MANAGEMENT PLAN OF ERAVIKULAM NATIONAL PARK 2012 - 2022

Department of Forests and Wildlife

Government of Kerala

- Camping for 4-5 day duration will be regularly carried out at Poovar and Varattukulam. At least 3 to 4 camps will be arranged in these areas each month to ensure proper protection.
- In other camps at Kolukkan, Eravikulam, Anamudy, Meenthotty and Pettymudy, camps of 3-4 day duration will be carried out. 2-3 camps will be arranged in these areas during a month.
- Camping and perambulation is to be done every month in Parappayar, Parakkudy and Nooradykudy to ensure protection and keep the boundaries free from illicit activities. This will also help in eco development initiatives and prevent the external interference in tribal settlements, especially in the light of latest challenges in the form of terrorism and nexalitism.
- The ganja combing operation will be carried out during these perambulations. Additional perambulations will be done in the areas adjoining the Park in the northern, eastern and western boundaries, where there are chances of ganja cultivation.
- The boundaries with the tea estates at Chattamunnar, Vaguvarai, Kadalar, Rajamala and Pettymudy will be regularly combed for nooses and illicit distillation of liquor.
- The camps at Poovar, Varattukulam, Kolukkan and Eravikulam will be managed by the staff at Chattamunnar and the camps at Anamudy, Meenthotty and Pettymudy will be managed by staff at Rajamala. The Forester at Chattamunnar will organise the perambulation at Poovar, Varattukulam, Kolukkan and Eravikulam. The Forester at Rajamala will organise camps at Anamudy, Meenthotty, Pettymudy and at Parappayar, Parakkudy and Nooradykudy. The Deputy Rangers will oversee the implementation of protection plan in Eravikulam National Park in areas under their jurisdiction. The staff incharge of respective EDC will take care of areas adjoining the Tribal Settlements at Parappayar, Parakkudy and Nooradykudy with the help of EDC members.
- Continuous camping will be done in fire season along with EDC members in these camps to prevent and detect fire incidents. Free ration, fuel, camping accessories, solar equipment, etc will be provided for the camping in the field.
- While adding proposed additional areas as buffer to the Park, perambulation plan will be extended to those areas.

- In the light of latest challenges like terrorism, protection will be followed scrupulously in all interior areas.
- The Assistant Wildlife Warden and Wildlife Warden will also join for patrolling and make frequent surprise checks.
- Frequent special ganja raids may also be arranged by the Wildlife Warden / Asst. Wildlife Warden.
- The staff will maintain the movement register and wildlife monitoring register which will be subject to frequent inspection by Assistant Wildlife Warden and Wildlife Warden.

6.4.1.5. Interstate coordination

The PA shares a total length of 9 kms of interstate boundary with Tamilnadu. In addition to perambulation and monitoring of the region, frequent sharing of information between the officials of neighboring forest divisions within and outside the State are necessary. It is proposed to conduct meeting at the Range Officers level once a month. In addition, the existing approved protocol for interstate meeting will strictly be followed.

6.4.1.6. Strategies for Specific Issues

6.4.1.6.1. Stray dogs

The problem due to stray dogs, disturbing the wildlife, has been noticed from Rajamala, Pettimudy, Nyamakadu and Vaguvarai tea estate. Measures will be taken to control the stray dogs with the help of estate management, local Panchayath, SPCA and Animal Husbandry Department through FDA.

6.4.1.6.2. Presence of shola grass lands outside the Park.

This issue is addressed in section 6.3.4 by proposing to add these areas to the Park.

6.4.1.6.3. Police Wireless Tower at Rajamala

At many points the shola grasslands extend outside the Park boundaries. The grasslands adjoining the tourism zone Rajamala is important for the tahr population in the area. The Police wireless station at Rajamala is located in the grasslands belonging to KDHP Company, adjoining the tourism zone. This grassland is the only corridor

connecting the tourism zone to the grasslands of Mankulam Division in the Panthumala – Pettymudy area. This causes disturbance to the Tahr population due to dumping of waste, feeding of animals and hindering the movement of animals. This can cause behavioral changes in animals and there is chance of spread of diseases to the animals. New structures are constructed in the area without taking into consideration of its ecological importance. The present enclosure around the wireless station will be maintained periodically. No new structures should be allowed to be constructed in the area. The possiblity of relocation of the wireless tower from the tahr habitat will also be explored during the plan period.

6.4.1.6.4. Presence of tea estates along the boundaries

The southern boundary of the National Park is occupied by tea estates belonging to KDHP Company and Thalayar Group. They follow inorganic method of cultivation, using a number of pesticides and chemicals. The effect of these practices on the National Park is not known. They have cultivated fuel wood crops like eucalyptus and wattle along the boundaries which slowly spreads in to the National Park areas. This practice has to be controlled in consultation with the estates management. The presence of cattle in these estates along the boundary is a potential threat for the spread of diseases to the wildlife including tahr that occasionally moves into these estates. The animal husbandry activities in these areas are to be regulated in co-operation with the company managements and animal husbandry department. The movement of tahr in to the estates is to be controlled with the help of estate management, EDCs and local dependents. The fire incidents in the Park start mainly from the tea estates along the boundary. There are chances of attempt of poaching, snaring, ganja cultivation and illicit brewing by the people from the estates. The frequent interaction with the estate management, staff and labourers will help in curbing these illicit practices by the people from these tea estates. The chance of management of nearby estates in a system that dovetails with the management of Eravikulam National Park, with the National Park as a focus and the chance of changing the inorganic method of cultivation in the estates, in tune with the Park management, need to be explored. The tea estates at Rajamala and Pettymudy use the road passing through the tourism zone of Park for transportation. The possibility of providing alternate route, including rope ways, to the estates will be explored to stop the increasing vehicular traffic through the tourism zone.

6.4.1.6.5. Fire

This issue is also dealt separately under theme plan for 'Fire Protection'.

6.4.1.7. Infrastructure Development

6.4.1.7.2. Administrative building

The Office and quarters of the Wildlife Warden is located at Munnar. The Office and quarters of Asst. Wildlife Warden is located at Rajamala in the Tourism Zone of Eravikulam National Park. Office and quarters of the Deputy Ranger is located at Chattamunnar. The staffs of Rajamala outpost are located at Rajamala. The Nature Education Centre, Munnar and the Interpretation Centre, Munnar helps in nature education, protection and management. The Old quarters Vaguvarrai and the heritage building, the Hut at Eravikulam, help in protection. Built in 1928, the Hut at Eravikulam is one of the few remaining colonial fishing bases. This structure is to be protected and maintained perfectly. Accommodation available for the staff at Rajamala and Chattamunnar is not sufficient. It is proposed to construct ecofriendly accommodation facilities for staff at Chattamunnar and a Forest Station building at Rajamala. It is also proposed to make available facilities like coats, tables, chairs, camping accessories etc. for the Chattamunnar Forest Station and Rajamala outpost.

The existing and proposed official and residential buildings will be maintained as and when required. The basic amenities such as lighting, drinking water, etc will be improved in these buildings. A library in each station/section headquarters will also be developed.

6.4.1.7.3. Improvement of facilities in existing camping stations

All basic amenities including solar lighting system, solar fencing, wind energy mills field cots, drinking water, etc. will be provided for improving camping facilities. Camping accessories like sleeping bags, tents, cooking accessories, free rations and fuel will be provided for efficient protection of the areas.

6.4.1.7.3 Check posts

The tribal people from Edamalakudy, the estate labourers and staff of Rajamala and Pettymudy estates of KDHP Company and Government officials to Rajamala, Pettymudy and Edamalakudy pass through the 5th mile - Rajamala road that passed

through the tourism zone of the National Park. The check post located at Rajamala controls the vehicular and human movement in the route. A chain gates is proposed at 5th mile entrance of the Park.

The main trek path through the National Park starts at No.1 field of Vaguvarrai lower tea estate of KDHP Company. A chain gate is proposed at the entrance of the trek path from No. 1 field. Chain gate is also proposed in the entrance to the Lakkomkudy from Vaguvarrai tea estate.

6.4.1.7.4. Roads

The following roads are passing through Eravikulam National Park.

1. Rajamala check post- Last point of tourism zone - 2.00Km
2. Vaguvarrai tea estate - Lakkomkudy - 0.30 Km

The first road is black topped passing through the tourism zone and the second road is concrete road passing to the Lakkomkudy tribal settlement.

The following roads outside the National Park are also under the National Park.

1. PWD rest house – Forest IB, Munnar - 300m
2. Road to Office of Asst. Wildlife Warden, Rajamala - 400m
3. Road at the parking area in 5th mile - 250m

The road from 5th Mile to forest check post, Rajamala is owned by the KDHP company. But the road is used for the commutation of visitors to the Tourism Zone and back. This road is not under the control of the Park.

It is proposed to periodically maintain all the roads including the one from 5th Mile to forest check post Rajamala. New roads will be constructed based on necessity and observations.

6.4.1.7.5. Trekpaths

The entire movement in the National Park other than the tourism zone is on foot. The list of trek paths in Eravikulam National Park is given in the Table 23.

Table 23: List of trek paths in Eravikulam National Park

Sl. No.	Name	Distance (Km.)
1	Number One – Eravikulam	8.5
2	Eravikulam – Poovar	14.0
3	Selvamala – Pothumala	4.5
4	Eravikulam – Kolukkan	6.5
5	Selvamala - Kumarickal	3.5
6	Lakkomkudy – Kudimala	2.0
7	Chattamunnar OP – Thirumudy	6.0
8	Varattukulam – Kattumala	3.0
9	Meenthotty - Anamudy	5.0
10	Sambamala – Parappayar	4.5
11	Cheruthannipetty - Enippara	5.6
12	Pettimudy – Parappayar	5.0
13	Nooradikudy – Thattukanam	4.0
14	Nooradikudy – Chembikavala	5.0
15	Oralipara – Erumapetty	1.1
16	Chattamunnar – Log House	0.5
	Total	**78.7**

The trek paths in the core area the National Park should be taken up annually. Only clearing of vegetation should be done in the core area. Plugging of eroded areas with locally available materials, to prevent degradation and construction of Iron bridges across streams, in order to facilitate the movement during rainy season, can be done. Construction of new trek paths can be done in proposed additional area to facilitate movement.

The Wildlife Warden may review and study the necessity of maintaining important trek paths in the checklist mentioned above. As far as possible, the trek paths through the sholas may not be maintained.

6.4.1.7.6. Communication facilities

There are 2 Wireless Towers at Rajamala and Varattukulam in Eravikulam National Park. There are 3 main sets, 2 mobile sets and 13 wacky talkies. It is proposed to construct two wireless towers at Chattamunnar and Poovar to strengthen the communication with the field. The repair, maintenance and replacement of wireless, wacky talkies and communication equipment will be done periodically. If more infrastructures are needed, especially in the proposed additional area, to ensure

complete coverage of the PA, it can be done based on observations. All the field staff up to the Forest Guard are provided with SIM cards by the department. But the mobile phone coverage in the PA is limited. The dependable mode of communication will be the wireless.

The advanced methods of surveillance and monitoring include remote cameras, installation of Radio Frequency Identification (RFID) and monitoring through wireless or satellites. These techniques shall be explored and adopted for enhancing protection.

6.4.1.7.7. Vehicle

At present there are 2 Jeeps, 1 Mini bus and 3 Motor bikes in Eravikulam National Park for protection. One more jeep for the proposed Rajamala station, repair and maintenance of the existing vehicles and timely replacement of damaged vehicles are proposed.

6.4.1.7.8. Arms and ammunition

At present the Park is having 1 Revolver, 2nos-.303 Rifles, 5nos-.315 Rifles, 2 Air Guns and ammunition for the protection. It is proposed to repair and maintain the present arms and replace the damaged ones with quality products. Once the new station is created, the present arms will be shared and used in the stations.

6.4.1.7.9. Deployment of staff

The present staff strength is not sufficient to manage the PA as the ecotourism and ecodevelopment activities are on the rise. The inflow of visitors is on the rise and the challenges are increasing every year. Addition of more area as buffer zone will make the protection very difficult with the existing staff strength. Hence, additional staffs are proposed to deal with the situation. It is proposed to appoint one Deputy Ranger, three forester, sixteen forest guards, one driver and four permanent muthuvan watchers in addition to the existing staff strength for the new forest station at Rajalmala. The present strength of Chattamunnar Forest Station will be retained at Chattamunnar. All vacant positions should be filled up regularly. The number of staff and watchers required for effective patrolling and protection of PA are detailed in the following table.

Table 24 – Staff Strength (Proposed)

Designation	Sanctioned strength	Present strength	Proposed strength	Additional reqirement
Asst Wildlife Warden	1	1	1	0
Wildlife Assistant	1	Nil	1	0
Deputy Ranger	1	1	2	1
Forester	3	3	6	3
Fores Guards	16	12	32	16
Forest Watchers	8	7	12	4
LD Clerk	1	1	1	0
Peon	1	1	1	0
Driver	1	1	2	1

6.4.1.7.10. Capacity Building

Training will be given to patrolling staff in unarmed combat, survival skills, usage of fire arms, first aid, swimming, driving etc. with the assistance of Police. Training will also be given in the preparation of offence reports. Selected staff will be trained as 'handlers' as part of intelligence gathering. Police should be approached for giving short term trainings on intelligence gathering at regular intervals. Exposure training to staff in identification of plants and animals will be periodically provided to staff working in the PA as part of building their capacity.

In addition to the above, local persons from the tribal communities with aptitude will be identified and trained in basics of wildlife crime detection. Detailed training requirements are provided in Chapter 9.

6.4.1.7.11. Intelligence Gathering and Coordination

The Wildlife Warden, Assistant Wildlife warden and staff will develop liaison with NGOs, peoples' representatives, EDC members, Tribal Heads, interstate officers, Crime Control bureau officials, in sharing information. The informants may be paid suitably. The Wildlife Warden may move proposal for fixing the rewards to the informants depending on the type of crime and information. Legal support will be made available as required. The Wildlife Warden will review and monitor the implementation of the protection plan.

The Assistant Wildlife Warden will also collect credible information through confidential channels employing agents or sources. Confidential sources and agents will be identified, trained and placed in position to get confidential information.

A system of regular interaction with Tamil Nadu forest department and adjoining divisions and joint combing operation in the interstate boundary with Tamil Nadu Forest Department Staff and Marayoor and Munnar division staff is proposed for protection.

6.4.1.7.12. Joint Patrolling and Meetings

Joint patrolling and meetings of various levels of officials will be held with the adjoining forest divisions within Kerala and Tamil Nadu side. This will be ensured by the Wildlife Warden and Assistant Wildlife Warden.

Regular meeting with the stakeholders including KDHP Company will help in improving the relationship and protection activities in the Park.

6.4.1.7.13. Exchange of Crime Dossiers

The Wildlife Warden /DFOs will exchange the crime dossiers with police to update and review with District Superintendent of Police at least once in six months. The information will also be shared with adjacent Forest Divisions in Tamil Nadu to ensure effective protection.

6.4.1.7.14. Review of protection issues

Based on the threats and protection issues, threat perception and vulnerability of various regions in the PA will be developed.

6.4.1.7.15. Maintenance of Records

Registers will be maintained in the camping stations to monitor the movement of patrolling teams. The Deputy Rangers will inspect the registers once in 15 days, the Assistant Wildlife Warden once is a month and the Wildlife Warden once in 3 months to ensure effective protection. Following records will be maintained by Wildlife Warden, Assistant Wildlife Warden and Section staff.

- Records of vehicles passing through check posts.
- Offence Registers at Division/Range/Station.

- Arms and ammunition Register (Range/Station)
- Records of dossiers of habitual/ incorrigible offenders in the Range.
- Regular supervision schedule for ROs.
- Records of surprise visit by Senior Officers (Field Director, Project Tiger and Wildlife Warden).
- Staff in each Section will maintain
- Movement Register
- Wildlife sighting/daily monitoring/observation Register (Wildlife Journal)

6.4.1.7.16. Equipment / Field Gears

It is proposed to procure field equipment such as Tents, Compass, GPS, Binoculars, Range finder, Digital camera, Rain Gauge, Thermometer, Hygrometer, Camera trap, field kits, etc. for all camping stations manned. In addition the watchers will be provided with field uniform once a year during the plan period.

6.4.1.7.17. Staff welfare activities

The Wildlife Warden will have meetings with the staff and include the staff amenities items in the APO funded by Government of India. At present the Govt. of India is providing staff welfare inputs like residential accommodation for the children of frontline staff in nearby town/villages, supply of kerosene, medicine, field kit, mosquito net, torch, etc. The staff who excel in performances will be rewarded accordingly. Camp food shall be provided to staff and watchers stationed at interior camps. The possibility of receiving assistance from eminent NGOs for protection like supply of field kits, sleeping bags, tents, training, legal assistance and awareness programmes will be explored. The staff working in the National Park may be given Project Allowance as allowed in Project Tiger areas.

6.4.2. Theme Plan for Fire Protection

Forest fire is the single and most destructive factor that challenges the protection of the fragile shola grass lands eco system in Eravikulam National Park. Fire management plan will be prepared every year considering the history of fire incidents and prevailing situations. The existing roads, trek path, rivers etc. has to be considered

while preparing the fire management plan. In order to protect the Park from forest fire, the following strategies are proposed.

6.4.2.1. Fire Management Plans

Fire protection measures will be taken in accordance with approved fire management plans.

6.4.2.1.1. General guidelines for preparation and Implementation of Fire Management Plan

- Identify the cause and consequences of fire at PA level.
- Prioritize and map fire prone areas based on local knowledge.
- Prepare plans on annual basis.
- Provide adequate training to fire-fighting squad in fighting fires and self-defense.
- Develop infrastructure by procuring necessary equipment and materials required for fire protection based on annual assessment.
- Develop proper monitoring protocols.
- Ensure timely implementation of interventions.
- Maintain fire records at Range and Division level.
- Report incidences of fire to Wildlife Warden and Field Director for evaluation and further action.
- Document the results of fire protection measures taken annually.

6.4.2.2. Fire Management Strategies

Following are general guidelines for implementation of fire protection measures in Eravikulam National Park:

6.4.2.2.1 Fire lines

The Wildlife Warden will maintain the following fire lines in the fire prone areas.

Table 25: List of fire line in Eravikulam National Park

Sl. No.	Name of fire line	Length (Km)
1.	Rajamala Check Post- Kadalar	3.50
2.	Rajamala Check Post- Chandanakadavu	3.50
3.	Kolukkan- Cheruthannypetty	7.50
4.	Kolukkan- Erumapetty	7.00
5.	Cheruthannypetty- Sampamala	2.00
6.	Methurunda- Neerar	2.00
7.	Anamudy- Thookkupalam	8.50
8.	Chinnanamudy- Velavar Kovil	1.00
9.	Kudimala- Varattukulam	2.50
10.	Kattumala- Perumalmala	2.50
11.	Kattumala- Kumarickal	5.00
12.	Chinnapoovar- Kumarickal	2.50
13.	Podumala- Chinnapoovar	2.00
14.	Perumalamala- Undakkal	4.00
15.	Podumala –Neerar	3.50
16.	Vembanthanny – Nedumkurukku	4.00
17.	Rajamala Check Post- Meenthotty	7.50
18.	Enippara- Pettymudy	5.00
19.	Bheemanoda- Kallupalm	4.00
20.	Onamthery – Vattachidhambu	3.50
21.	Pallanadu- Thookkupalam	8.00
22.	Around MPCA area	8.50
23.	Meenthotty – Junda No.1	11.00
24.	Lakkomkudy- Pakkumarathery	4.00
25.	Kolukkan shed –Thattukanam	3.00
26.	Erumapetty – Methurunda	5.00
27.	Kolukkan shed – Poosanampara	4.00
28.	Kolukkan shed – Sambamala	8.00
	Total	**132.50 km**

In addition fire lines will be created around shola forests to protect the sholas and regeneration of Kurinji species in case of necessity. This needs to be done in years immediately after the massive flowering of Kurinji in the sholas to protect the flowering

and seeds and in subsequent years, the regeneration from fire. This is also important as massive quantity of fuel wood will be available in the shoals in years following the massive flowering of Kurinji. All the fire incidents will be properly recorded for future management. New fire lines will be approved as per necessity by the Wildlife Warden. In case of addition of more area to the National Park, fire lines will be created in these areas.

The following rules will be followed in creating the fire lines in the Park.

- No scrapping should be done in the grasslands and core areas of the park for preparation of fire lines.
- No fire line should be taken on the edge of the shola forest. The fire line around the shola should be taken giving reasonable space of 10 meters for the extension of shola forest.
- Clearing and maintenance of fire lines should be carried out as per the FSR and prescribed in the section 6.4.2.2.1.
- Scraping of grasses in the grasslands and around shola patches as fire protection measures should be avoided. The grass will be cut and burnt without scraping.
- Preparation and implementation of fire management in association with the EDC.
- Controlled / cool burning of grasslands to help in fire protection and making available palatable grass for herbivores as per protocol.

6.4.2.2.2. Camps for fire-fighting gangs

- The existing protection camps at Poovar, Varattukulam, Eravikulam, Kolukkan, Anamudy, Meenthotty and Pettymudy will be used for the camping of fire watchers and fire protection committee members during fire season. In addition, temporary structures will be constructed at Mesthirikattu, Pakkumaratherry, Podumala and Kumarickal to detect and prevent the spread of fire from the human habitation around the National Park. In case of addition of new areas to the Park, temporary structures can be constructed in the area during fire season.

- A group of watchers will be maintained in Rajamala tourism zone in order to prevent fire incidents in this highly sensitive area, which is frequented by

vehicles and local people to Rajamala, Pettymudy and Edamalakkudy. They will be camping throughout in the temporary shed in the Rajamala tourism zone.

- The Wildlife Warden will ensure the engagement of fire gangs from the fringe area people in sensitive areas around the Park. Priority will be given to provide livelihood and employment to resource dependent local communities.

6.4.2.2.3. Fire watch towers

The existing fire watch tower at Rajamala will be made use of during fire season. The fires watch tower will be maintained periodically.

6.4.2.2.4. Controlled pre-burning

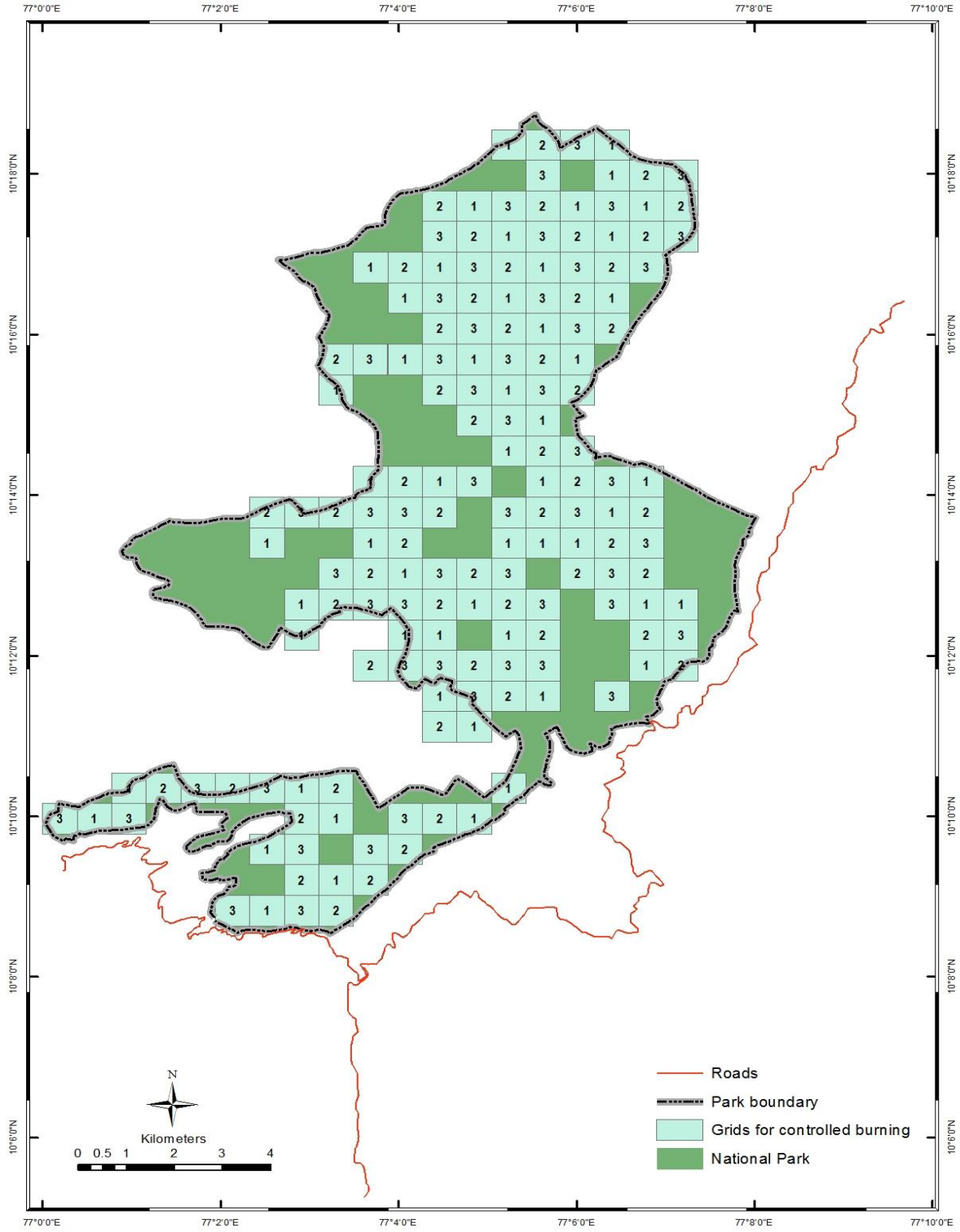
Controlled burning is the most important activity in connection with the fire management in the Park. Early controlled burning of grass land is carried out to facilitate growth of fresh grass to make available nutritious food for the young tahr calves and other herbivores during dry season and also to help in fire protection. The aim is to create a mosaic of burnt and unburnt patches. This helps to prevent the animals from venturing outside the Park in search of burnt grass and getting poached. This also helps in avoiding severe and irreversible damage due to late fires. Late fires accompanied by strong winds can cause irreversible damage to the grasslands. No burning should be done in areas like MPCA and other ecologically important areas. Controlled burning needs expertise, extra care and attention. The Muthuvans are experts in this activity. While doing, the following guidelines have to be strictly adhered to:

- Burning should be completed by the end of January itself when the grass is still green. Pre flushing of birds and small animals to be done.
- As far as possible the activity has to be carried out by the Muthuuvans.
- Burning has to be carried out in areas utilized by tahr and other herbivores, around sholas in the unburnt areas, along MPCA boundary and the grassy stretches on the Park boundary.
- Fire will be set only after taking fire lines around the prescribed burning regime set apart to prevent spreading of fire to surrounding forests.

- Burning has to be carried out early in the morning and late in the evening only. Night burning will cause damage to insects and birds that would otherwise move away.
- Before burning, target area should be flushed to drive out animals and birds. Simultaneous setting of fires on all sides of the block should be avoided.
- Fire should be set opposite to the wind direction to control speed/ velocity and intensity.
- On hill slopes, fire is to be set from top down direction for better control.
- Controlled burning should be carried out only in the presence of staff.
- Necessary fire-fighting equipments should be procured in advance. Staff and labourers involved for burning should be trained in using fire-fighting instruments.
- The area burnt has to be marked on a large scale map, GPS documented and kept as permanent record. The area has to be monitored regularly, right from the date of burning.
- Burning should not be done in areas where the Neelakurinji has come into bloom in the previous year.
- When burning is carried out around a shola, it is always ideal not to burn the tall grasses found on the edge of the shola that may provide micro environment for shola regeneration. Outside this edge, a 10m wide belt can be burned during the first year. Next year burning should be further outside this strip.
- If small patch of grassland is interspersed between two sholas, this patch should not be burnt because succession may bring back sholas at such sites.

In order to have a mosaic of burnt and unburnt areas, the grassland areas are divided into 50 ha grids and controlled burning regime is proposed (Map. 14). The grids with '1' will be burnt during the first year and '2' and '3' will be burnt during the subsequent years on rotation basis. Hence the entire grassland will be practiced with controlled burning in rotations of 3 years. Since grazing pressure is more in the burnt areas, the extent of grassland to be burnt should be large enough to sustain the grazing

Map. 14 : Proposed controlled burning regime



pressure. The size can vary from 5 ha to 50 ha depending upon the animal density, extend of grasslands, and fire prone nature of the area. While burning the grasslands in the grids the natural features such as streams, nullahs, roads, trek paths, etc will be identified for delineating the boundary for burning. The grass cut while clearing lines is to be burnt within the block. Experiment with mechanized precutting to cool burning, repeated mechanized cutting and natural decay in critical areas such as water sources, bird ground nesting areas etc.This system will act as a guide during the first year of the plan period and necessary changes can be made during the subsequent years.

6.4.2.2.5. Deploying fire-gangs

Fire gangs will be engaged throughout the season for efficient fire protection activities. In addition to the existing daily waged mazdoors and EDC members, a minimum of 10 members preferably from the tribal and local dependents will be engaged during the fire season every year. The number of persons engaged for this purpose will be decided based on the intensity of fire and severity of drought. In case of necessity fire gangs may be deployed in April – May depending on the intensity of drought.

6.4.2.2.6. Participatory Fire Management

Participatory fire management shall be based on the guidelines circulated by the Principal Chief Conservator of Forests in Circular No. E&TW1-2002/08 dated 14.11.2008 (Appendix 7.2).

The members of Lakkomkudy, Parappayar, Parakkudy, Nooradykudy and Watchers EDC will be involved in participatory fire management. A micro plan will be prepared for each EDC detailing the extent of area, people involved, benefit sharing etc in every fire season. The area for fire management will be identified and allotted to the EDC based on its geographic location. Funds for the prescribed operations will be placed in the EDC account on the basis of a MoU. Participatory Fire Management Plan will include the causes/sources of fire, preventive measures and conditions specified in line with the circular issued by KFD. The plan will be signed by a member of the EDC subgroup, President and Ex-Officio Secretary/Staff in-charge of the Section. Plan will be approved by the Range Officer. People along the boundary will also be engaged as fire

gangs in vulnerable areas. The members of professional EDCs may be engaged during fire season to provide firsthand information for them on the Park and its management.

6.4.2.3. Awareness and Training

Awareness campaigns are essential for preventing fire. Wildlife Warden will arrange awareness and training for the staff, EDC members and local dependent before the fire season every year. Awareness campaigns may be arranged for fringe area people, tribal settlements, tea estates, school, colleges, taxi drivers and people's representatives on the impact of fires on forests. This may be done by mass involvement of people in procession, talks, information display boards, banners, street play etc. EDC-based awareness campaigns highlighting fire preventive and containment measures among children and youth in the localities will be held during the fire season. Creative programmes in this regard will also be developed.

6.4.2.4 Training programmes

Training programmes for staff, watchers and other members of the community involved in fire protection will be organized.

6.4.2.4. Fire watchtowers and communication network

The present infrastructure and communication facilities will be made use of in fire protection to prevent the fire incidents and to mobilize additional forces in case of necessity.

6.4.2.5. Firefighting equipment

The equipments like gum boots, fire resistant suit etc may be procured and made available to the fire management groups.

The Wildlife Warden may review the fire plan every year after the fire season. The gap in fire protection may be identified and suitable proposals may be made in the ensuing year to make Park totally free from fire.

6.4.2.7. Impact Monitoring

Incidents of fire will be documented and reported promptly to the Field Director and Chief Wildlife Warden. Controlled pre-burning areas will be maped and GPS documented to assess their impact and streamline future activities.

The Wildlife Warden will review the fire plan every year after the fire season. The gap in fire protection will be identified and suitable proposals may be made in the ensuing year to make the Park totally fire free.

6.4.3. Theme Plan for Watershed and habitat management

6.4.3.1. Watershed management

Eravikulam National Park receives sufficient rainfall during South-West and North -East monsoons. A number of streams and natural water bodies are available throughout the National Park. Plenty of water is available for the animals throughout the year. Activities like creation water holes and gully plugging would damage several endangered and endemic flora and fauna in and around streams and sholas. Activities like construction of check dams, creation of water holes, gully plugging, retaining structures preferably vegetative barriers, etc will be made based on field observation. To know the distribution of water resources and to fulfill the needs of local people, the following strategy and activities are proposed:

- Mapping of water sources – water holes, check dams, streams and other natural sources with seasonality.
- Preparation of drainage map and vegetation map.

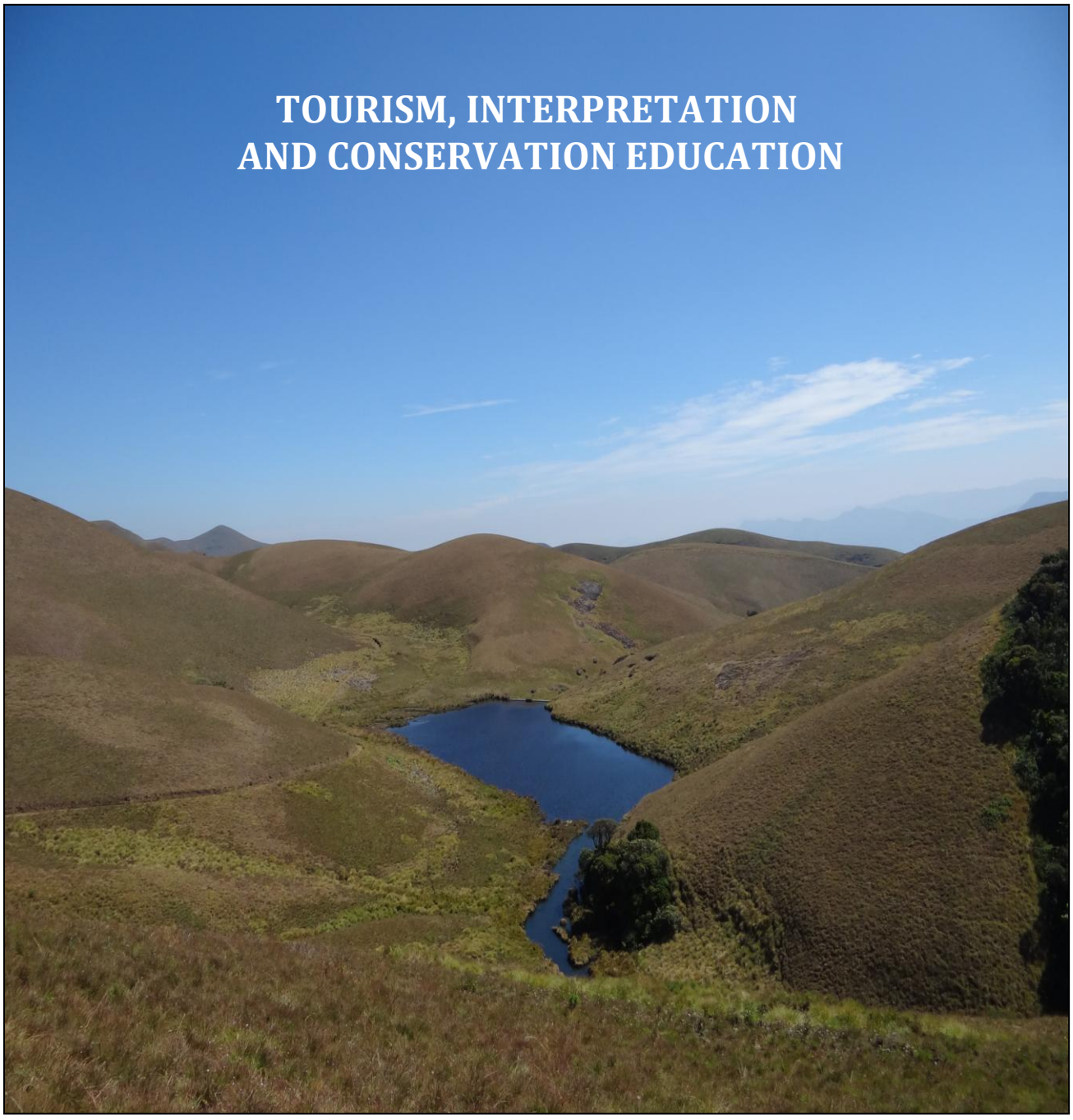
6.4.3.2 Habitat Management

As part of habitat management in the National Park following prescription will be followed during the plan period.

- Monitoring of ingressive exotic species along the boundaries.
- Eradication of exotic weeds along the boundaries and areas proposed to be added by cutting and uprooting repeatedly to prevent the spread into the National Park, if possible with the help of EDCs and local communities.

- Bring the plantations of exotic species along the boundary of the National Park belonging to Munnar and Marayoor divisions into natural status in a phased manner as per the working plan of the respective divisions.
- Future planting and coppice maintenance of exotic species along the boundary of the Park in Munnar and Marayur divisions may be streamlined for wildlife management after discussion and dialogue with the managers of adjoining forest divisions.
- Eradication of Eupatorium on experimental basis by establishing permanent plots and monitor the changes.
- Controlling the erosion and repair damaged trek paths and land slips in grasslands and shola forests as needed.
- Removal of exotic species in areas belonging to KDHP Company, especially adjoining Tourism Zone, in consultation with the company to facilitate the regeneration of natural forests.

CHAPTER 7



Eravikulam National Park has been an important tourist destination in Kerala. From a few hundreds during the end of 1980s, the number of visitors has gone up to 5,00,000 which includes Indians as well as foreigners.

Visitor management system was initiated in the Park in 1996. Since then, the visitors were controlled at Rajamala Forest Check Post, from where they were allowed to go by vehicle only up to the interpretation center, "Story of the Park" and then on foot along the main road. The main attraction of area was the near assured sighting of Tahr at touchable distance.

Most of the visitors were picnickers and not supportive of conservation. Daily waged watchers kept constant vigil to dissuade visitors from littering, trespassing, disturbing animals, plucking flowers, shouting etc.

The gregarious flowering of Kurinji (*Strobilanthus kunthianum*) in 1994, which gained wide publicity, was the main boost for increasing the visitors to the National Park. The visitor management system was continued up to 2006. In anticipation of the massive flowering of Kurinji in 2006, the present visitor management system was introduced with the help of local depended communities. All the private vehicles which were earlier allowed to carry the visitors up to the tourism and awareness zone were stopped at 5th Mile in the Munnar – Udumalpet road.

Six mini buses were purchased for the transportation of visitors and two new professional EDCs, the Drivers EDC and Venders EDC, were formed with the help of local depended communities. Ticketing counter was started at 5th Mile and visitors are transported in the six buses owned and operated by the EDCs from 5th mile to the tourism and awareness zone, which is 4km away from the ticketing counter. The visitors are allowed to walk 1 km along the tarred road in the tourism and awareness zone during which they could see the Nilgiri tahr, enjoy the picturesque landscape and shola grassland eco system.

The interpretation centre, "Story of the Park" provides information on the Park, its importance and biodiversity value. Facilities like parking area, cafeteria, enquiry counter, toilet etc are operated by the EDC members at 5th Mile for the amenities of the visitors. Facilities like eco-shop, amenity center, toilet etc are managed, in addition to

the interpretation centre, in the tourism and awareness zone by the EDC members. The members of 'Drivers EDC' operate the buses owned by the EDCs. The members of 'Watchers EDC' and 'Tribal EDCs' are engaged in the tourism and awareness zone to control the visitors and to keep area free from litter. They members of Driver and Watchers EDC act as guides to bridge the information gap.

Lakkom water fall, a picturesque waterfall in the tributary to river Pambar, which originate from Eravikulam National Park, was opened to the visitors in 2006. This is managed by the Lakkomkudy EDC, one of the four tribal EDCs under the Park.

More than one lakh people visit the area in a year. User fee is collected for entry into the area. Facilities like eco shop, toilets, locker, short trekking and camping programmes etc are operated by the EDC members for the visitor's. Massive flow of visitors during peak season and the increasing number of street vendors (unauthorized occupiers of the PWD road) have been a problem here. Some visitors even abuse the area. The waste generated is very high and these issues need to be tackled with the help of local dependents, Grama Panchayath, NGOs and Government bodies to keep the area free from litter and ecofriendly.

Nature awareness programmes are conducted for the students, clubs, and other interested group is the main activity related to conservation education in the Eravikulam National Park. The facilities available for the programme are:

1. Nature Education Center, Munnar
2. Information Center, Munnar
3. 'Story of the Park' - an Interpretation Centre, Rajamala

In addition to the above routine awareness programmes are arranged in connection with the wildlife week, fire season etc to create awareness among local dependent communities and also to help in information dissemination. All The activities including the nature education programmes are managed with the help of EDCs of local dependents.

7.1. Strategies for environmental conservation awareness

1. Conduct nature awareness camps for schools, colleges, nature clubs, NGOs and other interested groups.

2. Give priority to the Education Institutions and organization around the National Park in awareness programmes.
3. Device and conduct awareness programmes for target group such as tour operator, guides, taxi drivers, Divisional Advisory Committee of the tea estates, DTPC etc to create awareness on nature conservation and also to help in visitor management.
4. Upgrade the existing information centre "Story of the Park" at Rajamala and information centre at Munnar.
5. Develop education and awareness materials like leaflets, brochures, pamphlets, posters etc for various target groups.
6. Organise extension programmes in the tribal settlements, tea estates and local area with the help of EDCs, VSS, NGOs and estate management.
7. Impart training for the staff and EDC members engaged in awareness programmes.
8. Make available the service of Wildlife Assistant / Deputy Director for visitor management and conservation education.
9. Appoint Nature Education Officer and wildlife educationist on contract basis through FDA.
10. Engage trained resource persons to help information dissemination and visitor management.
11. Making available facilities like LCDs, computers, sound systems etc and maintenance of existing facilities.
12. Maintenance of existing facilities of nature education and interpretation.
13. Conduct study tour for staff and EDC members to other PAs.
14. Develop information centre, nature education centre, orientation centre, interpretation centre, conference hall, library, toilet block, landscaping, parking, etc in a centralized location (prerably at 5^{th} mile) by availing land from HRWEPA.

7.2. Facilitating Nature-based regulated tourism

The following ecotourism programmes are being implemented in Eravikulam National Park:

1. Visit to Rajamala tourism and awareness zone.
2. Visit to Lakkom water falls
3. Trekking at Rajamala and trekking and camping at Lakkom water fall.

As part of the regulated ecotourism, the following activities shall be taken up during the plan period.

i. Engaging EDC members of local dependent communities for managing the ecotourism programmes.

ii. Prepare implement visitor management plan for tourism and awareness zone, Lakkom water fall and other ecotourism programmes.

iii. Prepare site specific micro plans for ecotourism packages for the buffer zone, eco development zone and proposed additional area with base line information for ensuring sustainable livelihood for local dependents and conduct annual impact assessment through participatory process.

iv. Monitor the implementation and revise the visitor management plan once in 2 years.

v. Develop and implement interpretation packages as part of visitor management plan for all ecotourism programmes.

vi. Introduce Park interpretation movie at 5th mile.

vii. Conduct periodic impact assessment of tourism areas once in 5 years with the help of scientific community.

viii. Develop and implement system for collection of feedback from visitors to the Park with the help of EDC members and volunteers.

ix. Limit ticketing time to the tourism zone to 8 am – 4pm.

x. Redefine closure period based on studies.

xi. Development of additional parking area at 5th mile and Lakkom for visitor's amenity.

xii. Create and maintain of basic amenities to visitors in the tourism areas at Rajamala, 5th mile, Lakkom water fall and for ecotourism programmes based on approved microplan or visitor management plan.

xiii. Online booking for the visitors to Eravikulam National Park.

xiv. Commence alternate ticket station at Munnar / Marayoor to help the visitors.

xv. Ensure security by installing metal detector and other facilities at 5th mile Rajamala and Lakkom water falls.

xvi. Explore the possibility of imposing fine for littering, plucking of flowers, teasing of animals etc. in the Park based on Government orders.

xvii. Capacity building and training to EDC members and staff on human behaviour, identification of flora and fauna, visitor management, interpretation of Park values etc.

xviii. Conduct carrying capacity study and regulate the visitors to the tourism and awareness zone and Lakkom waterfalls and other eco-tourism programmes.

xix. Upgrade the existing web site of the National Park for information dissemination.

xx. Explore the possibility of rolling back the entrance fee to the PA for ecotourism and Park management activities.

xxi. Develop visitor management strategy to deal with the Kurinji flowering in 2018. The possibility of diverting the visitors to Kurunjimala Sanctuary in Wildlife Division to be explored.

xxii. Conduct review/ seminar / workshop annually on tourism programmes and publish the annual report through FDA.

xxiii. Explore the possibility of imposing eco development surcharge for ecotourism programme.

xxiv. Design and implement strategies to reduce interaction of Rajamala tahr with the visitors.

xxv. Develop theme based information displays in the tourism and awareness zone, 5th mile, Lakkom waterfalls and other strategic locations.

xxvi. Tackle the issue of private shops, parking and waste management at 5th mile Lakkom water fall and other ecotourism centers with the help of EDCs/ RDO / PWD / Line Departments / Police / Media / NGOs etc.

xxvii. Conduct meeting with line departments once in 6 months to help in visitor management activities.

xxviii. Preparation and timely revision of the micro plans for the EDCs and visitor management plans.

xxix. No vehicle other than those operated by the EDCs to be used for the transportation of visitors to the the Park.

xxx. Control and monitor the vehicular traffic through the tourism and awareness zone especially during night hours. The vehicular traffic from 10 pm to 6 am should be strictly controlled and speed limited to 30 km/ hour or as per prevailing rules from time to time.

xxxi. If vehicular transport is to be started from 5th Mile to Edamalakudy through tourism zone it will be started by the FDA with adequate checking facility.

xxxii. Make available more information to the visitors on the Park, Tahr, Kurinji etc to visitors by making available literatures and publications by establishing a museum in the tourism zone.

xxxiii. Closure of the park for a period by two months between January and March depending on the beginning of the calving period. A week's notice will be given by the Wildlife Warden before closure.

xxxiv. The revenue generated from ecotourism and visitor management will be recycled to the FDA for Park management and village ecodevelopment.

7.3. New ecotourism proposals

The Park manager will initiate the following proposals during the plan period.

i. Conducted tour package from Munnar to the adjoining landscapes. For this the Wildlife Warden will purchase a bus. The conducted tour will be organized through FDA, Anamudi.

ii. Protection and education oriented limited trekking, trekking and camping programmes to the buffer areas and proposed additional area based on approved microplans.

CHAPTER 8

ECODEVELOPMENT

The major problem related to people PA interface is making available sustainable livelihood for the depend communities, especially the tribal people at Lakkomkudy, Parappayar, Parakkudy and Nooradykudy. There is marginal collection of firewood, by the people from Lakkomkudy settlement, Chattamunnar occupation and from the Tea Estates along the boundaries at Chattamunnar, Coffee Store and Pallanad. Marginal grazing (96 cattles) also occurs at Lakkomkudy, Pallanadu, Coffee Store and Chattamunnar areas. NWFP, mainly honey, is collected by people from Lakkomkudy, Parappayar, Parakkudy, Nooradykudy and settlements along eastern boundary in Koodakad proposed reserve. The extent of NWFP collection is not yet studied and impact not understood. There are many constraints for the people living in these tribal settlements. The Lakkomkudy, having limited area under their possession, lacks livelihood opportunities. They are mainly dependent on marginal agriculture in the settlement and the employment in the Park for their sustenance. They need to be provided with alternative income generation opportunities. The people from Parappayar, Parakkudy and Nooradykudy are practically cut away from the outside world for want of infrastructure facilities. They depend on agriculture for their sustenance. The agricultural practices in these settlements need to be maintained as ecologically viable, marketing opportunity should be made available and the middle man exploitation stopped. They should be provided with more opportunities in visitor management and ecotourism to generate employment opportunities. In order to enhance the cooperation from the local people at Chattamunnar, Coffee Store and Pallanadu and the tribal settlements along the eastern boundary in the Koodakkadu proposed reserve constant interaction, awareness programme etc to be conducted along with exploring opportunities for positives intervention in their socio economic status, in order to gain their confidence thus helping in the management of the Park. The possibility for the formation of new EDCs/ work in association with the present VSSs in these areas to be explored during the plan period.

The professional EDCs in Eravikulam National Park, the main stay in the visitor management, are able to successfully tackle the visitor flow to the tourism zone of Eravikulam National Park. These EDCs consist of members of local community, especially from the tea estates, surrounding the National Park. As the members of Drivers EDC and Vendors EDC were not directly dependent on the park for their

sustenance, there is a gap in the conservation initiative on the part of members of these EDCs. They have to be more integrated in the conservation initiatives in the Park by constant interaction, trainings and awareness programmes. Being widely distributed, they are not in a position to avail common beneficial programmes like the tribal settlement. Hence, in order to ensure their welfare, appropriate programmes will be designed in consultation with the members, which will ensure the socio economic progress of the members and families of the professional EDCs.

All the people surrounding the National Park including the tribal settlements and the tea estates at Chattamunnar, Vaguvarai lower and Vaguvarai top depend on streams originating from the Park for their irrigation and drinking water needs. For this they have constructed some structures within the Park before the declaration of the Park. These structures need periodic maintenance. The possibility of repairing them through FDA/EDC to be explored.

The eco development need of the people is to be studied with the help of experts. Help of Government agencies like Tribal department, Agriculture department, Agriculture University, education and research institution and NGOs is to be made available in order to fulfill the eco development needs and thus achieving Park management objectives.

8.1. Strategies

To strengthen the People-PA interface, the following strategies and activities are proposed:

1. Improve people-PA relationship through eco development.
2. Strengthen the ecodevelopment initiatives and form a MIST (microplanning Implementation Support Team)
3. Engage ecologist and sociologist under FDA
4. Facilitate Forest Rights Settlement including community rights in all the settlements.
5. Facilitate certification and organic farming in the tribal settlements.
6. Utilise all available funds for ecodevelopment and Park Welfare Fund.

7. Develop and improve inter wing and inter department co-operation.

8.2. Activities

1. Identify the eco development needs through micro planning and studies.
2. Strengthen the Eco development activities with the help of EDCs.
3. Make available sustainable livelihood to people in tribal settlements by exploring available opportunities in visitor management, ecotourism programmes and alternate income generation opportunities, if needed in association with line departments/FDA.
4. Make available educational, social and medical assistance to tribal EDCs by making available infrastructure, conducting medical camps, providing financial assistances etc with the help of line departments/FDA.
5. Enhance the infrastructure facilities in the tribal settlement especially Parappayarkudy, Parakkudy and Nooradykudy in order to improve their socio economic status through FDA / line departments.
6. Assist the tribal people in enhancing the income from agriculture, NWFP collection etc by helping in processing and marketing of the produce.
7. Identify and implement schemes for improving the health, socio economic and educational status in the tribal settlements, professional EDC and family of professional EDCs.
8. Development of appropriate barriers to prevent wildlife entering the farmlands (elephant proof trench, solar power fence etc) at Lakkomkudy, Parappayarkudy, Parakkudy, Nooradykudy etc.
9. Timely assessment of wildlife damages and payment of compensation.
10. Institution of crop insurance.
11. Settle the rights including community rights in settlements as per Forest Rights Act.
12. Capacity enhancement of EDCs through trainings.
13. Conduct socio economic survey of the dependent communities periodically.

14. Implementation of Eco development programmes in fringe areas in association with Munnar and Marayoor FDAs.
15. Seek funds from various sources (Local bodies / other line departments/ Govt. of India) through FDA for eco development programme.
16. Initiate steps for the organic certification of crops produced in the tribal settlements.
17. Imparting training to staff on micro planning, eco development concept, ecotourism etc including visit to other protected areas in the State and outside.
18. Awareness creation on human-wildlife conflict.
19. Preparation and timely revision of micro plans of the EDCs.
20. Integrate local people from Rajamala, Pettymudy and tribal settlements in Edamalakudy to device methodologies for tackling the vehicular and human movement through the Tourism and awareness zone without affecting the Tahr population.
21. Facilitate the use of potable and irrigation water for local dependents, tea estates and tribal people. Explore possibility of shifting them to outside the Park. If needed, maintain the same through EDCs/FDA.
22. Explore the possibility of marketing the tribal produces through the outlets in Eravikulam National Park.
23. Ensure the participation of Park management in planning and implementation of projects by the line departments in the eco development zone and proposed additional area.

8.3. Strategies for specific issues

8.3.1. Grazing

- Study and monitor the number of cattle, extent and impact of grazing in Park areas.
- Reduce number of cattle by providing alternate livelihood and encouraging stall feeding.
- Ensure vaccination of cattle annually.

- Enhance the cooperation with line departments in regulating animal husbandry activities around the Park.

8.3.2. Firewood collection

- Study extent and impact of firewood collection.
- Encourage fuel wood cultivation of indigenous species in the tribal settlements and areas outside the Park to meet the fuel requirement.
- Providing energy saving devices, supply of gas connection on subsidized rate by the department and explore the possibility of alternate fuel sources.

8.3.3. NWFP collection

- Study extent and impact of NWFP collection.
- Define zone of collection through participatory process and frame access rules for sustainable/ scientific collection
- Provide training to EDC members on scientific/ sustainable collection of NWFP resources and value addition
- Monitor the resource dependency periodically.
- Propose alternate livelihood to prevent unscientific/ unsustainable collection of NWFP.
- Encourage regeneration of NWFP and medicinal plant species placed in RED Data Book
- Promote planting of selected endemic NWFP species in the homesteads and in the impact zone (ecodevelopment zone) in the surrounding area of tribal settlements.

8.3.4. Strategies for alternate income to dependent community

- Explore the potential of ecotourism programmes to improve the employment generation for the local dependent communities.
- Explore the possibility of enhancing opportunities in visitor management activities to create more employment for the local dependents.

- Explore the possibility of capacity building for the dependent people especially tribals in production and marketing of consumable handicrafts etc through the outlets in the Park.

CHAPTER 9

Although the Park was declared in the year 1978 not much study has been done regarding various aspects of the Park and the Tahr population. The following research, monitoring and training programmes are proposed during the plan period.

9.1. Research

a) Scientific study and documentation including the field status of RET species in the Park including *Roachestes replendens* and dissemination of information.

b) Conduct studies on population dynamics, movement pattern, natality, mortality, habitat requirements and breeding biology of Nilgiri Tahr.

c) Non-invasive genetic diversity study of tahr population in Eravikulam National Park and adjoining areas.

d) Participatory study to identify and demarcate zone of influence in the Park like grazing, fire wood collection and NWFP collection.

e) Conduct study and evolve scientific / sustainable method for NWFP collection.

f) Study the extent and impact of wildlife damage, crops involved and device methods for prevention.

g) Study the socio economic and ecological impact of tourism over the entire landscape with the Park as the focus.

h) Study the intrusion, regeneration and extent of exotics species around the Park and device methods for its phased removal.

i) Study and survey the important areas in the adjoining Forest Divisions to be added to the National Park as buffer zone.

j) Conduct study on the ecology and eco system dynamics of shola grass lands.

k) Conduct nutritional studies on food species of tahr in different season.

l) Study the impact of tea plantations and pesticides on the Park.

m) Identification and documentation of high altitude grass, herb and shrub species.

n) Conduct study on the elusive cat “Pohayan”

o) Study the effect of fire on shola grass land eco system.

p) Study the effect of controlled burning by monitoring the burnt and unburnt areas including soil health.

q) Study and document traditional knowledge of indigenous communities and historic materials about the park.

r) Conduct study on wildlife and their habitat in Eravikulam National Park.

s) Study the shola ecology and plant animal interaction.

9.2. Monitoring

a) Develop protocol for monitoring health of animals, especially the tahr in the tourism and awareness zone, and monitoring health of the animals as per protocol.

b) Monitor resource dependency of local people once in 5 years.

c) Monitoring of weather parameters by installing weather stations at Rajamala, Eravikulam and Poovar.

d) Monitor the vehicular movement through the tourism zone to assess the impact on environment and tahr population in the area.

e) Monitoring of visitors to tourism zone.

f) Develop protocol for scientific monitoring of the effects of controlled burning and document as per protocol.

g) Maintain journal of soil health in burned and unburned areas.

h) Conduct annual tahr census as per prescription and if possible by exploring new methods.

i) Conduct animal, butterflies and bird census once in 5 years.

j) Promote conservation activities of NGOs like HRWEPA in the estates for Monitoring wildlife.

9.3. Training

a) Training for staff and EDC members on intelligence gathering, identifying wildlife article, collection and handling of biological materials, identification of flora and fauna, wildlife census techniques, animal health monitoring, weapon handling, modern fire fighting methods, participatory forest management, unarmed combat, acts and rules etc.

b) Provide training to EDC members on scientific/ sustainable collection of NWFP and value addition

c) Training for staff and EDC members in rescue operations.

d) Maintain record of all training with relevant details.

e) Train EDC members on microplanning of PFM accounting and management.

9.4. Vaccination and health monitoring

Annual and periodic monitoring of animals through direct sightings and checking droppings shall be carried out with the support of veterinary officers and researchers and effective follow up steps will be persued on emergencies.

The Park is surrounded by tea estates in its southern boundary. There is one tribal settlement inside the Park namely Lakkomkudy. A totals of 96 cattle are their immediate boundary and inside the National Park. In addition there are a number of cattle in the tea estates and also in Koodakkad Proposed Reserve adjoining the Park. The monitoring if these cattle and periodic vaccination in association with the local vetinary department, tea estate management and EDC / VSS will be done to detect and prevent the spread of diseases from the cattle to wild life. The fringe cattle shall be monitored and periodically vaccinated for contagious diseases.

9.5. Weather and vegetation monitoring

Study (Ravindranath N.H et al., 2006) predicts that the forest eco system will be badly affected by the process of global warming in the years to come. Hence it is highly necessary that the weather data in Eravikulam National Park is collected and analysed to know the changes in climatic factors and correlate with the vegetation changes. The following activities are proposed in this regard:

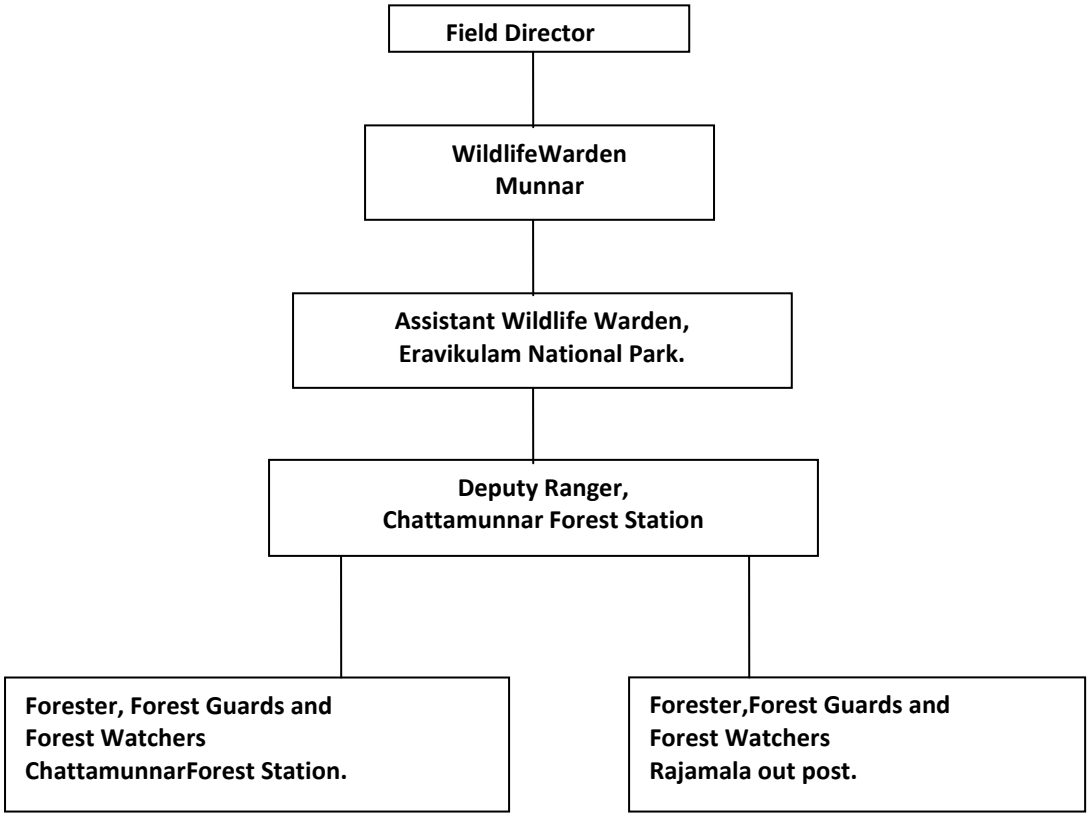
- Installation of additional automated meteorological stations for regular recording of weather data at Rajamala, Eravikulam and Poovar.
- Establishment of permanent plots and long-term monitoring of the vegetation changes in the sholas and grasslands.

CHAPTER 10

ORGANISATION AND ADMINISTRATION

10.1. Structure

The organizational structure of the Park is as shown below:



10.2. Responsibilities

10.2.1. The Eravikulam National Park will be headed by the Wildlife Warden who will have overall responsibility for the implementation of the Management Plan. The Wildlife Warden will develop a pocket field guide with schedule of operations for the implementation of management plan and supply it to Assistant Wildlife Warden, Deputy Ranger and staff.

10.2.2. The Wildlife Warden will make arrangements to supply the following control forms (Annexure 11) to the Assistant Wildlife Warden, Deputy Ranger and Foresters and compile the information about the Park.

10.2.3. The Wildlife Warden, Munnar shall prepare Annual Plan of Operations and Schedule of Operations every year in the first quarter of each year for the subsequent financial year.

10.2.4. The Wildlife Warden shall not deviate from the Management Plan prescriptions without the prior permission in writing of the Chief Wildlife Warden.

10.2.5. The Wildlife Warden shall also take action for reviewing the Management Plan after five years

CHAPTER 11

THE BUDGET

SL:No	Para of Management Plan	Activity	Financial Requirement(Lakhs)										Total
			1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	
1.	6.1.1	Survey of boundaries and construction of cairns/maintenance	3.00	3.00	3.50	3.50	4.00	0.50	0.50	0.50	0.50	0.50	**19.50**
2.	6.1.2	Survey and addition of important habitats around the park	3.00	3.00	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**9.60**
3.	6.3.1	Controlled early burning.	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00	9.00	**70.00**
4.	6.3.1	Restoration damaged and trek paths and grass lands.	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
5.	6.4.1	Meeting with stakeholders	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
6.	6.4.1	Clearance of Interstate boundary	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
7.	6.4.1.1	Salary of Range Officer, Deputy Ranger, 3 Forester & 16 Forest Guards and 8 Forest Watchers.	80.00	80.00	88.00	88.00	96.00	96.00	104.00	104.00	112.00	112.00	**960.00**
8.	6.4.1.1	Overhead and office expenses	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
9.	6.4.1.2	Construction of quarters at Chattamunnar and Rajamala.	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**20.00**
10.	6.4.1.2	Building maintenance	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00	9.00	**70.00**
11.	6.4.1.2	Maintenance of Offices, IB, Dormitory etc.	15.00	15.00	18.00	18.00	21.00	21.00	24.00	24.00	27.00	27.00	**210.00**
12.	6.4.1.3	Ganja raids	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
13.	6.4.1.3	Conducting protection camps by supplying field ration, amenities etc.	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00	9.00	**70.00**
14.	6.4.1.4	House rent for residential accommodation for children's of frontline staff	0.20	0.20	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	**3.00**
15.	6.4.1.4	Supply of kerosene, field kit, mosquito net, torches etc to staff	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
16.	6.4.1.4	Construction of camp sheds at Podumala- chinnapoovar and Parakkudy and Junda No I	0.00	5.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	**15.00**
17.	6.4.1.5	Maintenance of camps sheds in	2.00	2.00	2.40	2.40	2.80	2.80	3.20	3.20	3.60	3.60	**28.00**

		Eravikulam National Park.											
18.	6.4.1.5	Engaging protection mazdoor.	17.50	17.50	21.00	21.00	24.50	24.50	28.00	28.00	31.50	31.50	**245.00**
19.	6.4.1.5	Purchase and replacement of arms and ammunition	1.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	**2.50**
20.	6.4.1.5	Purchase and maintenance of wireless, walkie-talkie etc	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	0.45	0.45	**3.50**
21.	6.4.1.5	Construction of wireless tower at Chattamunnar and Poovar	1.50	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.50**
22.	6.4.1.5	Replacement and maintenance of vehicles.	10.00	17.50	12.00	20.00	14.00	21.50	16.00	16.00	18.00	18.00	**163.00**
23.	6.4.1.5	Maintenance of roads	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00	9.00	**70.00**
24.	6.4.1.5	Maintenance of trek paths	8.00	8.00	8.80	8.80	9.60	9.60	10.40	10.40	11.20	11.20	**96.00**
25.	6.4.1.5	Purchase of solar lights, torches, sleeping bags, tents, binoculars etc for staff.	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
26.	6.4.1.5	Providing amenities like solar lantern, solar lighting system, wind power etc to the protection camps	2.00	2.00	2.40	2.40	2.80	2.80	3.20	3.20	3.60	3.60	**28.00**
27.	6.4.1.5	Construction chain gates at 5th mile, Number One and Lakkomkudy	0.20	0.20	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.65**
28.	6.4.1.6	Intelligence gathering and rewards to informers	0.30	0.30	0.35	0.35	0.40	0.40	0.45	0.45	0.50	0.50	**4.00**
29.	6.4.1.6	Legal support in special cases.	0.20	0.20	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	**3.00**
30.	6.4.2.1	Creation of fire lines.	17.50	17.50	20.00	20.00	22.50	22.50	25.00	25.00	27.50	27.50	**225.00**
31.	6.4.2.2	Engaging fire gangs during fire season	1.50	1.50	1.75	1.75	2.00	2.00	2.25	2.25	2.50	2.50	**20.00**
32.	6.4.2.3	Participatory Fire Management	7.50	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	**105.00**
33.	6.4.2.4	Awareness for staff and local dependents.	0.50	0.50	0.60	0.60	0.70	0.70	0.80	0.80	0.90	0.90	**7.00**
34.	6.4.2.6	Purchase of fire fighting equipments (gum boots, fire resistant suit etc.)	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	0.45	0.45	**3.50**
35.	6.4.3	Establishment of permanent plots and monitoring vegetation changes.	3.00	2.00	2.20	2.20	2.40	2.40	2.60	2.60	2.80	2.80	**25.00**
36.	6.4.3	Mapping of water resources and preparation of drainage map.	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.00**

37.	6.4.3	Installation of meteorological station at Rajamala, Eravikulam and Poovar.	2.00	2.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.50**
38.	7.1	Creation of Information Centre at 5th Mile.	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**25.00**
39.	7.1	Education & awareness materials.	0.50	0.50	0.60	0.60	0.70	0.70	0.80	0.80	0.90	0.90	**7.00**
40.	7.1	Nature awareness camps	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00	9.00	**70.00**
41.	7.1	Maintenance and procurement of LCD, Computer etc for awareness campaigns	0.00	0.50	0.00	0.00	0.70	0.00	0.00	0.70	0.00	0.00	**1.90**
42.	7.1	Upgradation of the story of the park and information centre at munnar	3.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**7.00**
43.	7.1	Engaging wildlife educationist through FDA	2.00	2.00	2.40	2.40	2.80	2.80	3.20	3.20	3.60	3.60	**28.00**
44.	7.2	Upgradation of website.	0.10	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	**0.25**
45.	7.2	Erection of signages at strategic location	2.00	2.00	2.40	2.40	2.80	2.80	3.20	3.20	3.60	3.60	**28.00**
46.	7.2	Engaging a resource person for awareness and nature based tourism through Anamudy FDA	2.00	2.00	2.40	2.40	2.80	2.80	3.20	3.20	3.60	3.60	**28.00**
47.	7.2	Training to staff and EDC members on Visitor management	0.20	0.20	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	**3.00**
48.	7.2	Development of parking area	10.00	10.00	12.00	12.00	14.00	14.00	0.00	0.00	0.00	0.00	**72.00**
49.	7.2	Development of visitor amenities in the tourism areas.	10.00	10.00	12.00	12.00	14.00	14.00	16.00	16.00	18.00	18.00	**140.00**
50.	7.2	Develop implement and revise interpretation packages.	2.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	**5.00**
51.	7.2	Conducting seminar, work shops annually and publish the report through FDA	0.50	0.50	0.60	0.60	0.70	0.70	0.80	0.80	0.90	0.90	**7.00**
52.	7.2	Conduct impact assessment of visitation in the tourism areas	2.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	**5.00**
53.	7.2	Preparation implementation and revision of visitor management plan.	2.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	**5.00**
54.	8.1	Preparation and revision of micro	1.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	**2.50**

		plans.											
55.	8.1	Eco-development activities (as per micro plan)	3.00	3.00	3.60	3.60	4.20	4.20	4.80	4.80	5.40	5.40	**42.00**
56.	8.1	Training to staff and EDC members on eco-development, micro planning etc.	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	0.45	0.45	**3.50**
57.	8.1	Wildlife attack preventive measures.	10.00	0.00	12.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	**36.00**
58.	8.1	Compensation to victims of wildlife attack/ crop damage	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
59.	8.1	Study tour for the staff and EDC members to other protected areas	0.50	0.50	0.60	0.60	0.70	0.70	0.80	0.80	0.90	0.90	**7.00**
60.	8.1	Improving the health and education status of EDCs	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
61.	8.1	Socio economic survey of dependent communities/ EDCs	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.50	0.00	**2.50**
62.	8.2.1	Study the extent and impacts of grazing	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
63.	8.2.1	Vaccination of cattle	0.10	0.10	0.12	0.12	0.14	0.14	0.16	0.16	0.18	0.18	**1.40**
64.	8.2.2	Study the extent and impact of fire wood collection	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
65.	8.2.3	Study the extent and impact of NWFP collection	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
66.	8.2.3	Training on scientific collection of NWFP & value addition	0.30	0.30	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.95**
67.	9.1	Study and document the RET species and asses the field status.	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.00**
68.	9.1	Study & document the traditional knowledge of indigenous communities	1.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	**2.50**
69.	9.1	Monitoring of invasive species and phased removal	2.00	2.00	2.40	2.40	2.80	0.00	0.00	0.00	0.00	0.00	**11.60**
70.	9.1	Study the extent and impact of wildlife damage problems and crop involved.	2.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	**5.00**
71.	9.1	Identification and documentation of	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.00**

		high altitude herbs and shrubs.											
72.	9.1	Document the diversity of shola forests.	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**3.00**
73.	9.1	Documentation the flora of grass lands	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**3.00**
74.	9.1	Conduct carrying capacity study.	3.00	0.00	0.00	0.00	0.00	4.50	0.00	0.00	0.00	0.00	**7.50**
75.	9.1	Conducting nutritional study on food species in different seasons.	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**3.00**
76.	9.1	Study on the population dynamics, movement pattern, natality, mortality, habitat requirements and breeding biology of Nilgiri Tahr.	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.00**
77.	9.1	Non invasive genetic diversity study of Tahr population.	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.00**
78.	9.1	Study the impact of tea plantation and effect of pesticides on the park.	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**3.00**
79.	9.2	Wildlife health monitoring	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
80.	9.2	Annual Tahr census	0.75	0.75	0.90	0.90	1.05	1.05	1.20	1.20	1.35	1.35	**10.50**
81.	9.2	Monitoring the effect of control burning.	1.00	1.00	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.00**
82.	9.3	Training to staff and EDC members on weapon handling, fire fighting, census technique etc.	0.25	0.25	0.30	0.30	0.35	0.35	0.40	0.40	0.45	0.45	**3.50**
83.		Annual maintenance of information centres, gates etc	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	**24.50**
84.	9.2	Census of birds, butterflies, amphibians etc.	1.00	1.20	1.20	1.20	1.40	1.40	1.60	1.60	1.80	1.80	**14.20**
TOTAL			**309.85**	**323.55**	**309.87**	**296.27**	**335.29**	**343.04**	**335.81**	**336.61**	**372.83**	**371.43**	**3334.55**
Note: Wildlife Warden may seek funds from other sources (State Budget Head at present in operation)													

Annexure 1

GOVERNMENT OF KERALA
AGRICULTURE (FOREST MISC) DEPARTMENT
No. 8907/FM3/75/AD Dated , Trivandrum 31-3-1975

NOTIFICATION

S.R.O.No.

Whereas the Government of Kerala consider that the area, the situation and the limits of which are specified in the schedule below, is of adequate ecological, faunal, floral, geomorphological, natural, and zoological significance;

Now, therefore, in exercise of the powers conferred by sub-section (1) of section 18 of the Wild Life (Protection) Act, 1972 (Central Act 53 of 1972) the Government of Kerala hereby declare the said area to be a Sanctuary, to be known as the Eravikulam – Rajamallay Sanctuary for the purpose of protecting, propagating and Developing Wild Life and its environment.

SCHEDULE
Situation and limits of the said area

North :

The boundary commences from the point where the K.D.H.P. Village boundary meets the inter state boundary between Kerala and Tamilnadu at point 5540' (1689m). From that point, the boundary runs along the inter-state boundary passing through peaks with altitude of 3984' (1214 m), 5011' (1527 m), 5885' (1794 m) and 7388' (2252 m) to Parattumala 7033' 92144 m). Thence turning south east the boundary reaches Kumarickkal Malai 8273' (2522 m).

East:

Thence the boundary follows the K.D.H.P. Village boundary along the ridge through Kattumalai 8373' (2552 m) and then to Perumal Mala 7726' (2355 m) till it reaches Tirumudi 5676' (1830 m).

South:

Thence the boundary follows the western boundary of Chattamunnar Estate (Thaliar group), Northern boundaries of Vaguvarrai and Nyamakad Estates to meet the K.D.H.P. Village boundary about 3 km south west of Rajamala peak 7209' (2197 m).

West:

Thence the boundary follows the K.D.H.P. Village boundary to Rajamalai 7209' (2197 m) and thence along that boundary and ridge upto Umayamala 8001' (2439 m) passing through Anamudi 8841' (2695 m). Thence it runs along the K.D.H.P. Village boundary to Samba malai 7581' (2311 m) and thence to Bhima Malai 4719' (1438 m) and from there turns in a north-east direction to Kolukkumalai 7137' (2175 m) and then proceeds in a northernly direction to the starting point at 5540' (1689 m) passing through Erumai malai 7495' (2284 m) and Erumalpettimalai 699' (2133 m).

By Order of the Governor,
Sd.
Additional Secretary.

EXPLANATORY NOTE

The necessity of declaring the Eravikulam / Rajamallay area as a Game Sanctuary was pointed out by the State Chief Conservator of Forests, based on a recommendation of the Wild Life board that such a declaration would be highly essential to preserve the Wild Life in the area, in general and especially the Nilgiri Tahr, a rare animal vanishing at an alarming rate due to indiscriminate shooting by people. Requests urging speedy action for the above declaration were received by Government from different corners, including the Government of India. The area in question is of adequate ecological, faunal, floral, geomorphological, natural and zoological significance. In consideration of all the above aspects, Government consider it absolutely necessary to declare the said area as a 'Game Sanctuary' under section 18(i) of the Wild Life (Protection) Act 1972, and this Notification is intended to achieve the above object.

Sd.
Section officer

/True Copy/

Sd.
For Chief Conservator of Forests

Annexure-2

GOVERNMENT OF KERALA
AGRICULTURE (FOREST Miscellaneous) DEPARTMENT
NOTIFICATION

GO.Ms. No 142/78/AD Dated , Trivandrum 19th May 1978
S.R.O.No.

533/78--Whereas the Government of Kerala have, as per notification No. 92368/FM3/76/AD dated the 31st January, 1978 issued under sub section (1) of section 35 of the Wild Life (Protection) Act, 1972 (Central Act 53 of 1972 and published as S.R.O. No. 166/78 in Kerala Gazette No. 9 dated the 28th February, 1978, declared its intention to constitute the area, the situation and limits of which are specified in the Schedule below, as a National Park, to be known as the Eravikulam National Park;

And whereas the said area being a sanctuary declared under sub-section (1) of section 18 of the said Act and no claim in relation to any land in the area arises for settlement and the area vests in the State Government;

Now, therefore, in exercise of the powers conferred by sub-section (4) of the said section 35 the Government of Kerala hereby specify that the area, the limits of which are specified in the Schedule below shall comprise within the National Park and declare that the said area shall be a National Park known as the Eravikulam National Park on and from the date of this notification.

SCHEDULE
Situation and limits of the said area

North :

The boundary commences from the point where the Kannan Devan Hills Produce Village boundary meets the inter state boundary between Kerala and Tamilnadu at point 5540' (1689m). From that point, the boundary runs along the inter-state boundary passing through peaks with altitude of 3984' (1214 m), 5011' (1527 m), 5885' (1794 m) and 7388' (2252 m) to Parattumala 7033' (2144 m). Thence turning south east the boundary reaches Kumarickkal Malai 8278' (2522 m).

East:

Thence the boundary follows the Kannan Devan Hills Produce Village boundary along the ridge through Kattumalai 8373' (2552 m) and then to Perumal Mala 7726' (2355 m) till it reaches Tirumudi 5676' (1830 m).

South:

Thence the boundary follows the western boundary of Chattamunnar Estate (Thaliar group), Northern boundaries of Vaguvarrai and Nyamakad Estates to meet the Kannan Devan Hills Produce Village boundary about 3 km south west of Rajamala peak 7209' (2197 m).

West:

Thence the boundary follows the Kannan Devan Hills Produce Village boundary to Rajamalai 7209' (2197 m) and thence turning north-east, the boundaru reaches Sambamalai 7581' (2311 m) and thence to Bhima Malai 4719' (1438 m) and from there turns in a north-east direction to Kolukkumalai 7137' (2175 m) and then proceeds in a northernly direction to the starting point at 5540' (1689 m) passing through Erumalai 7495' (2284 m) and Erumalpettimalai 6999' (2133 m).

By Order of the Governor,

K.V. Vidhyadharan,

Additional Secretary.

EXPLANATORY NOTE

In notification No. 92368/FM3/76/AD dated. 31.1.1978 issued under sub section (1) of section 35 of the Wild Life (Protection) Act, 1972 (Central Act 53 of 1972) and published as S.R.O. No 186/78 in Kerala Gazette No. 9 dated 28.2.1978, Government have declared their intention to constitute the area, situation and the limits of which are specified in the schedule to that notification as a National Park to be known as the Eravikulam National Park. The necessity of declaring the Eravikulam / Rajamallay area as a National Park was pointed out by the Government of India based on the recommendation of the Executive Committee of the Indian Board for Wild Life. The area mentioned in the schedule to the notification dated 31.1.1978 is of adequate ecological, faunal, floral, geomorphological, natural and zoological significance. In consideration of the above aspects, Government have already

made clear their intention to declare the said area as a National Park they deem it necessary to issue the notification under sub-section 4 (b) of section 35 of the Wild Life (Protection) Act 1972, and this Notification is intended to achieve the above object.

Annexure-3 Chattamunnar Forest Station notification
കേരള സർക്കാർ

സംഗ്രഹം

വനം– വന്യജീവി വകുപ്പ് – മറയൂർ വനമേഖലയിലെ ചന്ദന മരങ്ങൾ സംരക്ഷിക്കുന്നതിനായി പുതിയ ചന്ദന വന ഡിവിഷനും റെയിഞ്ചുകളും ഫോറസ്റ്റ് സ്റ്റേഷനുകളും രൂപീകരിച്ചുകൊണ്ടും തസ്തികകൾ സൃഷ്ടിച്ചുകൊണ്ടും ഉത്തരവ് പുറപ്പെടുവിക്കുന്നു.

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വനം വന്യജീവി (എഫ്) വകുപ്പ്

ജി.ഒ (എം.എസ്) 67/2005/വനം   തീയതി, തിരുവനന്തപുരം ജൂൺ 8,2005

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പരാമർശം : അഡീഷണൽ പ്രിൻസിപ്പൽ ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്ററുടെ 21.2.2005, 2.5.2005 എന്നീ തീയതികളിലെ ഇ1– 1000/05 നമ്പർ കത്തുകൾ.

ഉത്തരവ്

കേരളത്തിൽ ചന്ദന മരങ്ങൾ കൂടുതലായി കണ്ടുവരുന്ന മറയൂർ, കാന്തല്ലൂർ, മൂന്നാർ വന്യജീവി ഡിവിഷൻ എന്നീ വനമേഖലകളിൽ ചന്ദന കള്ളക്കടത്ത് വ്യാപകമായിതീർന്നിരിക്കുന്ന സാഹചര്യത്തിൽ ചന്ദന മരങ്ങളുടെ സംരക്ഷണം ഉറപ്പുവരുത്തേണ്ടതിനായി നിലവിലുള്ള ഭരണ സംവിധാനം ശക്തിപ്പെടുത്തേണ്ടതുണ്ടെന്ന് സർക്കാർ വിലയിരുത്തി. ചന്ദന മോഷണം ഫലപ്രദമായി നേരിടുന്നതിന് സ്ഥിരസംവിധാനമെന്ന നിലയിൽ മറയൂർ ആസ്ഥാനമാക്കി ഒരു ചന്ദന വന ഡിവിഷനും അതിന്റെ പരിധിയിൽ നിലവിലുള്ള മറയൂർ റേഞ്ചും മറയൂർ, കാന്തല്ലൂർ എന്നീ ഫോറസ്റ്റ് സ്റ്റേഷനുകളും നിലനിർത്തുന്നതിനും അതിന് പുറമെ പുതുതായി ഒരു റേഞ്ചും (കാന്തല്ലൂർ), നാച്ചിവയൽ, വനാൻ തുരൈ എന്നീ ഫോർസ്റ്റ് സ്റ്റേഷനുകളും സ്ഥാപിക്കുന്നതിനും കൂടാതെ മൂന്നാർ വന്യ ജീവി ഡിവിഷനിലെ ചിന്നാർ വൈൽഡ് ലൈഫ് സാംങ്ച്വറി, ഇരവികുളം നാഷണൽ പാർക്ക് എന്നീ സംരക്ഷിത വനമേഖലകളിൽ രണ്ട് പുതിയ ഫോറസ്റ്റ് സ്റ്റേഷനുകൾ സ്ഥാപിക്കുന്നതിനും ഇതിലേക്കായി താഴെ പറയുന്ന തസ്തികകൾ സ്രിഷ്ടിച്ചുകൊണ്ടും ഉത്തരവാകുന്നു. പുനർവിന്യാസം വഴി കണ്ടെത്തിയ തസ്തികകൾ പ്രത്യേകം രേഖപ്പെടുത്തിയിരിക്കുന്നു.

തസ്തിക	നിലവിലുള്ള തസ്തിക	പുതുതായി അനുവദിച്ച തസ്തിക	ആകെ തസ്തികകൾ
മറയൂർ ചന്ദന വന ഡിവിഷൻ			
അസിസ്റ്റന്റ് ഫോറസ്റ്റ് കൺസർവേറ്റർ	0	1 (പുനർവിന്യാസംവഴി)	1 (പുനർവിന്യാസംവഴി - തിരുവനന്തപുരം ഫോറസ്റ്റ് ആസ്ഥാനത്തുള്ള അസിസ്റ്റന്റ് ഫോറസ്റ്റ് കൺസർവേറ്റർ (ലെയിസൺ)
സീനിയർ സൂപ്രണ്ട്	0	1 (പുനർവിന്യാസംവഴി)	1 (പുനർവിന്യാസംവഴി - തിരുവനന്തപുരം ഫോറസ്റ്റ് ആസ്ഥാനത്തുനിന്നും)
ഹെഡ് അക്കൗണ്ടന്റ്	0	1 (പുനർവിന്യാസംവഴി)	1 (പുനർവിന്യാസംവഴി - തെന്മല റെയിഞ്ചിൽ നിന്നും)
എൽ.ഡി / യൂ.ഡി ക്ലാർക്ക്	0	2	2

ടൈപ്പിസ്റ്റ്	0	1	1
ഡ്രൈവർ	0	1	1
ശിപായി	0	1	1
ആകെ	0	**8** (**3** പുനർവിന്യാസം)	8 (3 പുനർവിന്യാസം ഉൾപ്പെടെ)
മറയൂർ റെയിഞ്ച് (നിലവിലുള്ളത്)			
റെയിഞ്ച് ഓഫീസർ	1	0	1
എൽ.ഡി / യു.ഡി ക്ലാർക്ക്	1	1	2
ഡ്രൈവർ	1	0	1
ശിപായി	1	0	1
ആകെ	4	**1**	5
മറയൂർ ഫോറസ്റ്റ് സ്റ്റേഷൻ (നിലവിലുള്ളത്)			
ഡെപ്യൂട്ടി റെയിഞ്ചർ	1	0	1
ഫോറസ്റ്റർ	3	1	4
ഫോറസ്റ്റ് ഗാർഡ്	12	2	14
ഡ്രൈവർ	1	0	1
ആകെ	17	**3**	20
നാച്ചിവയൽ ഫോറസ്റ്റ് സ്റ്റേഷൻ (പുതിയത്)			
ഡെപ്യൂട്ടി റെയിഞ്ചർ	0	1 (പുനർവിന്യാസംവഴി)	1 (പുനർവിന്യാസംവഴി – സെൻ ട്രൽ നർസറി, കുളത്തൂപുഴ നിന്നും)
ഫോറസ്റ്റർ	0	3	3
ഫോറസ്റ്റ് ഗാർഡ്	0	14	14
ഡ്രൈവർ	0	1	1
ആകെ	0	**19** (1 പുനർവിന്യാസം)	**19** (1 പുനർവിന്യാസം ഉൾപ്പെടെ)
കാന്തല്ലൂർ റെയിഞ്ച് (പുതിയത്)			
റെയിഞ്ച് ഓഫീസർ	0	1 (പുനർവിന്യാസംവഴി)	1 (പുനർവിന്യാസംവഴി - തിരുവനന്തപുരം ഫോറസ്റ്റ് ആസ്ഥാനത്തുള്ള എ.സി.എം യൂണിറ്റിൽ നിന്നും)
എൽ.ഡി / യു.ഡി ക്ലാർക്ക്	0	2	2
ഡ്രൈവർ	0	1	1
ശിപായി	0	1	1
ആകെ	0	**5** (1 പുനർവിന്യാസം)	5 (1 പുനർവിന്യാസം ഉൾപ്പെടെ)
കാന്തല്ലൂർ ഫോറസ്റ്റ് സ്റ്റേഷൻ (നിലവിലുള്ളത്)			
ഡെപ്യൂട്ടി റെയിഞ്ചർ	1	0	1
ഫോറസ്റ്റർ	3	0	3
ഫോറസ്റ്റ് ഗാർഡ്	12	0	12
ഡ്രൈവർ	1	0	1
ആകെ	17	**0**	17

വണ്ണാന്തുറ ഫോറസ്റ്റ് സ്റ്റേഷൻ (പുതിയത്)			
ഡെപ്യൂട്ടി റെയിഞ്ചർ	0	1 (പുനർവിന്യാസംവഴി)	1 (പുനർവിന്യാസംവഴി തിരുവനന്തപുരം ഫോറസ്റ്റ് ആസ്ഥാനത്തുള്ള കൺ ട്രോൾ റൂമിൽ നിന്നും)
ഫോറസ്റ്റർ	0	3	3
ഫോറസ്റ്റ് ഗാർഡ്	0	12	12
ഡ്രൈവർ	0	1	1
ആകെ	0	**17** (1 പുനർവിന്യാസം)	**17** (1 പുനർവിന്യാസം ഉൾപ്പെടെ)
മൂന്നാർ വന്യജീവി ഡിവിഷൻ			
ചിന്നാർ വൈൽഡ് ലൈഫ് സാംങ്ച്വറിയുടെ പരിധിയിൽ കരിമുട്ടി ഫോറസ്റ്റ് സ്റ്റേഷൻ			
ഡെപ്യൂട്ടി റെയിഞ്ചർ	0	1	1
ഫോറസ്റ്റർ	2	1	3
ഫോറസ്റ്റ് ഗാർഡ്	7	9	16
ഡ്രൈവർ	0	0	0
ആകെ	9	**11**	20
ഇരവികുളം നാഷണൽ പാർക്കിന്റെ പരിധിയിൽ ചട്ടമൂന്നാർ ഫോറസ്റ്റ് സ്റ്റേഷൻ			
ഡെപ്യൂട്ടി റെയിഞ്ചർ	0	1	1
ഫോറസ്റ്റർ	2	1	3
ഫോറസ്റ്റ് ഗാർഡ്	6	10	16
ഡ്രൈവർ	0	0	0
ആകെ	8	**12**	20
മൊത്തം തസ്തിക	55	**76 (6** പുനർവിന്യാസം)	131 (6 പുനർവിന്യാസം ഉൾപ്പെടെ)

ഗവർണറുടെ ഉത്തരവിൻ പ്രകാരം
എൽ. രാധാകൃഷ്ണൻ
സെക്രട്ടറി.

1. പ്രിൻസിപ്പൾ ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ, തിരുവനന്തപുരം.
2. അഡീഷണൽ പ്രിൻസിപ്പൾ ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ, തിരുവനന്തപുരം.
3. ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ (വന്യ ജീവി), തിരുവനന്തപുരം.
4. ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ (വിജിലൻസ്), തിരുവനന്തപുരം.
5. ഡിവിഷണൽ ഫോറസ്റ്റ് ആഫീസർ, മൂന്നാർ ഫോറസ്റ്റ് ഡിവിഷൻ.
6. ഡിവിഷണൽ ഫോറസ്റ്റ് ആഫീസർ, മൂന്നാർ വന്യജീവി ഡിവിഷൻ.
7. അക്കൗണ്ടന്റ് ജനറൽ (എ & ഇ) / (ആഡിറ്റ്), തിരുവനന്തപുരം.
8. ധനകാര്യ വകുപ്പ് (16.5.2005 തീയതിയിലെ 32397 / എ ഡബ്ളീയു എ 2/05/ധന.നമ്പർ നോട്ട്)
9. പൊതുഭരണ (എസ്.സി) വകുപ്പ് (8.06.2005 ലെ മന്ത്രിസഭാ തീരുമാനം ഇനം നം 675)
10. പബ്ലിക് റിലേഷൻസ് വകുപ്പ്.
11. കരുതൽ ശേഖരം / അഫീസ് കോപ്പി.

ഉത്തരവിൻ പ്രകാരം

സെക്ഷൻ ആഫീസർ.

Annexure-4 Rajamala Checkpost notification

Government of Kerala
കേരള സർക്കാർ
2006

Reg. No. രജി, നമ്പർ
KL/TV/(N)/12/2006-2008

KERALA GAZETTE
കേരള ഗസറ്റ്

PUBLISHED BY AUTHORITY
ആധികാരികമായി പ്രസിദ്ധപ്പെടുത്തുന്നത്

Vol. LI വാല്യം 51 | **THIRUVANANTHAPURAM, TUESDAY** തിരുവനന്തപുരം, ചൊവ്വ | **13th June 2006 No** 2006 ജൂൺ 13 **23rd Jyaishta 1928** 1928 ജ്യേഷ്ഠം 23 | **No** നമ്പർ

PART III

Forest Department

OFFICE OF THE CHIEF CONSERVATOR OF FORESTS (WILDLIFE), THIRUVANANTHAPURAM NOTIFICATIONS

(1)

No WL-I – 1453/2006 *20th May 2006*

In exercising of powers conferred upon me as per Rule No 13 of the Kerala Forest Produce Transit Rules 1975 published in Notification No. G.O (P) 349/75/AD, dated 22-11-1975 in Kerala Gazette No. 3 dated 20-1-1976 in Part I, I, V. Gopinathan, Chief Conservator of Forests (Wildlife), Thiruvananthapuram do hereby order to open a new forest checking station at the enhance to 5th Mile deviation on the Munnar – Marayoor Road under Eravikulam National Park in Idukki Revenue District with immediate effect.

(2)

No WL4-2393/06 *20th May 2006*

In exercising of powers conferred upon me as per Rule No 13 of the Kerala Forest Produce Transit Rules 1975 published in Notification No. G.O (P) 349/75/AD, dated 22-11-1975 in Kerala Gazette No. 3 dated 20-1-1976 in Part I, I, V. Gopinathan, Chief Conservator of Forests (Wildlife), Thiruvananthapuram do hereby order to open a new forest checkpost, station at Vattavada Panchayat at the point where the road split to Kovilloor and old Kodaikanal road under Pambadum Shola National Park in Idukki Revenue District with immediate effect.

(sd)

Chief Conservator of Forests

(Wildlife)

Thiruvananthapuram

Annexure 5
Check list of the plants of the Grass lands

	RANUNCULACEAE	
1	*Anemone rivularis* Ham.	
2	*Ranaculus reniformis* Wall.	
3	*Thalictrum javanicum* Bl.	
	MENISPERMACEAE	
4	*Cyclea peltata* Hook.f. & Thoms.	
	BERBIRIDACEAE	
5	*Berberis tinctoria* Lesch	
6	*Mahonia leschenaultia* Tak	
	BRASSICACEAE	
7	*Cardamine hirsute* L.	
8	*Cardamine africana* Linn.	
9	*Cardamine trifoliolata* Hook.f.& Thoms.(*C. trichocarpa*)	
	VIOLACEAE	
10	*Viola patrinii* DC	
11	*Viola retusa.*	
12	*Viola distans.*	
	POLYGALACEAE	
13	*Polygala japonica* Houtt. (*Polygala sibirica* Sensu Bennet).	
	CARYOPHYLLACEAE	
14	*Drymaria cordata* Willd.	
	HYPERICACEAE	
15	*Hypericum mysorense* Heyne.	
16	*Hypericum japonicum* Thunb.	E
17	*Hypericum wightianum* Wall.	
	MALVACEAE	
18	*Urena lobata* L.	
	TILIACEAE	
19	*Triumfetta pilosa* Roth.	
	LINACEAE	
20	*Linum mysorense* Heyne.	
	GERANIACEAE	
21	*Geranium nepalense* Sweet.	
	BALSAMINACEAE	
22	*Impatiens pusilla* Benth.	
23	*Impatiens tomentosa* Heyne.	E
24	*Impatiens modesta* W.	E
25	*Impatiens maculata* W.	E
26	*Impatiens campanulata* W.	
27	*Impatiens pandata* Barnes.	E
28	*Impatiens chinensis* L.	E
29	*Impatiens goughii* W.	E
30	*Impatiens coelotropis*.	

	OXALIDACEAE	
31	*Oxalis richardiana* Babu.	
32	*Oxalis corniculata* L.	
	SAPINDACEAE	
33	*Dodonaea viscose* L.	
	FABACEAE	
34	*Crotalaria leschenaultia* DC.	
35	*Crotalaria formosa* Grah.	E
36	*Crotalaria fysonii* Dunn.	E
37	*Crotalaria tomentosa* Rottl.	E
38	*Crotalaria walkeri* Arn.	E
39	*Crotalaria ovalifoia* Wall.	E
40	*Desmodium triquetrum* DC.	
41	*Uraria rufescense* (DC.)Schindl.(*Desmodium rufescense* DC).	
42	*Flemingia nilgheriensis* (Baker) W.ex Cooke.	E
43	*Flemingia strobilifera* R.Br.(F. bractata (Roxb.)W.)	
44	*Parochetus communis* Hamm.	
45	*Smithia gracilis* Benth.	E
46	*Smithia blanda* Wall.	
	CAESALPINACEAE	
47	*Cassia leschenaultiana* DC.	
	MIMOSACEAE	
48	*Acacia mearnsii* De Willd.	
	ROSACEAE	
49	*Rubus rugosus* Sm.	
50	*Rubus ellipticus* Sm.	
51	*Rubus racemosus* Roxb.	
	PARNASSIACEAE	
52	*Parnassia pusilla* Wall.ex A. (P. mysorense)	
53	*Parnassia wightiana* Wall.	
	CRASSULACEAE	
54	*Kalanchoe grandiflora* W. & A.	E
	DROSERACEAE	
55	*Drosera burmanni* Vahl.	E
56	*Drosera peltata* Sm.	
	HOLARAGIACEAE	
57	*Laurembergia coccinea* (Blume) Kanitz. (*Serpicula hirsuta).*	
	MELASTOMACEAE	
58	*Osbeckia cupularis* Don.	
59	*Osbeckia gracilis* Bedd.(O. lineolata Gamble)	
60	Osbeckia aspera var wightiana (Benth.ex W. & A.) Trimen.(Osbeckia wightiana Benth.ex W. & A.)	
61	*Osbeckia leschenaultiana* DC.	E
62	*Sonerila pulneyensis* Gamb.	
63	*Sonerila rotundifolia* Bedd.	
	APIACEAE	
64	*Bupleeurum distichophyllum* W.&A.	E

65	*Centella asiatica* Urb.	
66	*Hydrcotyle javanica* Thumb.	
67	*Pimpinella candolleana* W.&A.	
68	*Vanasushava pedata* (W.) Mukh. & Const.(Heracleum pedatum W.).	E
	RUBIACEAE	
69	*Borreria stricta* K.Sch.	
70	*Hedyotis stylosa* Br.	E
71	*Hedyotis swertiodes* Hk.f.	E
72	*Hedyotis articularis* Br.	E
73	*Hedyotis santapui* Shetty & Vivek.	
74	*Hedyotis corymbosa* (L.)Lamk.	E
75	*Hedyotis buxifolia* Bedd	E
76	*Knoxia mollis* R.Br. (K. corymbosa).	
77	*Mussaenda hirsutissima* (Hk.f.)Hutch ex Gamble	
78	*Neanotis wightiana* (W. &A.) Lewis (*Anotis wightiana*, B.&Hk.f)	
79	*Neanotis indica* (DC.) Lewis (*Anotis leschenaultiana* B.& H.K.f).	
80	*Neanotis foetida* (Hook.f) Lewis(H. foetida Dalz.)	
81	*Ophiorrhiza leschnaultii*	
	VALERIANACEAE	
82	*Valeriana beddomei* Cl.	E
83	*Valeriana leschenaultia* DC.	E
84	*Valeriana hookeriana* W. & A.	
	ASTERACEAE	
85	*Ageratina adenophora* (Spreng) King & Robinsion	
86	*Anaphalis pulneyensis*	
87	*Anaphalis bournei* Fyson.	E
88	*Anaphalis leptophylla* DC.	
89	*Anaphalis travancorica* Sm.	E
90	*Anaphalis marcescense* Cl.	
91	*Anaphalis spp.*	
92	*Anaphalis lawii* Gamb.	
93	*Anaphalis wightiana* DC.	
94	*Anaphalis meeboldii* W.W.Sm.	E
95	*Artemisia japonica* Thunb. (*A. parviflora* Roxb.)	
96	*Artemisia nilagirica* Pamp.	
97	Bidens pilosa L.	
98	*Blumea mollis* (D.Don.) Merrill. (*B.neilgherrensis* Hk f.)	
99	*Blumea alata* (D.Don.) DC. (*Laggera alata*)	
100	*Blumea vulgaris*	
101	*Centratherum deltoids*	
102	*Cicerbita cyanea* (D.Don) Beauv. (*Lactuca hastata* DC.)	
103	*Cirsium wallichi* DC. (*Cnicus wallichi*)	
104	*Conyza bonariensis* (L) Cronq. (*C. ambigua* DC.)	
105	*Conyza stricta* Willd.	
106	*Dichrocephala chrysanthemifolia* DC.	
107	*Emillia zeylanica* Cl.	

108	*Emillia sonchifolia* DC.	
109	*Erigeron karvinskianus* DC.(*Erigeron mucronatus*) DC	
110	*Galinsoga quadriradiata* Ruiz & Pavon	
111	*Helichrysum buddleoides* DC.	
112	*Phyllocephalum indicum* (Less.) Kirkman (centrantherum reticulatum)	
113	*Senecio wightii* (W.) Benth.	
114	*Senecio lavandulaefolius* Wight	E
115	*Senecio zeylanicus* DC.	
116	*Sonchus wightianus* DC. (S. arvensis)	
117	*Spilanthes calva* DC. (S.acmella)	
118	*Vernonia anamudica* Shetty & Vivek)	E
	CAMPANULACEAE	
119	*Campanula fulgens* Wall.	
120	*Campanula alphonsii* Wall.	E
121	*Lobelia nicotianifolia* Heyne	
122	*Lobelia leschenaultiana* (Presl) Skottsb.	
123	*Lobelia trijuga*	
124	*Wahlenbergia marginata* (Thunb.)DC.(W.gricilis DC)	
	VACCINIACEAE	
125	*Vaccinium leschenaultii* W	
	ERICACEAE	
126	*Gaultheria fragrantissima* Wall.	
127	*Rhododendron arboreum* Sm. ssp	E
128	Nilagiricum (Zenk) Tagg.	
	PRIMULACEAE	
129	*Lysimachia leschenaultia Duby*.	E
130	*Lysimachia deltoides* W	
	MYRSINACEAE	
131	*Maesa indica* (Roxb) A.D.C. (*M. indica* var perottetiana Cl)	
	OLEACEAE	
132	*Ligustrum perottetii* A.D.C	
	GENTIANACEAE	
133	*Exacum wightianum* Arn.	E
134	*Exacum atropurpureum* Bedd.	
135	*Gentiana quadrifaria* Bl.	
136	*Gentiana pedicellatta* Wall.	
137	*Swertia corymbosa* W.	E
	SCROPHULARIACEAE	
138	*Calceolaria mexicana* Benth	
139	*Lindernia spp.*	
140	*Pedicularis zeylanica* Benth.	
141	*Pedicularis perrottetti* Benth.	
142	*Sopubia trifida* Ham.	
143	*Torenia bicolor* Dalz.	
	LENTIBULARIACEAE	
144	*Utricularia scandens* Benj. Var. scandens(U.wallichiana W.)	

145	*Utricularia caerulea* L.	E
146	*Utricularia graminifolia* Vahl.	
	GESNERIACEAE	
147	*Didymocarpus tomentosa* Barnes	
148	*Didymocarpus humboldtianna* Gardn	
	ACANTHACEAE	
149	*Andrographis neesiana* W.	E
150	*Justicia japonica* Thunb. (*J. simplex* D.Don)	
151	*Phlebophyllum kunthianum* Nees.	E
152	*Strobilanthes foliosus* T.And.	E
153	*Strobilanthes perrottetianus* Nees.	
154	*Strobilanthes homotropus* Nees.	E
	LAMIACEAE	
155	*Anisomeles indica* O.Kze.	
156	*Brunella vulgaris* L.	
157	*Clinopodium umbrosum* (Bieb.)Kotch. (*Calamintha umbrosa* Benth)	
158	*Coleus barbatus* Benth.	
159	*Leucas vestita* var. devikolemensis Shetty & Vivek	E
160	*Leucas hirta* spr.	
161	*Leucas helianthemifolia* Desf.	
162	*Leucas lanceaefolia* Desf.	
163	*Micromeria biflora* Benth.	
164	*Plectranthus wightii* Benth.	
165	*Pogostemon speciosus* Benth.	
166	*Pogostemon pubescens* Benth.	
167	*Scutellaria barbata* D.Don.	
168	*Scutellaria spp.*	
	PLANTAGINACEAE	
169	*Plantago erosa* Wall. (P. major L.)	
	CHENOPODIACEAE	
170	*Chenopodium ambrosioides* L.	
	POLYGONACEAE	
171	*Polygonum nepalensis* Meissn. (*P. punctatum* Buch-Ham.ex DC.)	
172	*Polygonum chinense* L.	
	THYMELACEAE	
173	*Gnidia glauca* (Fresen) Gilg. (*Lasiosiphon erioephalus* (Meissn.) Dence.)	
	EUPHORBIACEAE	
174	*Euphorbia laeta* Heyne ex Roth. (*Euphorbia rothiana*) Spr.	
175	*Glochidion arboretum* W.	
176	*Phyllanthus rheedii* W.	
177	*Phyllanthus gardnerianus* (W.) Baill	
	URTICACEAE	
178	*Laportea biflora*	
179	*Pouzolzia accuminata*	
180	*Pouzolzia wightii* Benn.	

	ORCHIDACEAE	
181	*Brachycorythis splendidam* Summ	E
182	*Brachycorythis wightii* Summ.	E
183	*Disperis neilgherrensis* W.	
184	*Habenaria barnesii* Summerhayes & Fischer	
185	*Habenaria heyneana* Lindl.	
186	*Habenaria perrottctiana* A.Rich.	
187	*Habaneria crassifolia* A.Rich.	E
188	*Habenaria elliptica* W.	E
189	*Habenaria rariflora* A.Rich.	
190	*Habenaria longicornuculata* Grah.	E
191	*Liparis wightiana* Thw.	
192	*Malaxis densiflora* (A.Rich) O.Kuntz.	E
193	*Malaxis intermedia* (A.Rich) Seidenf	
194	*Malaxis rheedii* Sw.	
195	*Pachystoma pubescens* Bl.	
196	*P. senile* (Lindl). Reichb.f.	
197	*Peristylus richardianus* W.	
198	*Peristylus spiralis* A.rich.	
199	*Satyrium nepalense* Don.	
200	*Spiranthes sinensis* (Pers.) Ames. (S. australis Lindl.)	
	HYPOXIDACEAE	
201	*Curculigo orchioides* Gaertn.	
202	*Hypoxis aurea* Lour.	
	LILIACEAE	
203	*Asparagus laevissimus* Stued.	
204	*Chlorophytum malabaricum* Baker	
205	*Disporum leschenaultianum* D. Don	
206	*Lilum wallichianum* J. A. & J.H.Sch.var.neilgherrense.(W.)Hara	
	XYRIDACEAE	
207	*Xyris spp*	
	COMMELINACEAE	
208	*Commelina hirusta* Cl.	E
209	*Commelina clavata* Cl.	
210	*Cyanotis arachnoidea* Cl.	
211	*Cyanotis pilosa* Sch.	
212	*Murdannia dimorpha* (Dalz.) Bruk. (*Aneilema dimorphum* Dalz.)	
	JUNCACEAE	
213	*Juncus bufonius* L.	
214	*Juncus inflexus* L. (*J. glaucus* Erh.ex Sibth.)	
215	*Luzula multiflora* (Retz.) Lejeune (*L. campestris* auct non DC.)	E
	PALMACEAE	
216	*Phoenix humilis* Royle.	
	ERIOCAULACEAE	
217	*Eriocaulon geoffreyi* Fyson	

218	*Eriocaulon collinum* Hk.f.	
219	*Eriocaulon robustum* Stued.	
	CYPERACEAE	
220	*Carex filicina* Nees.	
221	*Carex phacota,* Spr.	
222	*Carex sp.*	
223	*Cyperus cyperinus* (Retz.) Valck. (*Mariscus cyperinus* Vahl.)	
224	*Cyperus kyllingia* Endl.	
225	*Cyperus sanguinolentus* Vall.	
226	*Cyperus sesquiflorus* (Torr) Mattf.& Kuk. (*K.illingia)*	
227	*Cyperus brevifolius* (Rottb.) Hassk. (*Kyllingia brevifolia* Roth.)	
228	*Eleocharis congesta* D.Don.	
229	*Fimbristylis kingii* Cl.	E
230	*Picris sp.*	
231	*Rhynchospora rugosa* (Vahl) Gale	
232	*Scirpus fluitans* Linn.	
	POACEAE	
233	*Agrostis peninsularis* Hook,f.	E
234	*Agrostis pilosula* Trin.	
235	*Andropogon lividus* Thw.	
236	*Andropogon polyptychum* var. polyptychum.	
237	*Andropogon polyptychum* var. deccanensis.	
238	*Anthistiria ciliata* L.f.	
239	*Anthoxanthum borii* Jain	
240	*Apocopis courtallumensis* (Steud)Henr. (*Apocopis wightii* Nees.)	
241	*Arthraxon villosus* C.E.C.Fischer.	
242	*Arthraxon lanceolatus* (Roxb.) Hochst.	
243	*Arundinella vaginata* Bor.	E
244	*Arundinella purpurea* Stued.	E
245	*Arundinella mesophylla* Nees.	
246	*Arundinella ciliata* (Roxb) Nees.	
247	*Arundinella tuberculata* Munro.	
248	*Bothriochloa parameswaranii* Sreekumar *et al.*	E
249	*Bothriochloa foulkesii* (Hook.f.) Henr.	
250	*Bothriochloa insculpata* (A. Rich.) A. Campus.	
251	*Brachiaria reptans* (Linn.) Gard.&C.E.Hubb.	
252	*Capillipedium assimile* (Steud) A.Camus	
253	*Chrysopogon zeylanicus* (Steud) Thw.	
254	*Chrysopogon tadulingamii* Sreekumar *et al.*	E
255	*Coelachne simpliciuscula* (Steud.) Benth.	
256	*Coelachne perpusilla* (Stued.), Thw.	
257	*Cyrtococcum deccanense* Bor.	
258	*Cymbopogan flexuosus* (Stued.) Wats.	
259	*Cynodon dactylon* (Linn.)Pers.	
260	*Dichanthium oliganthum* (Stued.) Cope.	

	(D.polyptychum)	
261	*Dichanthium foulkesii* (Hook f.) Jain and Despan	
262	*Digitaria wallichiana* (Stued.) Stapf.	
263	*Eleusine indica* (Linn) Gaertn.	
264	*Eragrostis unioloides* (Retz.)Stued.	
265	*Eragrostis pilosa* (Linn) P.Beauv.	
266	*Eragrostis nigra* Stued.	
267	*Eulalia phaeothrix* (Hack) O..Kunz.	
268	*Eulalia thwaitesii* (Hack) O..Kunz.	
269	*Eulalia trispicata* (Schult) Henr.	
270	*Garnotia exaristata* Gould.	
271	*Garnotia courtellensis* (Arn.&Nees) Thw.	
272	*Helictotrichon virescens* (Stued.) Henr.	
273	*Heteropogon contortus* (Linn) Roem & Shultz.	
274	*Imperata cylindrical* (Linn) Raeusch.	
275	*Isachne setosa* C.E.C. Fischer.	
276	*Isachne fischeri* Bor.	E
277	*Isachne bourneorum* C.E.C. Fischer.	E
278	*Ischaemum tadulingamii* N.C.Nair et al.	
279	*Ischaemum commutatum* Hack.	
280	*Ischaemum indicum* (Houtt.) Merrill.	
281	*Ischaemum nilagiricum* Hack.	
282	*Jansenella griffithiana* (C.Muell.) Bor.	
283	*Oplismenus compositus* (Linn) P.Beauv.	
284	*Panicum gardneri* Thw.	
285	*Paspalidium punctatum* (Burm.) A.Camus.	
286	*Poa annua* Linn.	
287	*Sacciolepis indica* (Linn.) A.Chase (Aira indica)	
288	*Sehima nervosum* (Rottl.) Stapf.	
289	*Setaria pumila* (Poir) Roem. & Schutt. (*S. glauca* Sensu Hook f.)	
290	*Setaria pallide*	
291	*Themeda tremula* (Stued.) Hack.	
292	*Themeda cymbaria* (Roxb) Hack.	
293	*Tripogon bromoides* Roem. & Schutt.	
294	*Tripogon narayani* P.V Sreekumar et al.	E
295	*Tripogon anantaswamianus* P.V Sreekumar et al.	E
296	*Zenkeria jainii* N.C.Nair et al.	E
297	*Zenkeria elegans Trin*	

E - Endemic to Western Ghats

Check list of Pteridophytes

ASPLENIACEAE

1 ***As****plenium unilaterale* Lam.

GLEICHENIACEAE

2 *Dicranopteris linearis* (Burm.f) Undrew

3 (*Gleichenia dichotama* Hook.)

LINDSAEACEAE

4 *Lindsea odorata* Roxb.

5 **(***Lindsea cultrate* Sw.)

6 *Sphaenomeris chinensis* (Linn.)Maxon.

LYCOPODIACEAE

7 *Lycopodium cernuum* Linn.

8 *Lycopodium spp*

OSMUNDACEAE

9 *Osmunda regalis* Linn.

DENNSTAEDTIACEAE

10 *Pteridium aquilinum* (L.) Kuhn.

POLYPODIACEAE

11 *Lepisorus nodus* (Hook.) Ching

DAVALLIACEAE

12 *Leucostegia hymenophylloides* Presl.

Check List of Bryophytes (Mosses and Liverworts)

MOSSES

POLYTRICHACEAE

1 *Pogonatum microstomum* (Schwaegr) Bird
2 *P.decolyi* Gang.
3 *Polytrichum juniperinum* Hedw

BUXBAUMIACEAE

4 *Theriotia sp.*

DITRICHACEAE

5 *Garckea phascocides* (Hoo.) C.Muell
6 *Ditrichum difficile* (Dub. In Moritzi) Fleisch

FISSIDENTACEAE

7 *Fissidens ceyonensis* Doz.& Molk.
8 *F.anomalus* Mont.
9 *F. cristatus* Wilson & Mitten
10 *F. lancifolius* Bartram

SPLACHNACEAE

11 *Gymnostomiella sp.*

RHACOMITRIACEAE

12 *Rhacomitrium crispulum* (Hook.F. & Wils.)

FUNARIACEAE

13 *Funaria hygrometrica* Hedw.
14 *Entosthodon wichurae* Fleisch
15 *E.pulcha* Dix & P.Vard.
16 *Physcomitrium repandum* (Griff) Mitt.

BRYACEAE

17 *Rhodobryum giganteum* (Schwaegr.) Par.
18 *R. roseum* (Hedw.) Limpr.
19 *Brachymenium leptostomoides*
20 *B. tichothecium* (Besch.) Ochi.
21 *Bryum pseudotriquetrum* (Hedw.) Schwaegr.
22 *B. argenteum* Hedw.
23 *Anomobrym subnitidum* Card. & P.Vard.
A. pellucidum (Dicks.) Solms.
24 Filiforme (Dicks.) Solms.

MNIACEAE

25 *Mnium rostratum* Schrad.
26 *M.medium* B.S.G.

LEUCOBRYACEAE

27 *Octoblepharum albidum* Hedw.

CALYMPERACEAE

28 *Syrrhopodon leucophanoides* Card. & P. Vard.
29 *Calymperes sp.*

POTTIACEAE

30 *Barbula sp.*

31 *Trichostomum minussculum* Dix. & P.Vard.
32 *Tortella tortuosa* (Hedw.) Limpr.

BARTRAMIACEAE

33 *Philonotis thawaitesii* Mitt.

SEMATOPHYLLACEAE

34 *Rhaphidostichum brevisetum* Bartram

POTTIACEAE

35 *Trichostomum hyalinoblastum* (Broth.) Broth.
36 *T. minusculum* Dix. & Vard.
37 *Pottia davalliana*

ORTHOTRICHACEAE

38 *Macromitrium sulcatum*
39 *Macromitrium sp.*

HYPOPTERIGIACEAE

40 *Hypopeterigium tenellum* C.Muell.

THUIDIACEAE

41 *Thuidium delicatulum* (Hedw.) Mitt.
42 *T. tamariscellum*

METEORIACEACE

43 *Barbella convolvens* (Mitt.) Broth.
44 *Pendula* (Sull.) Fleisch.
45 *Barbella sp.*
46 *Meteoriopsis sp.*

NECKERACEAE

47 *Homaliodendron flabellatum* (Sm.) Fleisch.
48 *Neckeropsis lepineana*

HYPNACEAE

49 *Hypnum sp.*

HYLOCOMIACEA

50 *Macrothamnium macrocarpum* (Reinw.& Hornsch.) Fleisch.

LIVERWORTS

ANTHOCEROTACEAE

1 *Anthoceros gemmulosus* (Hatt.) Schiffn. & Pande ex Kachroo et al.
2 *Anthoceros erectus* Kashyap
3 *Folioceros sp.*

MARCHANTIACEAE

4 *Marchamtia sp.*
5 *Dumortiera hirsute* (S.w) nees
6 *Asterella khasiana* (Griff.) (Mitt.)
7 *Asterella sp.*

FOSSOMBRONIACEAE

8 *Fossombronia cristula* Aust.

ANEURACEAE

9 *Riccardia levieri* Schiffn
10 *Aneura pinguis* (L.) Dum.

PALLAVICINIACEAE

11 *Pallavicinia sp.*

METZGERIACEAE

12 *Metzgeria sp.*

PLAGIOCHILACEAE

13 *Plgiochila asplenoides* (L) Dum.

14 *P. duthiana* Steph.

15 *P. spinulosa* (Dicks.) Dum,.

16 *Plgiochila sp. 1*

17 *Plgiochila sp. 2*

CAPHALOZIELLACEAE

18 *Caphalozeiella kiaerii* (Aust) Amell.

JUNGERMANNIACEAE

19 *Jungermannia lonigera* Mitt.

20 *Jungermannia sp.*

FRULLANIACEAE

21 *Frullania tamarisic* (L.) Dum.

LEPIDOZEACEAE

22 *Bazzania sp.*

Check list of soil fungal flora of shola forests and grasslands

ZYGOMYCOTA

1 *Absidia californica* J.J Ellis & Hesselt
2 *A. cylindrospora* Hagem var. cylindrospora Hagem
3 *A. cylindrospora* var. nigra Hesselt. & J.J Ellis
4 *A. glauca* Hagem
5 *A. repns* van Tieghem
6 *A. repens* Lendner
7 *Circinella simplex* van Tieghem
8 *Cunninghamella echinulata (Thaxt.) Thaxt.*
9 *C. elegans Lendner*
10 *Congronella butleri (Lendner)*
11 *Peyronel & Dal Vesco*
12 *Hyphomucor assamensis (B.S. Mehrotra & B.R. Mehr.) Schipper & Lunn.*
13 *Micromucor ramannianus (A.Moller) Arx.*
14 *Mortierela sp.*
15 *Mucor circinelloides van Tieghem f. Circinelloides van Tieghem*
16 *M. circinelloides van Tieghem f. Griseo-cyanus (Hangem) Schipper*
17 *M. circinelloides van Tieghem f. Janssenii (Lendner) Schipper*
18 *M. circinelloides van Tieghem f. Lusitanicus (Bruderlein) Schipper*
19 *M. heimalis Wehmer f. luteus Wehmer.*
20 *M. mucedo L. ex Fr.*
21 *M. plumbeus Bon.*
22 *M. racemosus Fers. f. chibinensis (Neophytova) Schipper*
23 *Rhizopus micrsporus var. Rhizopodiformis van Tieghem*
24 *Rhizopus spp.*

ASCOMYCOTA

25 *Chaetomium funicola Cooke*
26 *C. gracile Udagawa*
27 *C. megasporum Sorgel ex. Seth.*
28 *C. virescens var. theilavioideum (Chen.) P.F Cannon*
29 *Emericella nidulans (Eidam) Vuill.*
30 *E. variecolor (Fennell & Raper) C.R.Benj.*
31 *Eupenicillium sp.*
32 *Neocosmospora vasinfecta Smith*
33 *Talaromyces sp.*

MITOSPORIC FUNGI

34 *Acremonium kiliense Grutz.*
35 *Acremonium sp.*
36 *A. ternaria alternata (Fr.) Keissler*
37 *Aspergillus carneus (van Tieghem) Blochwitz*
38 *A. flavus Link*
39 *A. fumigatus var. ellipticus Raper & Fennell*
40 *A. kanagawaensis Nehira*
41 *A.melleus Yukawa*
42 *A. nidulans (Eidem) Wint.*

43 *A. niger van Tieghem*
44 *A. quardricinctus Yuill*
45 *A. viride-natans Ducker & Trower*
46 *A. wentii Wehmer*
47 *A. spergillus spp.*
48 *Beauveria bassiana (Bals) Vuill.*
49 *Cladosporium cladosporioides (Fres) de Vries.*
50 *Curvularia intermedia Boedijn*
51 *C.lunata (Wakker) Boedijn*
52 *Cylindrocarpon sp.*
53 *Eladia saccula (Dale) Smith.*
54 *Eladia sp.*
55 *Fusarium dlamini Marasas, Nelson & Toussoun*
56 *F. moniliforme J. Sheld.*
57 *F. oxysporum Schltdl.*
58 *F. solani (Mart) Sacc.*
59 *Geotrichum candidum Link*
60 *Gilmaniella humicola Barron.*
61 *Glicladium catenulatum Gilm. & Abbott.*
62 *G. roseum Bainier*
63 *Humicola fuscoatra Traaen.*
64 *Metarrhizium anisopliae (Metschn) Sorok*
65 *Myrothecium roridum Tode ex Fr.*
66 *Paecilomyce carneus (Duche & Heim) Brown & Smith.*
67 *P. farinosus (Holm ex S.F. Gray) Brown & Smith*
68 *P. lilacinus (Thom) Samson*
69 *P. marquandii (Massee) Hunghes*
70 *Penicillium aculeatum Raper & Fennell*
71 *P. bilaii Chalabuda*
72 *P. canescens Sopp.*
73 *P. chermesinum Biourge*
74 *P. citrinum Thom.*
75 *P. daleae Zaleski.*
76 *P. decumbens Thom.*
77 *P. echinulatum Raper & Thom.*
78 *P. expansum Link ex Gray.*
79 *P. glabrum (Wehmer) Westling.*
80 *P. griseoroseum Dierckx.*
81 *P. janczewskii Zalaski.*
82 *P. janthinellumBiourge.*
83 *P. lividum Westling.*
84 *P. melinii Thom.*
85 *P. montanense Christensen & Backus*
86 *P. ochrochloron Boiurge.*
87 *P. purpurogenum Stoll.*
88 *P. restrictum Gilman & Abbott.*
89 *P. simplicissinum (Oudem) Thom.*
90 *P. spinulosum Thom.*
91 *P. thomii Maire.*

92 *P. variabile Sopp.*

93 *P. velutinum van Beyma.*

94 *P. verruculosum Peyronel.*

95 *P. vinaceum Gilman & Abbott.*

96 *P. waksmanii Zaleski.*

97 *Penicillium spp.*

98 *Periconia sp.*

99 *Sesquicillium candelabrum (Bonord) W. Gams.*

100 *Trichoderma aureoviride Rifai.*

101 *T. hamatum (Bonord) Bain.*

102 *T. harzianum Rifai.*

103 *T. longibracheatum Rifai.*

104 *T. polysporum (Link ex.Pers) Rifai.*

105 *T. pseudokoningii Rifai.*

106 *Trichoderma sp.*

Annexure 6

Check list of Mammals

No.	Common Name	Scientific Name	Status
1	House Shrew	*Suncus murinus*	
2	Montane Shrew	*Suncus montanus*	
3	Day's Shrew	*Suncus dayi*	
4	Savi's Pygmy Shrew	*Suncus struscus*	
5	Kelaart's long-clawed Shrew	*Feroculus feroculus*	
6	Indian Flying Fox	*Pteropus giganteus*	
7	Short nosed fruit bat	*Cynopterus sphinx*	
8	Horse-shoe leaf-nose bat	*Rhinolophus rouxi*	
9		*Harpiocephalus harpia madrassius*	
10	Bonnet Macaque	*Macaca radiata diluta*	
11	Lion-tailed Macaque	*Macaca silenus*	
12	Hanuman Langur	*Semnopithecus entellus*	
13	John's langur, Nilgiri langur	*Semnopithecus johni*	
14	Asiatic Jackal	*Canis aureus*	
15	Indian Wild Dog or Dhole	*Cuon alpinus*	
16	Sloth Bear	*Ursus ursinus*	
17	Eurasian or Common Otter	*Lutra lutra*	
18	Oriental small clawed-otter	*Amblonyx cinereus nirnai*	
19	South Indian Yellow-throated Marten	*Martes gwatkinsi*	
20	Small Indian Civet	*Viverricula indica indica*	
21	Palm Civet or Toddy cat	*Paradoxurus hermaphroditus*	
22	Indian Grey Mangoose	*Herpestes edwardsi*	
23	Ruddy Mongoose	*Hepestes smithi*	
24	Indian Brown Mangoose	*Herpestes fuscus*	
25	Striped necked mongoose	*Herpestes vitticollis*	
26	Jungle Cat	*Felis chaus kelaarti*	
27	Leopard Cat	*Prionailurus bengalensis*	
28	Leopard or Panther	*Panthera pardus*	
29	Tiger	*Panthera tigris*	

30	Indian Elephant	*Elephas maximus*
31	Wild Boar	*Sus scrofa*
32	Sambar	*Cervus unicolor*
33	Barking Deer	*Muntiacus muntjack*
34	Indian Gaur	*Bos gaurus*
35	Nilgiri Tahr	*Hemitragus hylocrius*
36	Black-naped hare	*Lepus nigricollis*
37	Layard's stripe squirrel	*Funambulus layardi dravidianus*
38	Dusky striped squirrel	*Funambulus sublineatus*
39	Jungle striped squirrel	*Funambulus tristriatus*
40	Indian Giant Squirrel or Malabar Squirrel	*Ratufa indica maxima*
41	Grizzled indain Giant Squirrel	*Ratufa macroura*
42	Indian Crested Porcupine	*Hystrix indica*
43	Malabar Spiny Dormouse	*Platacanthoyms lasiurus*
44	Indian long-tailed Tree mouse	*Vandeleuria oleracea nilgirica*
45	White bellied rat	*Rattus rattus wroughtoni*
46	Little Indian Field Mouse	*Mus booduga*
47	Field Mouse	*Mus cervicolor palnica*
48	Fawn coloured mouse	*Mus famulus famulus*
49	Mouse deer	*Tragulus meminna*

Annexure 7
Checklist of Birds

No.	Common Name	Scientific Name	Status
1	Black winged kite	*Elanus caeruleus*	
2	Blyth'sbaza	*Aviceda jerdoni*	
3	Honey buzzard	*Pernis ptilorhyncus*	
4	Ceylon shikra	*Accipitor baddius*	
5	Crested goshawk	*Accipitor trivirgatus*	
6	Japanese desert buzzard	*Buteo buteo*	
7	Indian crested hawk eagle	*Spizaetus cirrhatus*	
8	Bonelli's hawk eagle(Booted hawk eagle)	*Hieraetus pennatus*	
9	Rufous bellied hawk eagle	*Lophotriorchis kienerii*	
10	Black eagle	*Ictinaetus malayensis*	
11	Pale harrier	*Circus macrourus*	
12	Montagu's harrier	*Circus pygargus*	
13	Harrier	*Circus sp.*	
14	Short toed eagle	*Ciraetus galcius*	
15	Crested serpent eagle	*Spilornis cheela*	
16	Shahin falcon	*Falco perigrinus*	
17	Indian kestrel	*Falco tinnunculus*	
18	Painted bush quail	*Perdicula erythrorhyncha*	
19	Jungle bush quail	*Perdicula asiatica*	
20	Grey jungle fowl	*Gallus sonnerattii*	
21	Green sandpiper	*Trincha ochropus*	
22	Woodcock	*Scolopax rusticola*	
23	Jerdons imperial pigeon	*Ducula badia*	
24	Green imperial pigeon	*Ducula aenea*	
25	Nilgiri wood pigeon	*Columbia elphinstonii*	E
26	Emerald dove	*Chalcophaps indica*	
27	Spotted dove	*Streptopelia chinensis*	
28	Crow pheasant	*Centropus scinensis*	
29	Lesser coucal	*Centropus toulou*	
30	Malabar lorikeet	*Loriculus vernalis*	
31	Indian cuckoo	*Cuculus micropterus*	
32	Grass owl	*Tyto capensis*	
33	Indian jungle night jar	*Caprimulgus indicus*	
34	Jerdons long tailed night jar	*Caprimulgus macrurus*	
35	Indian ediblenest swiftlet	*Colocalia unicolor*	
36	Whiterumped spinetail swift	*Chaetura sylvatica*	
37	Brown throated spinetail swift	*Chaetura gigantean*	
38	Large whiterumped swift	*Apus pacificus*	
39	Alpine swift	*Apus melba*	
40	House swift	*Apus affinis*	
41	Whitebreasted kingfisher	*Halcyon smyrensis*	
42	Chestnut headed bee-eater	*Merops lescheneaultii*	
43	Small green bee-eater	*Merops orientalis*	

44	Small green barbet	*Megalaima viridis*	
45	Larger goldenbacked woodpecker	*Chrysocloptes lucidus*	
46	Lesser goldenbacked woodpecker	*Dinopium bengalense*	
47	Goldenbacked three toed woodpeeecker	*Dinopium javanense*	
48	Little scallybellied green woodpecker	*Picus myrmecophoneus*	
49	Small yellownapped woodpecker	*Picus chlorophus*	
50	Malabar crested lark	*Galerida malabarica*	
51	Dusky crag martin	*Hirundo concolor*	
52	Nilgiri house swallow	*Hirundo tahitiaca*	
53	Eastern swallow	*Hirundo rustica*	
54	Indian cliff swallow	*Hirundo fluvicola*	
55	Redrumped swallow	*Hirundo daurica*	
56	Brown shrike	*Lanius cristatus*	
57	Rufous backed shrike	*Lanius schach*	
58	Black headed oriole	*Orilus xanthornus*	
59	Indian grey drongo	*Dicrurus leucophaeus*	
60	Black drongo	*Dicrurus adsimitus*	
61	Jungle myna	*Acredotherus fuscus*	
62	Jungle crow	*Corvus machrorhyncus*	
63	Pied flycatcher shrike	*Hemipus picatus*	
64	Orange minivet	*Pericrocolus flammeus*	
65	Common iora	*Aegithina tiphia*	
66	Fairy blue bird	*Irena pueta*	
67	Red whiskered bulbul	*Pycnonotus iocosus*	
68	Redvented bulbul	*Pycnonotus cafer*	
69	Greyheaded bulbul	*Pycnonotus priocephalus*	E
70	Yellow browed bulbul	*Hypsipetus indicus*	
71	Black bulbul	*Hypsipetus madagascarensis*	
72	Travancore spotted babbler	*Pellornium ruficeps*	
73	Whitethroated babbler	*Dimetica hyperythra*	
74	Rufous babbler	*Turdoides affinis*	E
75	Travancore scimitar babbler	*Pomatorhinus schisticeps*	
76	White breasted laughing thrush	*Garrulax jerdonii*	
77	Nilgiri quaker babbler	*Alcippe poicephala*	
78	Red breasted flycatcher	*Muscicapa parva*	
79	Brown flycatcher	*Muscicapa castriorostris*	
80	Rufoustailed flycatcher	*Muscicapa raficauda*	
81	Black and orange flycatcher	*Muscicapa nigrorufa*	E
82	White bellied blue flycatcher	*Muscicapa pallipes*	E
83	Verditor flycatcher	*Muscicapa thalassina*	
84	Nilgiri verditor flycatcher	*Muscicapa albicaudata*	E
85	Tickell's blue flycatcher	*Muscicapa tickelliae*	
86	Grey headed flycatcher	*Culcicapa ceylonensis*	
87	Paradise flycatcher	*Terpsiphone paradise*	
88	Blacknaped flycatcher	*Hypothymis azurea*	
89	Nilgiri plain wren warbler	*Prinia subflava*	
90	Southern jungle wren warbler	*Prinia sylvatica*	

91	Southern ashy long tailed wren warbler	*Prinia socialis*	
92	Eastern grasshopper warbler	*Locustella naevia*	
93	Broad tailed grass warbler	*Schoenicola platura*	E
94	Thick billed warbler	*Phragamaticola aedon*	
95	Blyth's reed warbler	*Acrocephalus dumetorum*	
96	Booted warbler	*Hippolais caligata*	
97	Tickell's leaf warbler	*Phylloscopus affinis*	
98	Brown leaf warbler	*Phylloscopus collybita*	
99	Large billed leaf warbler	*Phylloscopus magnirostris*	
100	Greenish leaf warbler	*Phylloscopus trochiloides*	
101	Large crowned leaf warbler	*Phylloscopus occipitalis*	
102	Streaked fantail warbler	*Cisticola juncidis*	
103	Franklin's (Coorg)wren warbler	*Prinia hodgsonii*	
104	White bellied shortwing	*Brachypeteriyx major*	E
105	Indian blue chat	*Erithracuc brunneus*	
106	Magpie robin	*Copsychus saularis*	
107	Nilgiri pied bush chat	*Saxicola caprata*	
108	Blue headed rock thrush	*Monticola cinclorhynchus*	
109	Indian blue rock thrush	*Monticola solitarius*	
110	Malabar whistling thrush	*Myiophonus horsfieldii*	
111	Pied ground thrush	*Zoothera wardii*	
112	Nilgiri thrush	*Zoothera dauma*	
113	Blackcapped black bird	*Turdus merula*	
114	Bhourdilon's black bird	*Turdus merula*	
115	Indian gery tit	*Parus major*	
116	Travancore yellow cheeked tit	*Parus xanthogenys*	
117	Velvet fronted nuthatch	*Sitta frontalis*	
118	Tree pipit	*Anthus trivialis*	
119	Brown rock pipit	*Anthus similis*	
120	Indian tree pipit	*Abthus hodgsoni*	
121	Paddy field pipit	*Anthus novaesselandiae*	
122	Nilgiri pipit	*Anthus nilghiriensis*	E
123	Grey wagtail	*Motacilla cinerea*	
124	Large pied wagtail	*Motacilla maderaspatensis*	
125	Nilgiri flowerpecker	*Dicaeum concolor*	
126	Thick billed flower pecker	*Dicaeum agile*	
127	Tickell's flowerpecker	*Dicaeum erythrorhynchos*	
128	Small sunbird	*Nectarinia minima*	E
129	Loten's sunbird	*Nectarinia lotenia*	
130	Little spiderhunter	*Arachnothera longirostris*	
131	Nilgiri white eye	*Zosterops palpebrosa*	
132	Common Indian rosefinch	*Caprodachus erythrinus*	

Annexure 8
Check list of Reptiles

1 *Dravidogecko anamallensis*
2 *Salea anamallayana*
3 *Scincella travancoricum*
4 *Mabuya carinata*
5 *Ristella travancorica*
6 *Uropeltes pulneyensis*
7 *Uropeltes maculates*
8 *Teretrurus sanguineus*
9 *Amphiesma stolata*
10 *Ahaetulla disper*
11 *Xylophis perroteti*
12 *Trimeresurus macrolepis*
13 *Trimeresurus malabaricus*

Annexure 9
Check List of Amphibians

No.	Scientific name	Status
1	*Bufo melanostictus*	E
2	*Bufo parietalis*	
3	*Bufo microtympanum*	E
4	*Micrixalus sp*	E
5	*Indirana brachytarsus*	E
6	*Indirana beddomii*	E
7	*Indirana leithii*	E
8	*Indirana leptodactyla*	E
9	*Indirana semipalmatus*	E
10	*Limnonectes limnocharis*	
11	*Rana temporalis*	
12	*Rana curtipus*	E
13	*Nyctibatrachus sp.*	E
14	*Philautus glandulosus*	E
15	*Philautus flaviventris*	E
16	*Philautus leucorhinus*	E
17	*Philautus nasutus*	E
18	*Philautus signatus*	E
19	*Polypedates maculatus*	
20	*Polypedates pleurostictus*	E

E – Endemic to W.Ghats

* Endemic to Western Ghats

** Endemic to both Ceylon and Western Ghats.

Annexure 10
Check list of fishes

Sl no	Scientific name
1	*Horalabiosa joshuai*
2	*Garra hughi*
3	*Oreonectes*
4	*Salmo gairdnerii gairdnerii*

Annexure 11

Checklist of Butterflies

No.	Common name	Scientific name
	Family: PAPILIONIDAE	
1	Southern Birdwing	*Troides minos* *
2	Common Rose	*Pachliopta aristolochiae* **
3	Crimson Rose	*Pachliopta hector*
4	Common Bluebottle	*Graphium sarpedon*
5	Tailed Jay	*Graphium Agamemnon*
6	Common Mime	*Papilio clytia*
7	Lime Butterfly	*Papilio demoleus*
8	Malabar Raven	*Papilio dravidarum* *
9	Red Helen	*Papilio helenus*
10	Common Mormon	*Papilio polytes*
11	Blue Mormon	*Papilio polymnestor* **
12	Paris Peacock	*Papilio paris*
	Family:PIERIDAE	
13	Common Emigrant	*Catopsilia Pomona*
14	Mottled Emigrant	*Catopsilia pyranthe*
15	Small Grass Yellow	*Eurema brigitta*
16	Common Grass Yellow	*Eurema hecabe*
17	Nilgiri Grass Yellow	*Eurema nilgiriensis*
18	Nilgiri Clouded Yellow	*Colias nilgiriensis*
19	Common jezebel	*Delias eucharis* **
20	Indian cabbage white	*Pieris canidia*
21	Common Gull	*Cepora nerissa*
22	Pioneer or Caper White	*Anaphaeis aurota*
23	Plain Puffin	*Appias indra*
24	Spot Puffin	*Appias lalage*
25	Common Albatross	*Appias albina*
26	Great Orange Tip	*Hebomoia glaucippe*
27	Common Evening Brown	*Melanitis leda*
28	Great Evening Brown	*Melanitis zitenius*
29	Dark Evening Brown	*Melanitis phedima*
30	Bamboo Treebrown	*Lethe europa*
31	Tamil Treebrown	*Lethe drypetis*
32	Common Treebrown	*Lethe rohria*
33	Whitebar Bushbrown	*Mycalesis anaxias*
34	Red-Disk Bushbrown	*Mycalesis occulus* *
35	Palni Bushbrown	*Mycalesis davisoni*
36	Palni Fourring	*Ypthima ypthimoides*
37	Tawny Coster	*Acraea violae*
38	Rustic	*Cupha erymanthis*
39	Common Leopard	*Phalanta phalantha*

40	Tamil Yeoman	*Cirrochroa thais* **
41	Indian Fritillary	*Argyreus hyperbius*
42	Black prince	*Rohana parisatis*
43	Common Sailor	*Netis hylas*
44	Commander	*Limenitis procris*
45	Redspot Duke	*Dolpha evelina*
46	Angled Caster	*Ariadne ariane*
47	Common Map	*Cyrestis thyodamas*
48	Yellow Pansy	*Junonia bierta*
49	Blue Pansy	*Junonia orithya*
50	Lemon Pansy	*Junonia lemonias*
51	Peacock pansy	*Junonia almanac*
52	Chocolate Pansy	*Junonia iphita*
53	Painted Lady	*Cynthia cardui*
54	Indian Red Admiral	*Vanessa indica*
55	Blue Admiral	*Kaniska canace*
56	Great Eggfly	*Hypolimnas bolina*
57	Danaid Eggfly	*Hypolimnas misippus*
58	Glassy Tiger	*Parantica aglea*
59	Nilgiri Tiger	*Parantica nilgiriensis* *
60	Blue Tiger	*Tirumala limniace*
61	Dark Blue Tiger	*Tirumala septentrionis*
62	Plain Tiger	*Danaus Chrysippus*
63	Stripped or Common Tiger	*Danaus genutia*
64	Common Indian Crow	*Euploea core*
	Family: LYCAENIDAE	
65	Common Pierrot	*Castalius rosimon*
66	Banded Blue Pierrot	*Discolampa ethion*
67	Zebra Blue	*Leptotes plinius*
68	Bright Babul Blue	*Azanus ubaldus*
69	Indian Cupid	*Everes lacturnus*
70	Whtite Hedge blue	*Udara akasa*
71	Common Hedge Blue	*Actolepis puspa*
72	Whitedisc Hedge Blue	*Celatoxia albidisca* *
73	Pale Grass Blue	*Psuedozizeeria maha*
74	Dark Grass Blue	*Zizeeria karsandra*
75	Lesser Grass Blue	*Zizina otis*
76	Tiny Grass Blue	*Zizula hylax*
77	Plains Cupid	*Chilades pandava*
78	Gram Blue	*Euchrysops cnejus*
79	Forget-Me-Not	*Catochrysops strabo*
80	Pea Blue	*Lampides boeticul*
81	Dark Cerulean	*Jamides bochus*
82	Common Cerulean	*Jamides celeno*
83	Metallic Cerulean	*Jamides alecto*
84	Line Blue 1	*Nacaduba sp.*
85	Line Blue 2	*Nacaduba sp.*
86	Common Line Blue	*Prosotas nora*
87	Red Pierrot	*Talicada nyseus*

88	Ciliate blue	*Anthene emolus*
	Family: HESPERIDAE	
89	Common Banded Awl	*Hasora chromus*
90	White Banded Awl	*Hasora taminatus*
91	Indian Awlking	*Choaspes benjaminii*
92	Common Spotted Flat	*Celaenorrhinus leucocera*
93	Water Snow Flat	*Tagiades litigiosa*
94	Fulvous Pied Flat	*Psuedocoladenia dan*
95	Common Banded Demon	*Notocrypta paralysos*
96	Grass Demon	*Udaspes folus*
97	Tamil Grass Dart	*Taractrocera ceramas*
98	Tamil Dartlet	*Oriens concinna* *
99	Palni Dart	*Potanthus palnia*
100	Rice Swift	*Borbo cinnara*
101	Blank Swift	*Caltoris kumara*

Annexure 12
Control forms

FORM – 1
Restoration of habitat : Weed control

Sl. No	Location & name of site	Year	Extent of area(Ha)	Species of weed	Operation	Total Cost	Cost/ha	Remarks
1	2	3	4	5	6	7	8	9

Location : By compartment , site name or land feature
Operation : Uprooting, cutting, burning, ploughing, manual or by using animals or machinery.
Remarks : Measure of success and or problem faced

FORM – 2
Restoration of habitat : Controlled burning

Sl. No	Location & name of site	Year	Extent of area(Ha)	Area treated(ha)	Period	Total Cost	Cost/ha	Remarks
1	2	3	4	5	6	7	8	9

Location : By compartment , site name or land feature
Period : Date of starting operation and completion.
Remarks : Mention resultunt structure (eg. a mosaic, %burned, % intact), Problems

FORM – 3
Restoration of habitat

Sl. No	Location	Year	Extent of area(Ha)	Description of site	Regulations/protections measures	Response	Remarks
1	2	3	4	5	6	7	8

Location : By compartment or by a named feature and name given if any
Description : % tree, shrub, ground cover, main species, impact of factors causing perturbation
Regulations & protection measures: Social fencing, power or other kind of fencing, enforced protection by patrolling, fire protection etc. .
Responce : To be recorded annually. Concider trend of regeneration, vegitation cover, change in structure and composition, wildlife use index.
Remarks : Site problems or any other useful information, including alternatives if area being used by people for specific purposes.

FORM – 4
Animals : Measuring trends in populations

Sl. No	Species	Population estimation methodology	Adults		Sub-Adults		Year-lings	Fawns	Cubs	Total	Remarks
			M	F	M	F					
1	2	3	4	5	6	7	8	9	10	11	12

Population estimation : eg. pugmark, line transect, scan, road side counds, etc. Area covered, sampling intensity, data treatment, extrapolation where involved. In case of indices of density or dung count mention those figures under the remarks column; use details as pertinent. Describe age classes for each species
Remarks : Operational problems, protection problems, any other useful information. Indices of density or dung count details to be rrecorded here.

FORM – 5
Animals – New records

Sl. No	Species	Location	Year	How dicovered	Details of number, age, sex	Habitat description	Remarks
1	2	3	4	5	6	7	8

Note: Animal will include vertibrates and invertbrates
How dicovered : Sighting, dead specimen, reliability of sighting, captured specimen, incontrovertible other evidence.
No., age, sex, etc. : As applicable to vertebrates
Habitat description : Broad habitat description such as vegitation, and elements such as water, large
old trees, den trees, snags, down log material.
Use microhabitat descriptors only if relevent
Remarks : Any other useful information

FORM – 6
Animals – Mortality other than that attributable to an offence

Sl. No	Species	Location	Year	Sex and age	Number	How dicovered	Cause of mortality	Remarks
1	2	3	4	5	6	7	8	9

Location : By compartment, landmark etc.
Sex and age : As per parameters for age class, Sex, if possible to identify.

Hoe discovered : Carcass, complet or partial, skull or any other recognizable remains collected where only some remains of an animal are found.
Cause of mortality : If known, eg. territorial fight, accident, possible disease(following postmortem results), old age, cause difficult to determin, predation etc.
Remarks : Any other useful information

FORM – 7
Animals – Mortality attributed to poaching or an act of vandalism

Sl. No	Species	Location	Cause of mortality, number, sex, age class	Remarks
1	2	3	4	5

Location : By compartment or landmarks
Cause of mortality : whether the animal was intact or remains found, article or trophy to be recorded, Cause if known eg. animal snared, shot, or poisoned etc.
Remarks : Any other useful information, especially matters of illegal trade.

FORM – 8
Animals – Predation on domestic live stock by wild carnivores

Sl. No	Range	Month	Category of livestock killed	Location	Number	Compensation paid	Carnivore involved	No. of case Undecided	Remarks
1	2	3	4	5	6	7	8	9	10

Col. 4 : Buffalo, cow, bullock (adult, sub-adult, calf), camel, horse, donkey, sheep, goat, poultry, etc.
Col. 5 : Comptt. No. or landmarks where killed and the village of the owner.
Col. 8 : In dicate species responsible for the kill if identify is confirmed.
Col. 9 : Either in progress or dropped.
Col. 10 : Record obseervations like- attended or unattented animals, killed in forest or waterhole or in the pen/shed, field and whether kill was in area closed to livestock trespass

FORM – 9
Animals : Killing of a human by wild life or injury caused

Sl. No	Range	Month	No. of incidents	No. of people killed, age & sex	Location, circumstances & species	No. of people injured, age & sex	Location, circumstances & species	Compens sation (Rs.)
1	2	3	4	5	6	7	8	9

Location, circumstances : Location by camptt. No., the village to which the person belongs and a description of the site and species activity such as- open grassy patch, cutting grass, or under a mahua tree collecting flowers etc. Mention species on proof.

FORM – 10
Animals : Wildlife damage to private or public property

Sl. No	Range	Month	The category of property	Extent of damage	Species involved and number	Remarks
1	2	3	4	5	6	7

Location : By comptt. No., village survey no., name of village or land mark.
Category of property : eg. agriculture field-wheat, huts in a village, any kind of vehicle.
Extent of damage : Crop damage by area, estimated loss of produce and monetary loss. Similer yard sticks for other items like partial or total destruction of huts and belongings with estimated monetary loss.
Remarks : Any relevent information or circumstances eg. wild elephant was provoked by people.

FORM – 11
Plants: New records

Sl. No	Range	Kind of produce	Species	Quantity	Revenue realised	Free of change quantity	Agency involved	
							Local people	Out siders
1	2	3	4	5	6	7	8	

Kind of produce : Mention Name, can be biological or geomorphic in origin
Species : If applicable
Quantity : Use the appropriate units

Local people : applies to people within TUZ & ZI (buffer). This return normally applies to TUZ & (buffer). If practice exists within the PA, make a special mention

FORM – 12
NWFP Collection: Plants and other produce Range

Sl. No	Year	Kind of produce	Species	Quantity	Revenue realised	Free of charge quantity	Agency involved	
							Local people	Out siders
1	2	3	4	5	6	7	8	

Kind of produce : Mention Name, can be biological or geomorphic in origin
Species : If applicable
Quantity : Use the appropriate units
Local people : applies to people within TUZ & ZI (buffer). This return normally applies to TUZ & (buffer). If practice exists within the PA, make a special mention

FORM – 13
Grazing of domestic livestock

Sl. No	Year	Grazing unit No.	List of villages in the unit	Village-wise listed population of cattle	Capacity of the unit(cattle units) an number of cattle grazed	Total cattle unit grazed		Remarks
						Legal	Illegal	
1	2	3	4	5	6	7	8	9

Remarks : (i) Mention number of cattle immunized against FMD, RP, anthrax as the case might be and the number of cattle without the prophylatic cover
(ii) If grass is allowed to be cut for cattle being stall-fed, mention the village and numbeer of such cattle.

FORM – 14
Inter Agency programmes: Agencies and schemes (Govt.)

Sl. No	Year	Name of agency	Central /State	Number and name of scheme operated	Physical & financial targets		Area & location	Remarks
					Given	achieved		
1	2	3	4	6	7	8	9	10

Name of the scheme : To include all activities in the Govt. Sector, ie. Construction use of resources, development processes etc. Mention name of schemes, projects or normal operations. This will address all departments in the management area and those activities outside but capable of influencing the management area
Remarks : Success, adverse impacts, incompatibility with PA management objectives or failures should be mentioned. Detailed notes to go in the PA book

FORM – 15
Programmes of NGO's

Sl. No	Year	Name of agency	HQ location	Nature of the scheme operated	Physical & financial targets		Area & location	Remarks
					Given	achieved		
1	2	3	4	6	7	8	9	10

Remarks : Success, adverse impacts, incompatibility with PA management objectives or failures should be mentioned. Detailed notes to go in the PA book. These programmes and activities could be with in the management area or those that are out side the management area but are capable of influencing the state of the management area-either complimenting efforts or adversely impacting.

FORM – 16 A
Construction of Infrastructure : Roads and Bridges (New) **Range**

Sl. No	Year	Ctegory	Surface	Name or number	Length covered	Cross, drainage works, bridges with type	Total cost and status
1	2	3	4	5	6	7	8

Ctegory of road : national/State highway, district road etc. Public road or open only to managers should be stated
Surface type : Black toped, metal, earth etc. Applies to road ..
Name/number : as the case may be
Cross drainage type : eg. for colverts-box, humepipe culverts etc.
Bridge Type : Wooden trestle, suspention, metal multy span, masonry arch etc.
Status : Work completed or ongoing. State also the agency responsibility; state whether operational or non-operational

FORM – 16 B
Maintenance of Infrastructure : Roads and Bridges (existing) Range

Sl. No	Year	Ctegory	Surface	Name or number	Length covered	Cross, drainage works, bridges with type	Total cost and status
1	2	3	4				

Ctegory of road : national/State highway, district road etc. Public road or open only to managers should be stated
Surface type : Black toped, metal, earth etc. Applies to road ..
Name/number : as the case may be
Cross drainage type : eg. for colverts-box, humepipe culverts etc.
Bridge Type : Wooden trestle, suspention, metal multy span, masonry arch etc.
Status : Work completed or ongoing. State also the agency responsibility; state whether operational or non-operational

FORM – 17 A
Construction of Infrastructure: Buildings (New) Range

Sl. No	Year	Nature of the building	Location	Type of consrtuction	Number	Total cost	Status
1	2	3	4				

Nature of the building: Eg. Residential (guard), office, store, chauki, watch tower, tourist fecility, hide, barrier, patrolling camp, (temporary/permanent) etc.
Location : The by compartment or village or landmark as appropriate.
Type of construction : Masonry(brick/stone). Log or wooden, metal, local material etc.
Status : Completed or ongoing.

FORM – 17 B
Maintenance of Infrastructure : Buildings (Existing) Range

Sl. No	Year	Nature of the building	Location	Type of consrtuction	Number	Total cost	Status
1	2	3	4				

Nature of the building: Eg. Residential (guard), office, store, chauki, watch tower, tourist fecility, hide, barrier, patrolling camp, (temporary/permanent) etc.
Location : The by compartment or village or landmark as appropriate.
Type of construction : Masonry(brick/stone). Log or wooden, metal, local material etc.
Status : Completed or ongoing.

FORM – 18 A
Development of Infrastructure : Communication (New) Range

Sl. No	Year	Name of facility	Location	Number	Cost	Advantage gained	Remarks
1	2	3	4				

Type of facility : eg. telephone, wireless
Location : Staff HQ location, village or landmark as appropriate.
Advantage gained : Area's served, staff locaton connected etc.
Remarks : Record status-complere, ongoing, functional, non-functional....
Status : Completed or ongoing.

FORM – 18 B
Maintenance of Infrastructure : Communication (Existing) Year

Sl. No	Range	Name of facility	Location	Number	Cost	Advantage gained	Remarks
1	2	3	4				

Type of facility : eg. telephone, wireless
Location : Staff HQ location, village or landmark as appropriate.
Advantage gained : Area's served, staff locaton connected etc.
Remarks : Record status-complere, ongoing, functional, non-functional....

Status : Completed or ongoing.

FORM – 19 A
Development of of Infrastructure : Vehicle (New)
Range

Sl. No	Year	Kind of vehicle	Number	HQ if any	Intented use	Cost	Remarks
1	2	3	4	5	6	7	8

Kind of vehicle : Jeep, trailer, tractor, truck, minibus, tanker, motorcycle, bicucle, boat(paddle/motor), launch, car, riding elephant, ponies.etc.
Intended use : management support, patrolling/antipoaching, tourism, etc.
Remarks : Any other useful information. Mention written off vehicles, retired or dead animals.

FORM – 19 B
Maintenance of of Infrastructure : Vehicle (Existing)
Range

Sl. No	Year	Kind of vehicle	Number	HQ if any	Intented use	Cost	Remarks
1	2	3	4	5	6	7	8

Kind of vehicle : Jeep, trailer, tractor, truck, minibus, tanker, motorcycle, bicucle, boat(paddle/motor), launch, car, riding elephant, ponies.etc.
Intended use : management support, patrolling/antipoaching, tourism, etc.
Remarks : Any other useful information. Mention written off vehicles, retired or dead animals.

FORM – 20 A
Developing Infrastructure : Construction of boundaries Fences, CPTs, exclosures, enclosures (New)

Sl. No	Year	Category of construction	Location	Length (Mt)	Number	Specification	Remarks
1	2	3	4	5	6	7	8

Category : Kind of boundary eg. comptt, block, zone etc. In case of fences: power fence, others.

Location : By compartment or suitable landmark.
Number : In case of enclosures , exclosures, number of pillaars etc. as applicable.
Specification : As applicable to the construction: dry rubble, chain linl, local material, height, area, depth width etc.
Remarks : Any other relevent information

FORM – 20 B
Developing Infrastructure : Construction of boundaries Fences, CPTs, exclosures, enclosures (Existing)

Sl. No	Year	Category of construction	Location	Length (Mt)	Number	Specification	Remarks
1	2	3	4	5	6	7	8

Category : Kind of boundary eg. comptt, block, zone etc. In case of fences: power fence, others.
Location : By compartment or suitable landmark.
Number : In case of enclosures , exclosures, number of pillaars etc. as applicable.
Specification : As applicable to the construction: dry rubble, chain linl, local material, height, area, depth width etc.
Remarks : Any other relevent information

FORM – 21 A
Developing Infrastructure : Firelines (New)

Sl. No	Year	Fireline Category or width	Name of points connected	Length (Mt)	Cost	Remarks
1	2	3	4	5	6	8

Category : main or subsidiary etc. Record width

FORM – 21 B
Developing Infrastructure : Firelines (New)

Sl. No	Year	Fireline Category or width	Name of points connected	Length (Mt)	Cost	Remarks
1	2	3	4	5	6	8

Category : main or subsidiary etc. Record width

FORM – 22
Tourism

Year	The category of visitors by month & number					Indian		Revenue	Day visitors		Staying overnight		Total revenue
	Adult			Children	Total	Rural	Urban		No	Revenue	No	Revenue	
	Month	Male	Female										
1	2	3	4	5	6	7	8	9	10	11	12	13	14

FORM – 23
Outbreaks of fires : Eravikulam National Park.

Sl. No	Year	Location	Extant (ha)	Dates		Reason	Estimated loss	Remarks
				Detected	Controlled			
1	2	3	4	5		6	7	8

Location : By compartment
Reason : Established or suspected
Estimated Loss : eg. no. of trees damaged, stacked firewood/timber/bamboo destroyed/damaged by volume and cost, wild animals dead, particulars of sensitivity sites affected, other property or life destroyed.
Remarks : State particularly problems encounterred in detection and suppression and any other useful information. State also whether the extent of fire has been mapped.

FORM – 24
Offence cases detected : Eravikulam National Park.

Sl. No	Year	Category	Numbers	No. of cases detected		No. of cases under process	No. of cases compounded	Remarks
				Successful	Failure			
1	2	3	4	5		6	7	8

Category : eg. Illegal cutting of trees, illegal firewood, illegal NWFP, poaching, encroachment, illegal grazing etc, Category be codified by letters of alphabet.
Remarks : Any other useful information. This shouls also insludethe number of cases p[ending decision with the Department. The cases under col. 8 pertain to area of

non PA status under management which do not involve an endangerred species.(Shedule-I)

FORM – 25
Incentives and awards : Eravikulam National Park.

Sl. No	Year	No. of recipients of incentives for detecting offences	Amount paid(Rs)	Kind of award	No. of recipient	Remarks
1	2	3	4	5	6	8

Kind of award : Eg. medals like the Shouryachakra, any other such awards insituted by the State/Central govt., including citations extra incriments, etc.
Remarks : Any other useful information. If award carries cash, mention the amount.

FORM – 26
Reasearch projects under implimentation through PA manpower with or without collabration with other agencies Eravikulam National Park.

Sl. No	Year	Title	Completed	Ongoing	New	Status	Financial outlay (Rs)	Expenditure incurred (Rs)	Remarks
1	2	3	4	5	6	7	8	9	10

Completed : State date of completion and the status of the project reports
Ongoing : State since when the project is under operation and expected period of completion..
New : State the date of commenccement and duration.
Status : state the progress towards achievement of objectieves; or projects which has been dropped or held in abeyance etc.
Remarks : Any other relevent information. If the projects is collabration with any other agency or is an contractual arrangement, state the situation and the name of the collabrating agency. If animal/plant specimen are being collected, state authority and where collections are being housed

FORM – 27
Survey and inventories: Eravikulam National Park.

Sl. No	Year	Title of survey, inventory activity	Completed	Ongoing	New	By PA	By other agency	Remarks
1	2	3	4	5	6	7	8	9

Completed : State date of completion of field work and the status of the report
Ongoing : State since when the is it under operation and when is expected to be completed.
New : State the date of commenccement and duration.
By PA persona l: Will include collabration or contractual arrangement. State the case as relevent.
Other agency : State the name of the agency.
Remarks : If specimen plants/animals are being collected, state where the collections are being housed and authority. Any other useful information

FORM – 28
The Monitoring programme: Eravikulam National Park.

Sl. No	Year	Title of the programme	Date of initiation	Responcible agency	Technique	Status of collaboration and analysis of data	Remarks
1	2	3	4	5	6	7	9

Technique : PCQ, belt transect, line transect and plots, pugmarks etc. by the title of the technipue.
Status of collaboration : write only if applicable

FORM – 29
Ecodevelopment programme: Targets and implimentation Eravikulam National Park

Sl. No	Year	Nature of the programme	Sector (Central/ State) or NGO sponsored	Target set		Achievements		Village (buffer/enclaved)	Remarks
				Physical	Financial	Physical	Financial		

Nature of the programme : eg. pasture development, fodder plantations, establishing biogas plants, livestock improvement, establishment ansd development of sericulture, revival of local skills such as handicraft, water harvesting systems, adult education. Etc.
Village : Site where programme is being implimented-whether buffer or inside PA.
Remarks : State problems, state failures and thereof, reasons for not attaining targets, for non-implimentation or deviation etc. State whether it is on the right tracks in context of achievement of objectives

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