

## **DEMAND No.54**

### **POLICY NOTE 2016-2017**

#### **FOREST DEPARTMENT**

##### **INTRODUCTION**

The Government of Tamil Nadu recognizes the prospects of a balanced ecosystem in advancing the socio-economic development of the State. The pursuance of policy of environmental stability mandating afforestation and biodiversity conservation through people's movement has led to Tamil Nadu registering an increase of 2501 Sq Km of Forest Cover which is the maximum among all the States in the country for the period 2013-15(Government of India, Forest Survey of India Report, 2015). The achievement is quite significant keeping in view the continuous challenge faced by the Forest department because of increasing population pressure on the forest resources.

Tamil Nadu has been a pioneer State in the Biodiversity conservation particularly in Protected Area management, including conservation and improvement of terrestrial/ marine flora and fauna. The State's sincere efforts in establishing range of Tiger habitats in Western and Eastern Ghats of Tamil Nadu have resulted in the increase of tiger numbers from 163 in 2011 assessment to 229 in 2014 as per "Status of Tiger" report jointly published by the National Tiger Conservation Authority and the Wildlife Institute of India in 2015.

The United Nations Sustainable Development Summit adopted an action plan in 2015 for people, planet and prosperity and framed seventeen Sustainable Development Goals (SDGs). The SDGs are a UN Initiative and are universally acceptable goals that balance three dimensions of Sustainable Development, namely, Environmental, Social, and Economic.

The Government of Tamil Nadu continues to be equally concerned about vulnerability of natural resources on account of climate change and is committed to sustainably manage, enhance the forests and wildlife on scientific principles, while meeting the livelihood needs of the forest dependent communities.

## **2. VISION:**

The Twelfth Five Year Plan for the State of Tamil Nadu encompasses preservation of entire ecological footprint of human activity and includes increasing the forest cover, protection of wetlands, conserving groundwater, rivers and other water bodies, protection of the coastal zones including fragile ecosystems, conservation of the zoological and botanical diversity of the State. The initiatives of the Department are in line with the Hon'ble Chief Minister's Vision 2023 to maintain the ecological balance across the State. During the annual plan period (2016-17)

the Policy initiatives corresponding to each thrust area are as stated below:

### **3. BIODIVERSITY AND GENETIC RESOURCE CONSERVATION:**

Tamil Nadu has 22,877 Sq. km. of recorded forest area, which amounts to 17.59% of the geographical area of the State. As per the assessment of the Forest Survey of India (India State of Forest Report, 2015), the forest cover of the State is 26,345 sq. km. constituting 20.25% of the State's geographical area. This is because Forest Cover of the State got increased by 2501 sq. km. during the period 2013-15. The forest and tree cover of the State now is 30,850 sq. km. which constitutes 23.72% of the total geographical area of the State as against 33% forest and tree cover to be achieved as mandated in the National Forest Policy, 1988. The facets of biodiversity and genetic conservation include:

### **3.1 Improving Forest Productivity and Growing Stock:**

The ecological health of the State is an indication of its economic and social health. The State of Tamil Nadu has a rich array of biodiversity, this includes wide range of trees, herbs, shrubs locked in the rich forests of Western and Eastern Ghats. Thus there is an enormous potential in the State to enhance the growing stock in the Forests by improving the genetic resource and providing appropriate technical and material in put to contribute towards augmenting the social and ecological security by: -

- Identifying economically important tree resources and improving their stock.
- Adoption of better planting stock and improved silvicultural management.
- Protection and Conservation for Rare, Endangered and Threatened species.

- Restoration and improvement in the quality of forests for enhanced ecosystem services.

### **3.2 Wildlife and Biodiversity Conservation:**

Tamil Nadu has been a pioneer State in the Protected Area management and development of forest resources and wildlife. The total area under the protected area management is 7,072.95 sq. km. which comes to 30.92% of the State's Forest area. The Protected Areas in the State includes 5 National parks, 15 Wildlife sanctuaries, 15 bird sanctuaries and 2 conservation reserves besides 4 Tiger Reserves viz. Anamalai, Kalakkad-Mundanthurai, Mudumalai and Sathyamangalam. These Protected Areas have been established under Wildlife (Protection) Act, 1972. Further Tamil Nadu also has the distinction of having 3 Biosphere Reserves viz. Nilgiris, Gulf of Mannar and Agasthiarmalai, which are internationally acclaimed for their rich and unique biodiversity. The Western Ghats are one of the 25 global hotspots and one of the 3 mega centers of

endemism in India. The genetic assemblage of Tiger Reserves, Mukurthi, Srivilliputhur, Kanniyakumari and Megamalai owe their richness in flora and fauna to their locations in Western Ghats. The Biodiversity Conservation and Rural Livelihood Improvement Project pursued at Kalakkad-Mundanthurai Tiger Reserve is a new endeavor in perusing conservation at landscape level, covering five districts namely, Kanniyakumari, Tirunelveli, Virudhunagar, Madurai and Theni. The State proposes to improve wildlife wealth through the following practices:

- To improve the wildlife habitats by extending and strengthening the area wherever required and ensuring connectivity of habitats.
- Management of wildlife resources at Landscape level with better Inter-State Coordination.

- Harness the sentiments of tribal and forest dwellers in wildlife management while ensuring livelihood security.
- Efforts to protect the migratory birds and to conserve their habitats.
- Conservation of Wetlands for Avian fauna.
- Inventory of Biodiversity for Bio-prospecting.
- Understanding the lesser known diversity for conservation gains.

### **3.3 Addressing Human Wildlife Conflict and Mitigation Measures:**

The Forest department initiated measures that benefit both the wildlife and local human communities, enabling mutually beneficial co-existence. The following policy initiatives will be taken to address Human wildlife conflicts and its mitigation:

- Surveillance of vulnerable areas and monitoring of wildlife habitats.



- Mitigation measures to prevent Human wildlife conflicts
- GIS enabled information and technology driven system for monitoring of wildlife habitats to reduce human wildlife conflicts.
- Sensitizing the inhabitants and locals through modern tools and technologies.
- Timely distribution of benefits to win confidence of people.
- Protocols for the rescue and rehabilitation of wildlife straying out of forest areas.
- Strengthening the veterinary services for wildlife through Rapid Response Teams and Mobile Veterinary Units.

#### **3.4 Strengthening of Ex-situ Conservation:**

The Central Zoo Authority of India recognizes Arignar Anna Zoological Park, Vandalur, Chennai; Children's Park, Guindy, Chennai; Amirthi Zoo, Vellore; Kurumbapatti Zoological Park, Salem and Tiruchirappalli Zoo. The policy envisages:

- Conservation of rare, endangered and threatened species through captive breeding programmes.
- To create awareness for conservation support through outreach and education
- To scale up veterinary research for providing solutions for wildlife health and upkeep.
- To create a network of all Zoological and Butterfly Parks in the State for exchange of good practices.
- To seek Public Support for adoption of wild animals in captivity.
- To provide highest standard of veterinary care to all the animals in captivity and in the Rescue Centres.

### **3.5 To Conserve and Protect Marine Biodiversity in the Gulf of Mannar:**

The key coastal habitats in the Gulf of Mannar are coral reefs, seagrass and mangroves.

These habitats are some of the most diverse and valuable ecosystems on Earth. Marine ecosystems of Tamil Nadu, provide the livelihoods for many local fishing communities in the Gulf of Mannar coast, besides acting as buffer for adjacent shorelines from strong waves, help prevent erosion, property damage and loss of life. The Gulf of Mannar Trust has added to the State's effort in the conservation of marine biodiversity ensuring the livelihood security of the people along the coast line. To achieve significant improvement in the conservation of marine biodiversity and sustainable use of natural resources in marine and coastal ecosystems of the State, the policy envisages:

- Conservation and protection of marine biodiversity by promoting sustainable use and equitable sharing of marine resources.
- Enhance the quality of marine habitat with the help of local communities.

### **3.6 To check the growth of Invasive Species and adverse impact on Forests:**

The growth of invasive species in the forest ecosystems of Tamil Nadu has resulted in loss of biodiversity, loss of native flora and fauna, adverse ecological impacts, economic and social losses, increased soil erosion and choking of water bodies besides changes in water and soil properties. It is utmost important to check the growth of invasive species in order to create ecological security in the State. The policy envisages:

- To carry out site specific coordinated invasive species removal programmes.
- To control, remove the invasive species and bring the affected areas invaded by weeds to near natural forests status.

### **4. INCREASING TREE COVER OUTSIDE FORESTS:**

Tree Cover outside Forests is the single most important and cost effective strategy for

achieving the goal of 33% forest and tree cover as envisaged in the National Forest Policy of 1988. There is a need to create a positive environment towards tree planting in Tamil Nadu by creating partnership with people particularly farmers, landowners and institutions to promote local communities to take a lead role in the cultivation of trees which in turn will lead to poverty reduction.

#### **4.1 Agro-forestry for Food and Wood Security:**

The Forest Department's initiative of Tree Cultivation in Private Lands is further strengthened under the Tamil Nadu Biodiversity Conservation and Greening Project (TBGP) and has motivated farmers to raise commercial timber generating tree species in their lands and has also educated farmers about the scope of Agroforestry and Plantation forestry. These plantations with the intercrops provide wood and food security to the farming community. Through this programme

the land will be brought under additional tree crops for the following benefits:

- As mitigation measures for climate resilience.
- To increase farm income through trees resources.
- Providing raw materials to wood based industries.
- Creating new avenues for rural employment and to reduce pressure on the forests.

#### **4.2 Cultivation of Medicinal Plants and Women Empowerment:**

Overexploitation of Medicinal Plants having high market value in Forests needs to be discouraged. The department considers medicinal plant conservation as a priority programme for sustainable harvest of medicinal plants simultaneously creating opportunities for women empowerment. The policy envisages:

- To provide opportunities for cultivation of medicinal plants enabling sustainable harvest by empowering rural women.
- To provide necessary technical knowhow for cultivation of identified medicinal plant species and for sustainable harvest.

#### **4.3 Social Forestry to meet the growing demand of timber:**

The social forestry programmes with stronger linkage, enabling communities to meet the livelihood needs for better life support is one of the major aims of the Tamil Nadu forest department. Social forestry programme in the State will be implemented with the purpose of taking the pressure off the forests and making use of all unused and fallow lands to meet the growing demand for timber, fuel wood and fodder by initiating following actions:

- Afforestation of non-forest lands including Government fallow lands and other waste

lands, besides Railway, Panchayat and PWD lands.

- The Social Forestry Programmes will effectively interface in organizing Tree planting outside forests besides outreach and publicity programmes.

#### 4.4 **Urban Forestry:**

The role of forests in ameliorating urban habitats of the State with the active participation of local bodies, and various other departments has tremendous scope in the State of Tamil Nadu. Trees planted under the programme will act as source for removal of atmospheric pollutants; stabilize soil, groundwater recharge, besides biodiversity conservation and would add to carbon sequestration. The policy envisages:

- The Forest Department will take up planting along Highways to increase the green cover in the State.



- Specific urban planting programmes would aim to provide livelihood security.
- Help to mitigate the rising temperature onslaught.

## **5. FOREST PROTECTION:**

### **5.1 Consolidation and Protection of Forest Resources:**

The Forest Settlement Process is an effort to regulate and protect the land at the disposal of the government, wherein the intention to declare such land as forests has already been notified. The settlement and consolidation of forest areas will help to increase the forest and tree cover of the State to 33% as envisaged in the National Forest Policy, 1988. To consolidate and protect the existing forest resources, the policy vision shall be achieved by:

- Survey and demarcation of Forest Boundaries, in a phased manner and by construction of boundary cairns besides maintenance of existing cairns.

- The MIS/GIS database of the Department would be strengthened to speed up and monitor the forest consolidation works.
- Mangroves, Coastal, Wetlands, Compensatory Afforestation Lands to be consolidated by fixing their boundaries.
- The provisions of National Working Plan Code 2014 and the management plan code will guide the consolidation process.

## **5.2 Incentivizing Communities for Forest Protection:**

Over the last two decades a profound change has been witnessed in the forest ecosystems. Community based management institutions are increasingly being considered for equitable, efficient and effective implementation of protection of forest resources. The capacity building by the forest department of Tamil Nadu through community based approach will facilitate the local people to become partners in forest protection by:

- Incentivizing Conservation and Sustainable Management of Forests.
- Protecting the natural resource base of rare and endangered species, through involvement of communities and incentivizing them for protection of such critically endangered and vulnerable species.
- Building capacity of communities towards forest protection and better management.

### **5.3 Preserving Forest Health:**

Healthy forest Ecosystems are essential for sustainable forest management. The policy envisages mainstreaming measures in the State to control forest fires, Insect and diseases and lessening the impact of extreme weather events. The policy envisages:

- Providing real time information and control of forest fire through enhanced scientific support.

- Building Capacity to detect entomological and pathological malfunctioning in the trees and provide for immediate ameliorative measures.
- The Rapid Response Teams to respond immediately in the event of crisis in the forests and its vicinity.

## **6. CONSERVING WATER PRODUCTION LANDSCAPES:**

### **6.1 River Catchment Protection and Watershed Management:**

Wetlands, water bodies, Rivers, Check dams, and other man made water structures shall be protected to conserve and enhance major water production landscapes. The extent of the wetlands is important for flood control and efforts will be made to protect the wetlands of the State. The policy recognizes that wetlands of the State have potential to improve water quality,

attenuate floods, protect shorelines and provide habitat for varied species of flora and fauna. The policy envisages:

- Augmenting conjunctive water production landscapes in forest areas to rejuvenate river catchments.
- State Wetland Conservation Authority to lay down policy guidelines for conservation of wetlands, for achieving water security in the State.
- Integrated and coordinated development of surface water to improve the quality of water sources in the watersheds to benefit the dependent villages.
- To augment water quality in aquifers.
- To reduce soil erosion and inculcate a culture of water conservation.

## **7. TRIBAL WELFARE AND DEVELOPMENT:**

### **7.1 Skill Development of Tribal Communities:**

The Forest Department will assist in improving the tribal livelihoods by creating opportunities for skill development promoting alternative sources of employment by taking the following measures:

- To generate alternate sources of income through skill development.
- Building capacity for tribal livelihood for the access and benefit sharing from forest resources.
- Creating maximum educational and vocational opportunities for the tribals.
- Empower the tribals including women so that they become self-reliant.

## **8. ENHANCING CLIMATE RESILIENCE IN FORESTS:**

The effects of climate change, including increase in temperature, changes in precipitation patterns, rising sea levels and increased

frequency of weather related anomalies will create risks for forests, wildlife, marine and terrestrial ecosystems in the State. Many of the services that forests provide may become vulnerable on account of climate change. Therefore the State shall strive for ecosystem based adaptation to reduce the adverse impacts of climate change by:

- Societal adaptation to climate change by supporting communities, local knowledge and technologies that promote conservation of forests.
- To enhance ecosystem resilience in landscapes and seascapes, through scientific interventions.

## **9. ECOTOURISM:**

### **9.1 Forest Department to play pivotal role in Eco tourism in Forests and Wildlife Areas.**

Tamil Nadu has a great tradition of conserving its forests and environment, which is

intricately and historically linked with its culture. The forest department proposes to capitalise on this advantage by promoting ecotourism as a responsible travel to natural areas without disturbing the ecology and natural habitats. The Department will strive to manage ecotourism sites within the forest and wildlife are as by:

- Adopting low impact tourism that ensures ecological integrity of wilderness.
- To highlight the heritage value of Tamil Nadu's Forests, and Wildlife.
- Facilitate the sustainability of ecotourism enterprises in ecotourism management.

## **10. SOCIO-ECONOMIC DEVELOPMENT OF FOREST FRINGE VILLAGES:**

### **10.1 To Create Opportunities for Sustainable Livelihoods:**

The people in forest fringe villages are dependent on forests for their wood, food, water and livelihood security. The reduction of marketable Non Timber Forest Produce like fruits,



flowers, berries, tubers, resins, honey, leaves, creepers and other resources has accentuated the poverty conditions among the forest fringe communities. The people living in the fringe villages have increasingly perceived the Forest Department as an agent of development. Further in order to gain trust and respect in the forest fringe villages, the Policy envisages:

- To provide sustainable livelihood opportunities to the fringe and forest dwelling communities.
- To bring about convergence of different schemes for the over all development of forest fringe villages.
- Revisiting the established institutions of joint forest management and revitalise them for conservation gains.

## **11. INFRASTRUCTURE DEVELOPMENT:**

Rapid urbanization and changing technology requires forest Infrastructure to gear up with

emerging demands and challenges to match the modern requirements of the Tamil Nadu Forest department. The policy envisages:

- To strengthen the forest protection measures by using the latest equipments.
- To support forests and wildlife conservation by improving infrastructure and communication facilities including roads and bridges.

## **12. RESEARCH, EDUCATION AND EXTENSION:**

Forest department has made remarkable achievements in the areas of forest research, education and extension. The network of research and extension centres in the State has improved by adoption of multitude of activities covering tree improvement, soil science, seed handling, silviculture, bio-fertilizers, education, extending and showcasing technology to support biodiversity conservation and bio-productivity enhancement. The State has 32 Forestry

Extension centres to respond to the needs of tree cultivating farmers. Effective dissemination of information to various stakeholders including farmers through training programmes, workshops and publications has enabled to enhance the outreach of the department. The State will promote research, education and extension activities by adopting:

- Need based Research programmes in tune to support the new forest management practices.
- To supply certified quality planting material, seeds, bio-boosters and bio-fertilizers for the forestry programmes.
- Emphasis on restoration and recovery programmes for rare endangered and endemic species.
- To provide professional skills for field level functionaries on latest technologies through the Forest Academy and College.

- Documentation and showcasing of best practices through extension programmes.
- Children, youth and women to be sensitized to become torchbearers for conservation.

### **13. MAINSTREAMING, e-GOVERNANCE INITIATIVES:**

The management of forests through adoption of Information Communication and Technology (ICT) driven initiatives will be undertaken to induce change Management, simplification of processes including removal of constraints, ownerships and partnerships, scalability and sustainability to achieve interoperable and web based information for better governance. The ICT led initiatives will provide scope for the following:

- Real time based information for effective forest resource management.

- Improving Forest Administration and fast track governance through MIS and GIS initiatives.

#### **14. PLANNING PROCESS TO SUPPORT FOREST MANAGEMENT:**

National Working Plan Code 2014 provides for uniformity in forest management planning across the country. The policy envisages streamlining of planning process for scientific forest management by:

- Preparing the Working Plans by adopting the provisions of National Working Plan Code 2014.
- Research based Management Plans for wildlife and protected areas.

#### **15. HUMAN RESOURCE DEVELOPMENT:**

The Forestry sector in Tamil Nadu is facing new challenges due to increased responsibilities and management task. Capacity building in the

Forest Department needs to be improved and a perspective HRD Plan will be evolved for maximizing the efficiency and the functioning of the department. The perspective plan will pave way for appropriate HRD interventions for the benefit of its personnel. The key areas of interventions are:

- Plan for Filling up the vacancies through Direct Recruitment, Promotions and Recruitment by transfer will be evolved.
- Evolving a promotion plan to maintain the Field strength of the Department at optimum level.
- Re-organization of different cadres for increased output and efficiency.
- Capacity building, training and Skill upgradation for field and office staff for gains in management, administrative and governance skills.

## **16. STRATEGIES:**

In order to meet the policy vision and the needs of thrust areas the following strategies shall be adopted

- Ecosystem Services of Forests will be garnered to ensure urban and rural prosperity.
- Professional systems will be institutionalized in execution, planning, reporting and monitoring for responsive and enabled Forest Department.
- Five year tenure based programmes on landscape approach to be mainstreamed for plan proposals.
- Human Resource Development including personnel management to be streamlined.

- Support of local community will be harnessed to strengthen the protection system through a humane connectivity with Tribal's and local community.
- Improving infrastructure, connectivity, communication and technology to strengthen forest protection.
- Organizing an efficient forestry research, education and extension activities.

The strategies shall be executed through the following ongoing and innovative schemes.

## **17. IMPORTANT ONGOING SCHEMES:**

### **17.1 Major State Schemes:**

#### **17.1.1 Tamil Nadu Biodiversity Conservation and Greening Project:**

Japan International Co-operation Agency (JICA) aided Tamil Nadu Biodiversity



Conservation and Greening Project (TBGP) with an outlay of Rs. 686 crore is being implemented from 2011-12 and will continue till 2018-19. It is being implemented through a Project Management Unit, registered under the Tamil Nadu Society Registration Act, 1975. The project has been instrumental in reducing the threats to

the native Biodiversity of the State and in enhancing the natural resource base besides improving the capacity of field staff. During 2016-17 the scheme is proposed to continue with an outlay of Rs. 109.51 crore.

#### **17.1.2 Massive Tree Planting Programme:**

In order to make tree planting as a massive people oriented exercise as well as to increase green cover in the State, a massive tree planting programme has been continuing from 2011-12 to 2015-16. Planting and maintenance of 2.62 crore seedlings in the 32 districts throughout Tamil Nadu has been achieved through Massive

Tree Planting Programme till 2015-16. During 2016-17 the programme is proposed to be extended by planting 68 Lakh seedlings, of which 60 Lakh seedlings will be planted by the Rural Development and Panchayat Raj Department and the remaining seedlings will be planted by Forest Department under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).The total outlay for planting of 68 lakh seedlings is Rs.61.68 crore.

#### **17.1.3 Raising Teak Plantations on Padugai lands:**

The objectives of the scheme are to create timber resources in the State, to increase tree cover outside the Reserve Forests and to prevent soil erosion in the canal banks. During 2014-15, teak plantations have been raised over an area of 3260 ha, besides carrying out maintenance works in the padugais of Thanjavur, Tiruvarur, Trichy, Dindigul and Villupuram districts at an outlay of Rs.13.97 crore. The

Scheme with innovative approaches and scientific interventions is proposed to continue during 2016-17 with an outlay of Rs.10.62 crore.

#### **17.1.4 Nature Conservation:**

The objective of the scheme is to maintain the mini zoo's and to carry out the works such as maintenance of fodder species, renovation of existing fence for preventing the animals from moving outside the zoo area, improving the water sources, feeding the zoo animals and maintenance of zoo premises. The scheme was implemented during 2015-16 at an outlay of Rs.0.235 crore. The Scheme is proposed to continue during 2016-17 with an outlay of Rs.0.75 crore.

#### **17.1.5 Payment of compensation for the damages caused by wildlife:**

Increase in human population, urbanization and industrialization have resulted in reduction in quality of wildlife habitats, besides fragmentation

of habitats, as a result of which wildlife have started straying out of the forests into human settlements causing human wildlife conflicts. It is essential to augment fodder resources and provide water holes inside the forests for wildlife to avoid incidents of human wildlife conflicts and also timely payment of compensation to the victims for the loss of human life, injury, damage to agricultural crops and property and create physical barriers for wildlife in the vulnerable areas. During 2011-12, the Government enhanced the rate of compensation amount to be paid for damages to crops, properties and for human death caused by wildlife. The compensation for human death and permanent incapacitation has been raised from Rs.1.50 lakh to Rs.3.00 lakh and for crop damages from Rs.0.15 lakh per acre to Rs.0.25 lakh per acre. An amount of Rs.5 crore was sanctioned under various schemes for payment of compensation during 2015-16. The scheme shall continue during 2016-17 with rates of compensation

enhanced on par with the State Disaster Response Fund.

**17.1.6 Asian Elephants Depredation and Mitigation Measures:**

Human wildlife conflict is a complex problem to be managed by adopting a multi-pronged strategy involving habitat improvement and augmenting water sources, trap crop management (growing crops which are preferred by wild animals as fodder inside the forest area), formation of physical barriers along the forest boundary, capacity building of the villagers, awareness creation and timely payment of compensation to the victims for loss of human life, injuries and for damages to agricultural crops and properties. The construction of barriers like elephant proof trench along forest boundaries to prevent human wildlife conflicts has been found to be effective and has been appreciated by the people. The Scheme is proposed to continue during 2016-17.

#### **17.1.7 Creation of fodder resources and improvement of wildlife habitats:**

Forest Department pays a sizeable amount as compensation for damages caused to the agricultural crops by wild animals and also for loss of life and injuries caused by wild animals. With an objective of restricting the elephant movement within its habitat, Forest Department has proposed to raise green fodder bank inside the Reserved Forest areas and to arrange for application of salt licks to the artificial water holes along the elephants migratory corridor to supplement the mineral requirements of the elephants. Construction of check dams and percolation ponds under the scheme will help to meet the water requirement for the wildlife especially during summer. The Government sanctioned Rs.20.87 crore for implementation of this scheme for a period of five years from 2011-12 to 2015-16. The Scheme is proposed to continue during 2016-17.

#### **17.1.8 Eco - Restoration of Pallikaranai Marshland:**

The Pallikaranai marshland is a unique fresh water swamp located within the Chennai metropolitan area. This wetland is situated in parts of Perungudi, Pallikaranai and Thoraipakkam villages of Kancheepuram District. Hon'ble Chief Minister of Tamil Nadu had directed to protect this marshland during 2002. As on date, 690.65 ha, out of the total marshland area of nearly 931.50 ha, is so far brought under the control of Forest Department. In order to preserve the marshland to discharge its ecological functions, a comprehensive scheme has been sanctioned for a period of five years from 2011-12 with an outlay of Rs.15.75 crore, for taking up various restoration activities like habitat improvement, protection, research, monitoring, publicity and awareness by constituting the Conservation Authority of Pallikaranai Marshland. The Scheme is proposed to continue during 2016-17 with an outlay of Rs.0.35 crore

#### **17.1.9 Establishment of Butterfly Park and Nakshatravanam, Trichy:**

A special scheme for Establishment of Butterfly Park and Nakshatravanam at Trichy in an area of 10 ha, in Upper Anaicut Reserve Forest near Srirangam has been sanctioned to conserve and exhibit the butterflies for the benefit of pilgrims and tourists with an outlay of Rs.7.35 crore. During 2015-16, this scheme was implemented at an outlay of Rs.3.37 crore with the support of tourism department. The activities of Butterfly Park will continue during 2016-17.

#### **17.1.10 Gulf of Mannar Biosphere Reserve Trust (GOMBRT):**

After closure of UNDP-GEF scheme in 2012, the Government of Tamil Nadu has taken over the functioning of the Gulf of Mannar Biosphere Reserve Trust from 2013-14. During 2016-17, activities of GOMBRT inclusive of research, awareness creation, training



programmes and eco-development activities shall continue with an outlay of Rs.2.96 crore.

**17.1.11 Arignar Anna Zoological Park, (AAZP) Vandalur:**

Arignar Anna Zoological Park is spread over an extent of 602 Ha. of forest area and is located at Vandalur near Chennai. The park exhibits 2142 animals, which includes 43 species of mammals, 92 species of birds, 35 species of reptiles in all numbering 170 species of wildlife. Over the past 30 years since its establishment, this zoological park has emerged as a successful ex-situ conservation complex and a captive breeding centre for many endangered wildlife species like White Tiger, Lion Tailed Macaque and Nilgiri Langur. This zoological park attracts on an average 25 lakhs visitors annually. The establishment of Butterfly Park within the Arignar Anna Zoological Park during the year 2015-16 is a new attraction to Park. The Park is emerging as a significant initiative for awareness

and compassion for wildlife in Tamil Nadu. The activities of AAZP shall continue during 2016-17.

**17.1.12 Rejuvenation Camp for Temple and Departmental Elephants:**

A Special Health and Rejuvenation camp for the 31 elephants belonging to Temple and Mutts was conducted for 48 days from 07.01.2016 to 23.02.2016 at Thekkampatti in Coimbatore District and Rs.1.05 crore was sanctioned by Hindu Religious & Charitable Endowment Department. Before starting the camp, appropriate health checkup for elephants and their Mohouts was done. In addition, 53 captive elephants of Forest Department participated in the similar Special Health camps conducted at Mudumalai Elephant camp, Anamalai elephant camp, Sadivayal Kumki Elephant Camp, Arignar Anna Zoological Park, Vandalur and Kurumbapatti Zoo, Salem during 2015-16 and an amount of Rs.90.00 lakhs was spent for this purpose.

The rejuvenation camp facilitates socialization and joyful experience which results in psychological improvement among the elephants. The Rejuvenation Camp will continue during 2016-17.

## **17.2 CENTRALLY SPONSORED SCHEMES:**

The funding pattern under the centrally sponsored schemes varies with respect to each scheme. The major centrally sponsored schemes with varied sharing patterns between the Central Government and State Government are as under:

### **17.2.1 Project Tiger:**

The Forest Department has taken various measures to conserve Tigers and their habitats. There are four Tiger Reserves in Tamil Nadu viz., Kalakad Mundanthurai Tiger Reserve in Tirunelveli District, Anamalai Tiger Reserve in Coimbatore and Tirupur Districts, Mudumalai Tiger Reserve in

Nilgiris District and Sathyamangalam Tiger Reserve in Erode District. The importance of tiger conservation lies in the fact that the presence of this predator is an indicator of the health of an ecosystem. Government of India provides financial assistance in the ratio of 60:40 for works of Non-recurring nature. The Government of India bears share of 60% and remaining is borne by the State Government. Further with respect of Recurring works the ratio between Central and State Government is 50:50. The scheme provides assistance for works relating to habitat conservation, protection including fire prevention, eco-development, improvement of water sources, tourism development, mitigating human wildlife conflicts and improvement of infrastructure facilities, in Tiger Reserves. The scheme shall continue during 2016-17 with an outlay of Rs.17.71 crore.

#### 17.2.2 **Project Elephant:**

Project Elephant scheme is implemented in four Elephant Reserves i.e. Nilgiris Eastern Elephant Reserve, Coimbatore Elephant Reserve, Anamalai Elephant Reserve and Periyar Elephant Reserve. These Elephant Reserves have no separate legal status. These 4 Elephant Reserves are grouped for management convenience and include the existing Reserve Forests and Sanctuaries. This scheme is being implemented to protect the elephants, improve their habitats providing water facilities, and to control forest fire. The scheme also includes payment of compensation for the crop damages and loss of human lives caused by human wildlife conflicts and further to take necessary steps to minimize such conflicts. Tamil Nadu is one among the leading States implementing Project Elephant, pursuing scientific management and habitat conservation. The Government of India has introduced a revised funding pattern in the ratio of 60:40, with Government of India, bearing share of 60% and remaining to be met by the State

Government. The Scheme shall continue during 2016-17 with an outlay of Rs.3.04 crore.

### **17.2.3 Gulf of Mannar Biosphere Reserve:**

The Gulf of Mannar Biosphere Reserve is known for its rich bio-diversity and endemism. It includes 21 coral rich islands along the coast line from Rameswaram to Tuticorin. With its rich biodiversity of about 4223 species of various flora and fauna, part of this Gulf of Mannar, between Rameswaram and Tuticorin covering 21 islands and the surrounding shallow coastal waters was declared as Marine National Park in 1986 by the Government of Tamil Nadu and later in 1989 Government of India declared this as the first Marine Biosphere Reserve of India. Besides key coastal habitats like coral reefs, seagrass and mangroves, the Gulf of Mannar Biosphere Reserve supports several critically endangered species such as *Dugong dugon* (sea cow), sharks including whaleshark, sea horses, green sea turtles, dolphins, sea cucumbers and several

endemic species of sea grass, crabs and mangroves. Government of India sanctions funds for this Reserve under two separate schemes viz. Gulf of Mannar Biosphere Reserve and Conservation and Management of coral reefs. The revised funding pattern determining the share between the Government of India and the State Government for the said two schemes varies in the ratio of 60:40 and 50:50, with Government of India bearing 60% and 50% respectively. This scheme shall continue during 2016-17.

#### **17.2.4 Wetland Conservation and Development**

Wetland systems directly or indirectly support for providing goods and services to lakhs of people by checking floods, preventing coastal erosion, mitigating the effects of natural disasters like cyclones and tidal waves, storing rainwater, recharging ground water aquifers, providing nesting ground for many wading birds and water fowls, providing food and shelter for mammals.

Wetlands also act as carbon sink and help to remove a wide range of pollutants. In Tamil Nadu, this scheme is implemented at Point Calimere, Kazhuvveli and Pallikaranai Wetlands. Major activities involved in Wetland management are Habitat improvement, Wildlife Protection, Eco-development activities around Wetlands, Awareness creation, Research and Monitoring and Nature Education. The revised funding pattern for the scheme Wetland Conservation and Development is in the ratio of 50:50 between the Government of India and the State Government. The Scheme shall continue during 2016-17 with an outlay of Rs.1.97 crore.

#### **17.2.5 Agasthyarmalai Landscape site in Tamil Nadu:**

The part of Agasthyarmalai Landscape in Tamil Nadu comprising of 2707.49 Ha, falls in the area of Megamalai Wildlife Sanctuary and Theni Forest Division in Theni District, Grizzled Squirrel Wildlife Sanctuary in Virudhunagar District,



Kalakad-Mundanthurai and Tirunelveli Forest Division in Tirunelveli District and Kanniyakumari Wildlife Sanctuary in Kanniyakumari District. The Agasthyarmalai Landscape with the richness of Mammalian species diversity accommodates the increasing tiger population and maintains the genetic viability of wild species found in the whole area. With a view to conserve the entire spectrum of biodiversity, genetic diversity of species, research, monitoring, education and training besides economic well-being of the local people, this scheme is being implemented. The scheme is 100% funded by the Government of India, through an externally aided project Biodiversity Conservation and Rural Livelihood Improvement Project (BCRLIP). The Scheme shall continue during 2016-17.

#### **17.2.6 National Afforestation Programme**

The National Afforestation Programme (NAP) is being implemented in Tamil Nadu from 2002-03 through Forest Development Agencies at

District level and Joint Forest Management Committees (JFMCs) at village level with 100% central assistance and an area of 74,764 ha has been afforested so far at a cost of Rs. 124.09 crore. The revised funding pattern for this scheme is in the ratio of 60:40 between the Government of India and the State Government. The Scheme shall continue during 2016-17 with an outlay of Rs.1.69 crore.

**17.2.7 Conservation, Development and Sustainable Management of Medicinal Plants:**

The scheme of Conservation, Development and Sustainable Management of Medicinal Plants is a 100% centrally sponsored scheme. The National Medicinal Plants Board, New Delhi has approved the proposal for an outlay of Rs.336.77 lakhs for a period of 6 years since 2013-14. The Scheme shall continue during 2016-17.

**18. HIGHLIGHTS OF 2015-16:**

- The Government of India's organization, namely, Forest Survey of India in its Report 2015 documented that Tamil Nadu registered an increase of 2501 Sq Km of Forest Cover, which is maximum among all the States in the country for the period 2013-15.
- Hon'ble Chief Minister inaugurated 222 Buildings constructed by the Forest Department at a total cost of Rs. 32.87 crore.
- Agasthyarmalai Biosphere Reserve became part of World Network of Biosphere Reserves in March 2016. With this all the three Biosphere Reserves of Tamil Nadu, namely, Gulf of Mannar, Nilgiris and Agasthyarmalai Biosphere Reserves are now part of World Network of Biosphere Reserves.

- Wireless video surveillance system has been established for monitoring and protection of valuable Red sanders trees in Tiruvallur Division at a cost of Rs.96.54 lakhs under Tamil Nadu Innovation Initiative Programme.
- Sanction is accorded for implementation of Tamil Nadu Biodiversity Conservation and Greening Project at an outlay of Rs.114.55 crore.
- Programme for Conservation of Olive Ridley Sea turtles under TBGP has been implemented in eight Forest Divisions. During the last three years 1,29,252 eggs collected and 94,640 hatchlings were released in their natural coastal habitat.
- Three Rapid Response Teams for tracking human wildlife conflict were established in Coimbatore, Krishnagiri and Tirunelveli Districts at a cost of Rs.2.67 crore.

- Raising of sandal plantation scheme has been taken up in Vellore, Salem, Erode, Dharmapuri, Trichy and Coimbatore districts with an outlay of Rs.5.00 crore for augmenting sandal resource.
- An innovative early warning alarm system has been established to caution people about the movement of wild elephants in Tamil Nadu Government Buses in Valparai area on pilot basis.
- With an objective of acknowledging the contribution of legendary foresters who left indelible footprints for the cause of forest and wildlife conservation, a Hall of Fame depicting biography of such legends was established in the head office of the Forest Department.
- Society for Wildlife Interface Forestry Training(SWIFT) has been established In Tamil Nadu Forest Academy, Coimbatore

for implementing innovative thinking and out of box ideas in the field of forests and wildlife conservation.

- The Government of India recognized Tamil Nadu Forest Academy (TNFA) Coimbatore as one of the training institutions for training Forest Range Officers of the Country. During the year 39 Forest Range Officer Trainees from six other States have been deputed to TNFA Coimbatore.
- To capture geo based real time information on events occurring in the forest areas, the Tamil Nadu Forest Department mainstreamed 813 Global Positioning Systems.
- With an objective of encouraging ecotourism, Tamil Nadu Forest Department established 25 Ecotourism sites under Tamil Nadu Bio-diversity Conservation and

Greening Project with the support of local communities.

## **19. LOWEST DIVERSION OF FOREST AREAS:**

Tamil Nadu has always been the forerunner of all the forest protection and conservation measures as it implements various enactments vigorously. The diversion of forest lands for non-forestry purposes in Tamil Nadu continues to be lowest in the country. In a long span of more than 30 years, the diversion of Forest areas for non forestry purpose is only about 4,546.80 hectares involving 388 cases.

## **20. FOREST REVENUE AND EXPENDITURE DETAILS:**

### **20.1. Forest Revenue:**

Major sources of revenue are by sale of sandalwood, timber and sale of social forestry plantations (Annexure-I). Dead sandalwood trees alone are extracted for sale. Matured teak trees

aged over 30 years are being harvested every year. Supply of pulpwood raw materials is made from matured plantations of Eucalyptus and Wattle which are allotted by the Government to the paper mills and other wood based industries.

## **20.2. Expenditure:**

All the developmental programmes including afforestation, soil and water conservation, habitat improvement works in various sanctuaries and Tiger reserves, intensive care towards protection of forest wealth, creation of awareness among the rural people have been continued in an effective manner. The necessary provisions for schemes made in the budget are narrated in Annexure-II.

## **21. CORPORATIONS:**

### **21.1. Tamil Nadu Forest Plantation Corporation Limited (TAF CORN):**

21.1.1. TAF CORN was established on 13.06.1974 with headquarters at Tiruchirappalli under Indian Companies Act, 1956. This



Corporation has an authorized share capital of Rs.10 crore and a paid up share capital of Rs.5.64 crore. The entire share capital of the Corporation is held by the Government of Tamil Nadu. Presently 73,722 Ha. of Reserved Forests have been taken by TAF CORN on lease from Tamil Nadu Forest Department. In pursuance of Government orders an area of 1262.05 hectare has been handed over by TAF CORN to Tamil Nadu Forest Department. TAF CORN pays 30% of the annual turnover as lease rent to the department.

21.1.2. The main objectives of TAF CORN are to raise, maintain and harvest Eucalyptus pulpwood and cashew to meet the needs of industries, to increase the productivity of forests, to provide rural employment, to conserve soil and moisture and to supply firewood to meet the needs of the rural people.

21.1.3. The details of the plantations raised and expenditure involved during 2014-15 and 2015-16 are given in Annexure-III.

21.1.4. The pulpwood supplied to paper mills during 2014-15 and 2015-16 are given in Annexure-III.

21.1.5. Cashew is the second major revenue earner in the Corporation. The details of revenue realized are given in Annexure-III.

21.1.6. The revenue and expenditure details of the corporation for 2014-15 and 2015-16 are given in Annexure-IV.

21.1.7. The details of fresh plantations to be raised and cost involved during 2016-17 are given in Annexure-IV.

## **21.2. Tamil Nadu Tea Plantation Corporation Limited (TANTEA):**

21.2.1 A Government Tea Project was started by the Government of Tamil Nadu for raising tea plantations in 1968 through the Forest Department with the socio-economic objective of rehabilitating the repatriates from Sri Lanka under the Shastri-Srimavo Pact. The said tea

project was later, registered as a company under the Indian Companies Act, 1956 viz., Tamil Nadu Tea Plantation Corporation Limited and is popularly known as TANTEA. The authorized share capital of this Corporation is Rs.25 crore and the paid-up share capital is Rs.14.96 crore. The corporation is maintaining plantations over an area of 4311.04 Ha, on the lands leased out by Tamil Nadu Forest Department in four phases. Details are stated in Annexure-V.

21.2.2. The main objectives are to establish tea plantations and to employ and rehabilitate the Sri Lankan repatriates in the tea plantations.

21.2.3. The actual physical achievement of green tea leaves and made-tea for the year 2014-15 and 2015-16 are furnished in Annexure-V.

21.2.4. The Revenue and expenditure details are furnished in Annexure-V.

### **21.3. Arasu Rubber Corporation Limited (ARC):**

Arasu Rubber Corporation Limited with headquarters at Nagercoil has rubber plantations over an area of 4160.78 Ha. of lands taken on lease from Tamil Nadu Forest Department in Kanniyakumari district, where the soil, climate and topography are conducive for the growth of rubber trees. The Corporation was registered on 01.08.1984 under the Indian Companies Act, 1956 and has been functioning with effect from 01.10.1984. The authorized capital of the Corporation is Rs.10 crore and the paid up share capital is Rs.8.45 crore. The Government of Tamil Nadu holds the entire share capital of the Corporation. There are 1178 permanent workers including 265 Sri Lankan repatriates.

Production and financial achievements are furnished in Annexure-VI.

## **22. CONCLUSION**

Forests, Wildlife and the natural resources therein provide the foundation on which the edifice of development and prosperity of the State is built. The Government of Tamil Nadu is committed to conserve forests, water, wildlife, biodiversity and the associated ecological processes on scientific principles, while meeting the livelihood aspirations of the forest dependent communities ensuring the well-being of the people.

The Government will continue to discharge its obligation to achieve the National goal of increasing the extent of Forest and Tree cover to one third of the land area and maintaining the water, food, wood, livelihood and ecological security.

**DINDIGUL C. SREENIVASAN**  
**MINISTER FOR FORESTS**



## ANNEXURE-I

### Forest revenue:

Sl.No	Source of revenue	2016-17 Budget Estimate (Rs. in lakhs)
1.	Sandalwood	7,150.00
2.	Timber	1435.44
3.	Supply of raw materials to industries	942.87
4.	Other Minor Forest Produce	63.22
5.	Farm Forestry plantations excluding refund	2,200.00
6.	Sale of bamboo, cashew, softwood plantations, etc.	16.50
7.	Other receipts	4,051.17
	Sub total	<b>15,859.20</b>
	Deduct recoveries (-)	<b>0.01</b>

Sl.No	Source of revenue	2016-17 Budget Estimate (Rs. in lakhs)
	Total	<b>15,859.19</b>



**ANNEXURE-II**  
**Expenditure:**

Name of the Scheme(s)	2016-17 Revised Budget Estimate (Rs. in lakh)
<b>Non-Plan schemes</b>	<b>43,134.53</b>
<b>State Plan schemes</b>	<b>13,579.08</b>
<b>Centrally Sponsored Schemes</b>	<b>2,452.94</b>
<b>Schemes shared between State and Centre</b>	<b>1,294.61</b>
<b>Total</b>	<b>60,461.16</b>

**ANNEXURE-III****Tamil Nadu Forest Plantation Corporation Limited****Achievements:**

Sl. No.	Raising Plantation Species	Physical (Ha)		Financial (Rs. in crore)	
		2014-15	2015-16	2014-15	2015-16
1.	Eucalyptus	4225	4349	14.24	15.22
2.	Cashew	978	711	3.61	2.43

**Pulpwood supply**

Year	Quantity supplied (M.T)	Revenue (Rs. in crore)
2014-15	1,64,961.823	55.87
2015-16	1,52,974.725	51.66
2016-17 (Budget Estimate)	1,65,000.000	60.89

**Cashew**

Year	Revenue (Rs. in crore)
2014-15	6.33
2015-16	7.26
2016-17 (Budget Estimate)	7.50

**ANNEXURE-IV**  
**Tamil Nadu Forest Plantation Corporation Limited**  
**Revenue and Expenditure:**

(Rs.in crore)

<b>Year</b>	<b>Revenue</b>	<b>Expenditure</b>	<b>Profit (+) Loss (-)</b>
2014-15 (Actual)	82.10	61.97	(+)20.13
2015-16	77.35	60.84	(+)16.51
2016-17 (Budget Estimate)	81.05	73.00	(+)8.05

**Proposals for 2016-17**

<b>Plantations</b>	<b>Physical (Ha)</b>	<b>Financial (Rs. in crore)</b>
Eucalyptus	4,000	13.66
Cashew	250	0.92

**ANNEXURE-V**  
**Tamil Nadu Tea Plantation Corporation Limited**  
**Area leased out to TANTEA:**

Phase	Year	Planted area (in Ha.)		
		Nilgiris	Anamalai	Total
Phase I	1969-79	1858.74	..	<b>1858.74</b>
Phase II	1979-81	583.10	..	<b>583.10</b>
Phase III	1982-84	336.58	..	<b>336.58</b>
Phase IV	1990-95	576.26	956.36	<b>1532.62</b>
<b>TOTAL</b>		<b>3354.68</b>	<b>956.36</b>	<b>4311.04</b>

**Green tea leaves and made-tea production**

<b>Details</b> (in lakh kgs.)	<b>2014-15</b>	<b>2015-16</b>
Harvest of green tea leaves	343.25	303.92
Made-Tea production	84.20	73.22

**Revenue and expenditure details**

(Rs. in crore)

<b>Year</b>	<b>Revenue</b>	<b>Expenditure</b>	<b>Profit (+) Loss (-)</b>
2014-15	60.74	75.69	(-) 14.95
2015-16	57.72	71.72	(-)14.00
2016-17	67.47	73.72	(-)6.25

**ANNEXURE-VI**  
**Arasu Rubber Corporation Limited**  
**Production and financial achievement**

(Rs. in crore)

Sl. No	Particulars	2014-15 (Actual)	2015-16	2016-17 BE
1.	Production of Rubber (in M.T)	1911	1909	1800
2.	Revenue and expenditure			
	a) Income	31.56	25.36	34.92
	b) Expenditure	42.24	36.43	41.75
3.	Profit (+) or Loss (-)	(-) 10.68	(-)11.07	(-) 6.83