stand in the year 1983 in an area of 4.4 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 1000 m). Collected 8.980 kg of seed using CAMPA fund and handed over to KFRI. The records were verified and found correct.
Maintenance of 1981 Sandal Seed Stand at Anakkalpetty	N10°14.956' E77°09.392'	Anakkalpetty	5.5	Naturally grown trees of sandal converted to sandal seed stand in the year 1981 in an area of 5.5 Ha. Protection of the trial has been ensured through creation of firelines

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				(5.2 x 1000 m). Collected 9.420 kg of seed using CAMPA fund and handed over to KFRI. The records were verified and found correct.
Maintenance of 1982 Sandal Seed Stand at Anakkalpetty	N10°14.963' E77°09.380'	Anakkalpetty	4.4	Naturally grown trees of sandal converted to sandal seed stand in the year 1982 in an area of 4.4 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 1000 m). Collected 5.940 kg of seed using CAMPA fund and handed over to KFRI. The records were verified and found correct.
Maintenance of 1985 Sandal Seed Stand at Nachivayal	N10°15.184' E77°09.462'	Nachivayal	3.3	Naturally grown trees of sandal converted to sandal seed stand in the year 1985 in an area of 3.3 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 750 m). Collected 8.520 kg of seed using CAMPA fund and handed over to KFRI. The records were verified and found correct.
Maintenance of 1987 Sandal Regeneration Trial Plot at Anakkalpetty	N10°14.953' E077°09.181'	Anakkalpetty	4.4	Naturally grown trees of sandal converted to sandal regeneration trial plot in the year 1987 in an area of 4.4 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 1000 m). Collected 9.940 kg of seed using CAMPA fund and handed over to KFRI. No regeneration observed in the trial due to deer grazing; hence protection from grazing needs to be addressed. The records were verified and found correct.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Maintenance of 2005 Gene Bank of Fruit bearing Trees at Chully	N10°15.698' E76°27.980'	Chully	1	The fruit plants garden was established in the year 2005 covering an area of 1ha with 175 trees. The species observed were *Magnifera indica, Artocarpus hetrophyllus, Garcinia gummigutta. However, the Garcinia gummigutta* trees did not survive. A fireline was created as protection measure under a different scheme. Weeding was carried out during 2021. The common weeds found were *Curcuma angustifolia, Helictres isora, Clerodendrum infortunatum, Pseudarthria viscia, Asystasia gangetica, Glycosmis pentaphylla, Ziziphus oenoplia, Hemidesmus indicus, Chromolaena odorata, Lantana camara, Canthium sps, Mimosa pudica*. When compared to the unworked adjacent plot the weeds were only 19 percent less. So, the weeding is only partially effective. The weeds have started to grow back so weeding may be done more frequently.
Maintenance of 2014-15 Teak CSO and CHG plot at Chettikkulam	N10°20.434' E76°23.382'; N10°20.488' E76°23.473'	Chettikkulam	1.1	Two teak trial established by KFRI as hedge garden in the year 2014 in an area of 1.1 ha with 770 plants, out of which 62 plants were dead. The average height was 7.8 m and girth was 38.3 cm. Another plot close by is CSO of teak with average height 4.85 m and girth 32.6 cm. During 2017 KFRI handed over the plot to research Division of KFD. Weeding was carried out

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				whenever fund is released. The common weeds found were *Macaranga peltata, Chromolaena odorata, Oplismenus hirtellus, Clitoria ternatea, Mikania micrantha, Zizyphus oenoplia, Zizyphus rugosa, Asystasia gangetica, Spermacoce hispida, Breynia* sps and *Mimosa diplotricha*. When compared to the unworked adjacent plot the weeds were 32 percent less. So, the weeding is only partially effective.
Maintenance of 2016 Experimental plot for comparitive study of teak plantations raised through teak stump and root trainer seedlings site quality-II at Karikkadavu	N10°22.546' E76°27.450'	Karikkadavu	2	The teak trials were established in the year 2016 in an area of 2 ha each as an experimental plot for a comparative study of teak plantations raised through teak stumps and root trainer seedlings. The plots were elephant infested. All the plants were damaged and stunted with multiple branching. It was not in a condition for assessment and study.
Maintenance of 2016 Experimental plot for comparitive study of teak plantations raised through teak stump and root trainer seedlings site quality-IV at Karikkadavu	N10°22.565' E76°27.216'	Karikkadavu	2	
Maintenence of 1983 Pterocarpus santalinus permamnent preservation plot at Palalpilly	N10°25.380' E76°20.567'	Palalpilly	1.07	The red sander trial was established in the year 1983 in an area of 1.07 ha. Weeding was carried out whenever fund is released. The common weeds found were *Chasalia curviflora, Macaranga peltate, Asystasia gangetica, Chamaecostus sps, Clerodendrum infortunatum, Annona squamosa, Glycosmis pentaphylla, Cayratia pedata, Curcuma angustifolia, Achyranthes bidentata*. When

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
				compared to the unworked adjacent plot the weeds were 35 percent less. The weeding is only partially effective.

In addtion to the aforementioned, two trials worked using CAMPA funds were also assessed.

Component/ Particulars of Work	GPS of the Location	Location	Area (ha)	Remarks
Comparitive study of Teak root trainer and stump experimental plot, Panniyode	N11°50'05.98" E75°40'32.36"	Panniyode, Kannur, North Research Division	2	The teak trials were established in the year 2015 in an area of 2 Ha (1 ha each) as an experimental plot for a comparative study of teak plantations raised through teak stumps and root trainer seedlings with 2654 stumps and 2628 seedlings. Weeding was carried out in the year 2020-21. The common weeds found were *Chromolaena odorata, Dichrostachys* and common grass. When compared to the unworked adjacent plot the weeds were 96.5 percent less. So, the weeding is clearly effective. The records were verified and found correct.
Maintenance of 1985 Sandal seed stand Anakkalpetty	N10°14'54.60" E77°09'18.91"	Anakkalpetty, Marayoor	1.3	Naturally grown trees of sandal converted to sandal seed stand in the year 1985 in an area of 1.3 Ha. Protection of the trial has been ensured through creation of firelines (5.2 x 500 m). Collected 9 kg of seed using CAMPA fund and handed over to KFRI. The records were verified and found correct.

Overall, an amount of Rs. 57.46 lakhs was allotted to the circle during the period, with 96.75 per cent expenditure.

1976 TSPA at Mathamangalam

Andaman Padauk at Nedumpoyil

1977 TSPA at Mathamangalam

Bamboo trial plot at Venmani

Permanent Preservation Plot at Begur

Rosewood trial at Pokalamalam

PPP at Vattapoyil

Teak Experimental trial at Mananthavady

1980 Sandal Reg Plot Anakkalpetty Marayur

1985 Sandal seed stand Anakkalpetty Marayur

Seed collection details from Marayur

Sandalwood regeneration plot at Marayoor

Teak experimental plot at Peringamala

TCSO at Ariyankavu

Nellikkuth-1986 Teak Provenance Trial Plot

Poolallapara 1970 TSPA

Cherupuzha-1971 TSPA

Nedunkayam 1970 SPA

Amaramalam TSSO

Amaramalam TCSO

Vadapuram Mavu Kudampuli Plot in Nilambur

Dalbergia plots at Vadapuram, Nilambur Range

M-book maintenance details in Marayoor

5. Recommendations and Suggestions

The proposed evaluation had multiple objectives. *Inter alia*, this evaluation examined the impact of various activities in terms of increase in vegetation spread, soil and water conservation measures , infrastructure development, capacity building and the extent to which the objectives of CAMPA were achieved. The qualitative data were used to support further analysis of variations across regions and categories. The following are the recommendations and suggestions arising out of this present monitoring and evaluation of CAMPA activities in Kerala

(a) **Soil & Water Conservation (SWC)Works:** The present APO focussed more on the maintenance of the existing SWC structures. The SMC activities, in most places, have increased the vegetation, indicating the moisture retention impacts. Since most of the structures are in difficult areas, allocation towards such maintenance ativities could be enhanced.

(b) **Connectivity:** The present APO improved connectivity through construction of bridges, trek paths and forest roads. Many of these structures are very crucial as they connect different ranges within a division. Such structures deserve special attention and need stronger reinforcement in the face of frequest floods.

(c) Most of the water-holding structures are old, and not capable of holding water to the designed potential. Such structures may be reworked.

(d) The river stabilisation process in many circles could be encouraged in the coming years as severe erosion has been observed in many stretches.

(e) **Improvement of Wildlife Habitat:** Activities undertaken under this component could be given more emphasis, wider publicity and involving local public. This would bring more visibility to the conservation efforts of the department.

(f) Awareness pprogrammes involving the local communities and imparting trainings to staff have been taken up consistently. It would be more effective if a group of trainers are empowered from the communities who would then undertake to train others within the communities under the supervision of the forest department staff.

(g) Regional and State level workshop could be organized for prioritation of species for Afforestation/Enrichment planting in the forest areas by involving local

communities, field staff of SFDs, Forestry Research institutions, NGOs and other stakeholders.

(h) Technical support can be obtained from Forestry Research institutions for transferring/developing seed handling techniques and nursery technologies for indigenous species prioritized for Afforestation / Enrichment planting.

(I) In remote locations and in locations with high damages to the planted seedlings by wild animals, manual seeding of indigenous species using "Seed Ball Technologies" could be attempted.

(j) Maintenance costs should be linked to survival rates and strict guidelines should be framed regarding replanting in failed sites.

(k) Maintenance efforts in plantations were not effective in many places. It is essential to provide maintenance provisions for five years so that the purpose is well achieved.

(l) Fodder Plantations should be prioritied in elephant corridors which would act as deterrents to their entry into human-habitation.

(m) **Protection of Forests and Wildlife:** Anti-Poaching Camps (APC) have been established throughout the state in almost all divisions. The APCs are sufficienfly equipped with staff and modern equipment for protection activities. There is a need to regularly support the staff with protective gears and field survival kits.

(n) GIS-based forest survey monitoring has been attempted in the state. The staff report that this has helped prevent, contain and douse forest fires in many places. All staff have to be provided basic training in the use of advanced methods of monitoring for protection. The procedures of fire management / fire protection can be extended to the forest fringe area inhabitants in addition to school/ college students.

(o) Provisions need to be made in the budget for procuring more field vehicles, as a dearth in availability of these was observed.

(p) In almost all divisions, the maintenance of buildings, roads, SMCs are taken up regulalry. A fixed cycle could be adopted for maintenance and repair of civil works, rather than taking a routine annual maintenance.

(q) A decentralised allotment to the social forestry wings may be thought of, to meet the local needs for each division.

(r) Incentives to temporary staff associated with the department's activities for more than ten years.

(s) Digitisation of records would enable easy access to information.

(t) Internal evaluation needs to be strengthened and a database must be established to monitor the changes. This would enable regular assessment of seasonal works like protection camps, fire protection works etc. Further, this report should also be made available during third party monitoring and evaluation.

(u) Permanent structures created under CAMPA should be displayed/indicated through suitable markings to ensure proper visibility of CAMPA-funded activities.

ANNEXURES

Annexure I

Minutes of meeting

Third Party Evaluation of State CAMPA Activities in Kerala

23rd November 2021

Venue: VC Hall, IFGTB

Participants:

IFGTB	Kerala Forest Department
Dr. C. Kunhikannan, Director IFGTB	Shri. Rajeesh Ravindran IFS, CEO
Dr. R. Yasodha, Scientist G & GCR	CAMPA & APCCF
Dr. JP Jacob, Scientist G – *on leave*	Ms P. T. Sreelekha, ACF, SA&NO,
Shri. Rajesh Gopalan IFS - *online*	CAMPA
Dr. C. Buvaneswaran, Scientist F	
Dr. Kannan CS Warrier, Scientist F	
Dr. A. Karthikeyan, Scientist F	
Dr. D.R.S. Sekar, Scientist F – *not attended*	
Dr. Rekha R Warrier, Scientist F	
Dr. S. Saravanan, Scientist F	
Dr. A. Rajasekaran, Scientist F	

An online meeting was held on 23rd November 2021 at 10.00 am to discuss the modalities of third party evaluation of CAMPA-related works undertaken in Kerala by Kerala Forest Department.

Under CAMPA, various activities have been taken up to accelerate preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works.

Shri Rajesh Ravindran, CEO-CAMPA listed the different circles where CAMPA activities have been taken up. He sought evaluation of different protection activities, labour deployed for watch and ward, fire protection, and site suitability, especially regarding

ecorestoration of monoculture plantations, the species planted and their performance, etc.

Dr. S. Saravanan, Scientist F, presented the need for third-party evaluation to assess the various activities taken under State CAMPA. He elaborated on the requirements of the National CAMPA Authority concerning the monitoring while carrying out the evaluation.He also detailed the methodology for the evaluation process and the extent of sampling for the different activities taken under CAMPA based on the guidelines provided by the IIFM, Bhopal with necessary modifications. He also informed that IFGTB has experience working towards the evaluation of NAP of the NAEB in Kerala and providing consultancies to various industries. A team has been formed for the execution of the work.

This was followed by a discussion on the modalities for execution of the evaluation. The following points emerged.

1. An MoU would be signed between the Kerala Forest Department and IFGTB towards the activity. IFGTB would complete the evaluation within a period of six months from the date of release of funds.
2. State CAMPA would provide information, plantation journals, maps, measurement books, and all relevant records pertaining to the CAMPA works from 2009 to the present. Co-ordination in the state, local travel, lodging, and field support of personnel would also be provided by the Department.
3. The Department looks forward to APO-wise reports. Thus, six reports are envisaged at the end of the evaluation.
4. The sampling intensity was agreed upon.
5. A proposal including financial requirements and draft MoU would be sent to the CEO-CAMPA for perusal.
6. The CEO-CAMPA would visit IFGTB during the last week of November, 2021 for a detailed discussion and finalising the proposal.

Annexure II

Timelines of the Evaluation

Milestone	Activity
September 2021	Identification of IFGTB for Third party Monitoring
November 2021	Finalisation of activities under the Third Party Monitoring
January 2022	Acceptance of Project proposal of IFGTB forMonitoring & Evaluation of CAMPA activities in Kerala . Approval of the MoU.
March 2022	Signing of the MoU and Release of the First Instalment
April to June 2022	Field works
July to September 2022	Report preparation
September 2022	Release of the Second Instalment
October 2022	Submission of Final Report

Annexure III

APO-wise components implemented in various Circles

Components	Particulars
Better connectivity	Maintenance of trek path/patrolling route
	Maintenece of Forest RoadsCapacity Building
	Awareness Program/ training to staff and VSS/EDC members
	Conducting Nature Camps to School and College children
Catchment Area Treatment Plan Fund	River Bank Stabilization
Compensatory Afforestation Funds	Compensatory Afforestation Works (Creation - Preparatory works)
	Compensatory Afforestation Works (Maintenance)
Forest and Wildlife Protection	Soil and Moisture Conservation, Gully Plugging etc.
Forest Fire Prevention and control operation	Creation of fire-break
	Engaging Fire Gang through participatory forest management
	Fire Awareness Campaign
	Fire Fighting Equipment
Human Animal Conflict Mitigation	Engaging watchers to mitigate human animal interface
	Protective Gears for wildlife conflict mitigation staff
	Purchase of Equipment/Ration for Rapid Response Teams (RRTs)
Improvement of Wildlife Habitat	Bird survey and conservation
	Eradication of Exotic Weeds
	Maintenance of Vayal (marshy grasslands which are source of fodder for herbivores)
	Sea Turtle Conservation

Components	Particulars
Protection of plantations and forests	Eco-restoration activities in monoculture plantations by planting indigenous/misc. species/preparatory works
	Field survival kits and field Equipment
	Interior Campshed maintenance
	Organising Joint Patrolling and Raids along inter-divisional and interstate boundaries
	Protection of Research Plots and Seed Production Areas
	Provision of field ration for interior camps

Annexure IV

Monitoring and evaluation teams

Teams Region	1 Southern Circle, Kollam (1)	2 Southern Circle, Kollam (2)	3 High Range Circle, Kottayam (1)	4 High Range Circle, Kottayam (2)	5 FD PT, Kottayam (1)
Team Co-ordinators (Dr/Mr/Ms)	C. Buvaneswaran	Rekha R Warrier	Kannan CS Warrier	K. Murali Shankar	S. Saravanan
Team Leaders (Dr/Mr/Ms)	A. Balasubramanian	R. Sumathi	K. Gireesan	A. Mayavel	S.P. Subramani
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Member	V. Mareeswaran	S. Sudha	K. Gopalakrishnan	P. Vignesh	M. Suryaprakash
Member	S.S. Abijith	R.G. Anitha	T. Pradeep	K.R. Shankar	R. Ariharasuthan
Member			C. Muthumanikam	M. Vishnu	M. Mahalingam
Team Co-ordinator (KFD)	Fen Antony, ACF	Fen Antony, ACF	KS Subash, ACF	Subash, ACF	Sandeep.S, ACF

Teams Region	6 FD PT, Kottayam (2)	7 Agasthyavanam Biological Park	8 Social Forestry, Southern Region, Kollam	9 Central Circle, Thrissur	10 Social Forestry, Central Region, Thrissur
Team Co-ordinators (Dr/Mr/Ms)	N.V. Mathish	A. Rajasekaran	A.C. Surya Prabha	D. Raja Suguna Sekar	J. Sriram
Team Leaders (Dr/Mr/Ms)	S.P.Subramani	Muhammad Ali	P. Chandrasekar Noushad	B. Deeparaj	A. Mayavel
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Member	M. Suryaprakash	L. Mahalingam	P. Vignesh	S. Pragadeesh	C.V. Vijayam
Member	R. Ariharasuthan	S. Selvakumar	K.R. Shankar	R. Kalaiselvi	R. Sathishkumar
Member	M. Mahalingam	N. Vijayanand	M. Vishnu	C. Thamotharan	Rudranath, V.R.
Team Co-ordinator (KFD)	Sandeep.S, ACF	Ajith.N , ACF	Rohini. GR, ACF	V.P. Jayaprakash, ACF	Chinnu Janardhanan, ACF

Teams Region	11 Social Forestry, Northern Region, Kannur	12 Northern Circle, Kannur	13 Eastern Circle, Palakkad	14 Wildlife Circle, Palakkad	15 Research Division N and S, & Head quarters
Team Co-ordinators (Dr/Mr/Ms)	Madhavraj G. R	A. Karthikeyan	Rekha R Warrier	Rekha R Warrier	JP Jacob
Team Leaders (Dr/Mr/Ms)	K.N. Ashirth	R. Archana	S.Lalitha	A. Shanthi	K. Shanthi & Muhammad Ali Noushad
Member	Srijita Ganguly	C. Rajesh	M. Ganesan	R. Velumani	M.V. Vineetha
Member	M. Jeyakumar	S.M. Paulraj	N. Sudha	A. Sathish	P. Vipin
Member	V. Abirami	Remya T Radhan	Mishra Avinash	K. Rajasekaran	C. Kandasamy
Member	C.K. Suresh	M. Manikandan	S. Ajay		T. Govindaraj
Team Co-ordinator (KFD)	Sunil Kumar. K, ACF	Ajith K Raman, ACF	K. Manoj, ACF	Sanall.P., ACF	Adersh. M, ACF

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