12.1 FORESTS

Overview

Forests are renewable natural resource capable of providing several major and minor forest products and contribute substantially to economic development. The forests consist of and conserve a variety of flora and fauna, which form a rich bio-diversity and play a vital role in the environmental stability and ecological balance. Apart from various products, which forests yield, the forests provide shelter and means of livelihood for the hill tribes. They provide employment to people and revenue to Government. They influence the climate by reducing the extremes of temperature, act as rain-holder and rain banker, conserve soil and regulate moisture and flow of rivers and are essential for health also as they purify the air. The trees are objects of beauty, forests provide fine scenery and attract tourists and serve as a source of recreation.

The geographical area of Tamil Nadu is 1.30 lakhs sq.km. Tamil Nadu has a forest area of 22,699 sq.km. which constitutes only 17.56% of the total geographical area. This is very much below the National Policy stipulation of 33.33% and also below the national average of 21.16%. It comprises of 19,285 sq.km. of Reserved Forests, 2,254 sq.km. of reserved lands and 1,306 sq.km. of unclassed forests. The per capita forest area of Tamil Nadu is only 0.04 hectare compared to the national average of 0.08 hectare. These are indicators of the magnitude of effort required to increase the forest cover or tree cover in the State which should be normally one-third of the total land area.

The forests of the State are under acute biotic pressures. There are 3,072 villages lying close to forests and the increasing pressure from the growing population of the villagers on the forest biomass has resulted in widening gap between demand and supply of various forest products besides reducing its regeneration and productive potentials of forests. The area under forest has shrunk because of rapid growth of population and the increasing demand for food and agricultural raw material. Large tracts of forests have been cleared to find area for cultivation and settlement. The growth of population has accelerated the indiscriminate felling of trees. Forests have also been cleared to meet the demand for firewood and other products. The practice of unregulated grazing has resulted in the removal of natural vegetation. Clearing of vegetation also results is soil erosion which, in turn, affects agriculture and eventually the economy of the country.

Conservation and intensive management of forests has become necessary for the protection and improvement of the quality of the environment, the deterioration of which has caused considerable harm. India is one of the few countries, which has a forest policy since 1894. It was revised in 1952 and again in 1988. The main plank of the forest policy of 1988 is protection, conservation and development of forests. Its aims are:

- Maintenance of environmental stability through preservation and restoration of ecological balance;
- Conservation of natural heritage;
• Check on soil erosion and denudation in catchment area of rivers, lakes and reservoirs;
• Check on extension on sand dunes in desert areas of Rajasthan and along coastal tracts;
• Substantial increase in forest tree cover through massive afforestation and social forestry programmes;
• Meeting the requirement of fuel wood, fodder, minor forests produce and soil timber of rural and tribal populations;
• Increase in productivity of forests to meet the national needs;
• Encouragement of efficient utilisation of forest produce and optimum substitution of wood and
• Steps to create massive peoples movement with involvement of women to achieve the objectives and minimise pressure on existing forests.

The entire gamut of forest activities have been given a new orientation in the light of the National Forest Policy of 1988. Under the provisions of the Forest (Conservation) Act, 1980 which was enacted to check the indiscriminate deforestation, prior approval of the Central Government is required for diversion of forest lands for non forest purposes. The forests of Tamil Nadu are governed by the Tamil Nadu State Forest Act 1882, the Wild Life Protection Act 1972 and the Rules formulated there-under. Although the underlying themes and principles of the National Forest Policy 1988, are the guiding force, formulation of a separate “State Forest Policy” is under consideration of the Government. The basic thrust of the proposed Forest Policy of the State is directed towards environmental conservation, ecological stabilization and meeting the local needs of the people to the extent possible on a sustainable basis.

*Ninth Five Year Plan Performance*

*Objectives*

The Ninth Plan was formulated with the following objectives:

(1) To maintain the environmental stability and ecological balance
(2) To conserve the flora and fauna
(3) To conserve the moisture and soil in the catchment areas
(4) To increase the tree cover
(5) To create massive peoples movement in forestry through Joint Forest Management and
(6) To increase the forest or tree cover in the State to 20% of total land area.

*Performance*

An area of 3,73,389 ha. of degraded forest had been upgraded biologically through Joint Forest Management under Tamil Nadu Afforestation
Project, implemented with the financial assistance from Japan Bank for International Co-operation (JBIC). A total number of 999 village forest councils had been established to ensure protection to micro watersheds adjacent to these villages with the involvement of 703 non-Governmental Organisations in the project. The employment generated was about 400 lakh mandays. Usufructs to the tune of 603.4 M.Tones had been harvested giving revenue of Rs. 28.46 lakhs for benefit sharing among the members of Village Forests Council. Watershed Development Programmes were undertaken is 9,340 ha in Western Ghat Region under the Western Ghat Development Programme and is 1,335 ha in Nilgiris under the Hill Area Development Programme. To increase productivity from forests, 1,442 ha. of Teak Plantations were raised on the lesser productive degraded forest and along canal banks. To meet the demands of fuel-wood, rural fuel wood plantation was raised in an area of 14,700 ha. More than 350 medicinal plant species were identified and assembled. Gulf of Mannar Reserve Trust has been formed to get financial assistance from the Global Environmental Facility. The Project Elephant and the Project Tiger were managed well with Eco Development measures and ensuring adequate protection measures. 5 lakh high yielding 60 varieties of Tamarind were produced and the world’s first ever second generation clonal seed orchard in Casuarina equisetifolia was established.

Table showing Targets and Achievement (1997-2002)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Year</th>
<th>Physical (Hectares)</th>
<th>Financial (Rs. in crores)</th>
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<td></td>
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Tenth Five Year Plan

Objectives, Approach and Strategy

Forests being a renewable natural resource deserve conservation and protection. Forests therefore needs to be managed in such a way that ensure their sustainability and utilisation safeguarding the ecological process and genetic diversity essential for the maintenance of the resource base. Efforts will be continued during the Tenth Five Year Plan to increase the forest/ tree cover in the State to one third of the total land area of the State.

Objectives

1. Conservation of Bio-diversity and maintenance of ecological and environmental stability.

2. Increasing the forest or tree cover in the State to one-third of the total land area.
3. Conservation of moisture and soil in catchment areas of lakes, rivers and reservoirs by enhancing the tree cover.

4. Stabilising the fragile ecological system in Coastal Areas.

5. Increasing productivity of species and value addition and through innovative researches and technological development giving thrust to medicinal plants and Non-timber Forest Produces.

6. Meeting genuine requirements of fuel, fodder, non-wood forest produce of rural population and at the same time substantially increasing tree cover in private and community lands to reduce pressure on forests.

7. Uplifting economy of the tribal population.

8. Strengthening further the people’s movement in forestry through Joint Forest Management.

The forest area of Tamil Nadu is mainly spread over Western Ghats, Eastern Ghats and the plateaus in between. Forest plays a crucial role in the economic and social well being of people particularly in rural areas of Tamil Nadu. The structure and quality of forest varies from place to place due to difference in interaction of various factors – geographical, topographical, hydrological, etc, under the influence of climate and biotic interference over centuries. The State has over 12% of Reserve Forest Area as protected areas. Efforts are on to include more areas under this category. For overall development of the villages adjacent to the forest area and biodiversity conservation it has been proposed to rehabilitate the ecologically degraded forests.

NGO’s and corporate involvement in forestry, removal of policy impediments and effecting sectoral co-ordination are the specific areas, which will be addressed in the Tenth Plan. Forest Department will continue to give priority for expansion of Medicinal Plant Conservation Areas and Medicinal Plant Development Areas and encourage individual farmers through the medicinal plant cultivation support programme. The efforts of Forest Department in tackling the marginal lands will have to be harmonised with the Wasteland Development Programme.

There will be a greater thrust in Tenth Five Year Plan from Ninth Five Year Plan on

- Increasing productivity of species and value addition and through innovative research and technological development giving thrust to Medicinal plants and Non Timber Forest Produce.

- Meeting genuine requirements of fuel, fodder, Non Wood Forest produce of rural population and at the same time substantially increasing tree cover in private and community lands to reduce pressure on forests.

- Uplifting economy of the Tribal population.
Targets

- Good natural areas have been declared protected where conservation of Flora and fauna is receiving priority attention. The State has 12.5% of RFs area as protected areas. Efforts are on to include more areas under this category.

- Under Tamil Nadu Afforestation Project, the balance 3,500 Sq. K.M. of area is proposed to be treated (under the X Five Year Plan).

- Bringing 1,000 villages under Tamil Nadu Afforestation project for transferring the responsibility of protection of adjoining forest areas to the local people.

- Planting of 5,000 hectares of degraded watershed areas under the Western Ghats Development Programme, 1,000 hectares under the Hill Area Development Programme, 8,225 hectares under the Eastern Ghats Development Programme and 20,000 hectares under the Coastal Area Management Programme.

- Afforestation works over an extent of 7,500 hectares under the Catchment area Management Programme.

- Under Forest Protection, provision of jeeps to 92 Ranges in addition to existing ones, provision of 200 additional rifles and 20 pistols to staff.

- Construction of 54 new watch towers for protection against fire.

- Formation of demonstration plots over 116 ha. for forestry extension.

- Bringing 27,500 hectares of poromboke wastelands under Community Afforestation.

- Notifying 1,91,874 hectares under Sec. 16.

The above target will be achieved by

1) Joint Forest Management for the
   a. Conservation of Bio-diversity
   b. Ecological restoration of degraded forest

2) Special Area Management
3) Catchment area Management
4) Protection Forestry
5) Tribal Development
6) Production Forestry
7) Extension Forestry
8) Community Forestry
9) Research
10) Human Resources Development
11) Infrastructure Development
12) Forest Settlement
The Forest Development Agency approach is envisaged in all the Districts. (Proposals have been sent to Government of India for 16 Districts).

Programmes

1. Conservation of biodiversity (Rs. 158.94 crores)

Tamil Nadu is endowed with a rich bio-diversity. Of the total recorded forest area in the State, 2,917 sq kms or 12.8% of the total forest area is dedicated towards wildlife conservation covering five national parks, seven wildlife sanctuaries and twelve bird sanctuaries. The biological diversity in the State has co-evolved with our culture. Tamil Nadu is the home of a wide diversity of plants and animals both domesticated and wild and an impressive variety of habitats and eco-systems. This diversity sustains almost all the essential needs of most of the States population (i.e.) food, clear water, clothing, shelter, fodder, fuel, nutrient cycling etc. Conservation of flora and fauna will continue to be the main objective in the maintenance of sanctuaries, national parks and biosphere reserves. The protected areas in Tamil Nadu are also managed for preserving biodiversity and wilderness to provide nature education, recreation and inspiration for our future generation.

The growing knowledge and skill to order and manipulate nature for various needs has significantly changed the Hydrological, Geo-chemical cycles the landscape, and the coastal areas in the State as witnessed in any other parts of the Country. Efforts will be made to increase the extent of protected areas under wildlife management to 25% of the total forest area of the State. Many medicinal plants and plants of genetic importance will also be conserved in these areas. The cost of all wildlife schemes for the Tenth Five Year Plan is Rs. 145.11 crores. Apart from the above, a project on “Eco-development for implementation in and around Protected Areas” to a tune of Rs. 13.83 crores will be implemented under external aid projects.

2. Ecological restoration of degraded forests (joint forest management)

Tamil Nadu Afforestation Project II (Rs. 583.62 crores)

In a Study Report of Forestry Sector of Tamil Nadu by Tata Consultancy Services (1995), it has been indicated that 7,000 sq. kms of forests out of a total of 22,699 sq. kms of forests in Tamil Nadu are in a precariously degraded condition. Nearly 50% of the degraded forest had been proposed to be restored by the year 2002 through the afforestation programmes taken up under the Tamil Nadu Afforestation Project I (1997-2002) funded by Japanese Bank for International Co-operation (JBIC). The remaining 3500 Sq.Kms. of degraded forests with rural population living in more than 1000 adjacent villages calls for immediate attention and care as a priority activity on a time bound basis. A two pronged strategy, therefore, needs to be adopted to tackle the degraded forest areas in the vicinity of villages, viz. a) to take up ecological restoration work over balance 3,500 Sq.Kms and b) to consolidate the gains achieved during the Ninth Plan Period under the project. For a holistic treatment and development of natural resources in the degraded forest, watershed development approach is adopted. This approach primarily focusses on water harvesting through various types of structures in order to improve the productivity of forests in the upstream side and the productivity of
agriculture in the down stream side. This will involve implementation of ameliorative measures on barren hill slopes, marginal lands, privately owned agricultural lands and badly cut nalas and river courses. In terms of resources development, it starts from water and extends to the resource of fuel, fodder, livestock and all associated components. Joint Forest Management, with people's participation in forestry, is an effective means of regenerating/rehabilitating degraded forest areas. In the light of the above, Phase II of Tamil Nadu Afforestation Project with an outlay of Rs. 583.62 crores has been proposed in the Tenth Five Year Plan period. The focus of the project will be on soil conservation, afforestation, minor irrigation and host of other poverty alleviation activities into well integrated micro watersheds.

3. Special area management (Rs. 337.49 crores)

A. Western Ghats Development Programme (WGDP) (Rs. 28.48 crores)

Western Ghats are the main peninsular hill range extending over 1,400 km starting in the North from near the Tapti River and ending in the South near Kanniyakumari. The western slope of the Western Ghats register very heavy annual rain fall ranging from 2000-6000 mm but across the hill ranges eastward, the intensity of rainfall decreases. The eastern slopes and foothills are almost rain shadow areas.

The Western Ghats constitute the main water shed in Peninsular India from which all principal rivers namely Godavari, Krishna and Cauvery originate and flow east wards emptying into Bay of Bengal. A very large number of short, perennial, torrential west flowing rivers also originate from it and join the Arabian Sea. The Western Ghat tract lies in Nilgiris, Coimbatore, Dindigul, Madurai, Theni, Vidudhunagar, Tirunelveli and Kanyakumari districts. The Western Ghat Development Programme is being implemented with special central assistance. The Tenth Plan will focus on the areas like Conservation of bio diversity, Infrastructure development for enhancing protection, Tribal Welfare, Bio Protection and Water Augmentation. The Tenth Plan proposes to work out new strategies to protect, conserve and enhance the natural heritage and also provides new avenues for effective natural resource management. The total allocation for the programme is Rs. 28.48 crores.

B. Hill Area Development Programme in Nilgiris district (Rs. 22.36 crores)

The Nilgiris, known as Blue Mountains is situated at the tri-junction of the three states of Tamil Nadu, Karnataka, and Kerala in South India. Presently, a revenue district of Tamil Nadu, the administrative unit covers an area of 2478.65 sq. km. out of which 59% of the land is under forests. It has been classified that 53% of the land in Nilgiris district is above 1000 metres in attitude from MSL and 47% of the same surface tower above 1800 metres, and form the southern tip of Mysore plateau. Major rivers like Moyar, Bhavani, Pykara, Kundah and Beypore drain this plateau. The programme is being implemented for eco-restoration in Nilgiris district. It aims to enlarge the permanent green cover and to preserve, protect and develop the ecological condition through afforestation and soil conservation and other developmental activities. The Tenth Five Year Plan programme under HADP will have the following broader objectives:
- Ecological restoration and biological upgradation of hill areas
- Conservation of biodiversity including the protection of wildlife
- Eco development including tribal welfare
- Eco tourism development and other activities.

The total outlay provided under HADP during the Tenth Five Year Plan is Rs. 22.36 crores.

C. Eastern Ghats Development Programme in Tamil Nadu (Rs. 276 crores)

The Peninsular plateaus are bordered on the east by the Eastern Ghats. The Eastern Ghats run in the fragmentary spurs and ranges down the east side of peninsula, receding in land and leaving broad plains belong to no one geological formation; and the rocks which they consist of vary in structure and origin with the country through which they pass. The Range is cut into discontinuous blocks of hills by several large rivers. Eastern Ghats are distributed in as many as 16 districts occupying about 50,000 sq.km.in Tamil Nadu. Unlike Western Ghats, the Eastern Ghats are easily accessible for being encroached upon resulting in increasing list of threatened species day by day. It requires immediate attention to restore the original eco system to the extent possible. Hence it has been proposed to have an exclusive programme for Eastern Ghats under the Tenth Five Year Plan.

The main objectives of this programme are:

1. Bio diversity conservation,
2. Providing vegetal cover to the denuded degraded and highly eroded forest areas,
3. Improvement of water yield and ground water and prevention of soil loss,
4. Skill development and generation of employment to the local people/tribals to improve their socio-economic status be involving them through Joint Forest Management,
5. Increasing the stock of Sandal, Red sanders, etc by natural tending and increasing the forest produce by AR,
6. Scientific Management of wildlife,
7. Creation of eco-awareness and
8. Undertaking research on specific problems.

The total outlay provided under EGDP during the Tenth Five Year Plan is Rs. 276 crores.

D. Coastal Area Management Programme (Rs. 10.65 crores)

Tamil Nadu has a long coastline of 1,000 kms. The coastal habitat is of great importance for its many special features, particularly the estuaries and wetlands with their complex and dynamic ecosystem, mangrove forests, coral reefs etc. In recent years this coastal ecosystem has been greatly disturbed by siltation, erosion, flooding, damage to aquifers, pollution and conversion to various industrial and agricultural uses and for construction
purposes. The mangrove forests are a typical feature of our tropical marine ecosystem. This has suffered extensive damage because of human settlements, conservation of land to cultivation, industrial pollution, indiscriminate felling for fuelwood, cattle, grazing etc. Tamil Nadu has only a very small representation of mangroves.

The following programmes will be taken up during Tenth Five Year Plan under the Coastal Management Programme:

a. Planting of suitable species on sand dunes

b. Planting of suitable tall tree species at staggered close spacing along the seacoast to act as wind breaks (shelter belts)

c. Preservation of mangrove forests and mangrove afforestation works at Pulicat lake, Adyar Estuary, Pichavaram and Muthupet etc. Rehabilitation of Mangrove patches on the coastal areas of Ramnad and Chidambaram Districts of Tamil Nadu

d. Conservation of Dry Evergreen Forests in Villupuram and Nagapattinam Divisions

The objective of the programme is to stabilise the sand dunes in coastal areas, undertake cyclone damage control measures and conservation of wetland ecosystem and dry evergreen forests.

An amount of Rs. 10.65 crores is provided for this project during the Tenth Five Year Plan period.

4. Catchment Area Management (Rs. 24.28 crores)

Agriculture plays a major role in development. In this context, catchment management plays a vital role. Forestry is the mother of agriculture and, therefore, development of catchment areas of two rivers Cauvery and Vaigai systems is emphasised under the Tenth Plan. In Chennai city, Poondi Reservoir is providing supply of drinking water, which is the Major Reservoir. The reserve Forest and Reserve Lands situated in Pallipattu Range and Tiruthani Range of Thiruvallore Revenue District are the main catchment areas for the Poondi Reservoir and most of the areas are devoid of vegetation and hence it has been decided to increase the green cover by constructing check dams and percolation ponds in view of the need to continue to provide drinking water supply to Chennai city. The total provision for this scheme is Rs. 24.28 crores.

5. Protection Forestry (Rs. 100 crores)

Forests of this state have been looked upon as a source of timber, firewood and green manure and due to lack of manpower and infrastructural facilities the forest wealth is vulnerable to damage and destruction by illicit felling of trees, ganja cultivation, fire, encroachment and poachers of wildlife. To check the destruction of valuable forest products including sandalwood and other scheduled timber, several measures have been taken. Efforts will continue to be taken up to strengthen the infrastructure for forest protection and to equip the protection staff with facilities like firearms, vehicles, wireless equipments, etc. Encroachment of forestlands by adjoining patta holders and estate owners is a serious problem to the forest administration. Action is being
taken by Forest Department to evict such encroachments in cooperation with Revenue and Police officials. Efforts are also being taken to strengthen the infrastructure enabling the department to curtail fresh encroachments. The main aims of this scheme are:

1. Protection of forests from illicit fellings
2. Protection of forests from grazing
3. Protection of forest from fire, and
4. Protection of wild animals from poaching
5. In addition to forest protection, area protection i.e., protection of land area declared as Reserve Forests, Reserve Lands and other areas classified as forest land.

The provision for this scheme in the Tenth Plan is Rs. 100 crores.

6. Tribal Development (Rs. 50 crores)

Tribals are generally native of the forests. They form part of forest Eco-system and their economy depends on forest resources. They collect fuel wood, small timber, hutment materials, food materials etc. from forest for their domestic purpose. Population increase, coupled with increase in cattle population, poor literacy rate, low socio-economic status, unemployment and underemployment, vagaries of monsoon and failure of subsistent agricultural crops drive the tribals to look for short-cut methods to earn their livelihood. The pressure often gets focussed to the forest in which they live. In view of their socio-economic backwardness, Government has been paying attention to improve their lot by implementing the tribal sub plan. The Integrated Tribal Development Program is being implemented in 9 tribal pockets of Vellore, Tiruvannamalai, Salem, Villupuram, Dharmapuri, Trichy and Namakkal districts covering about 2 lakhs tribals population (33%). Nearly 23 sectoral departments are involved in the implementation of this programme. Forest Department is one among them. Under forestry sector, planting, tending and maintenance of fruit bearing trees, maintenance of tribal schools and hostels, soil conservation works like construction of percolation ponds and check-dams, construction of overhead tanks, digging bore wells, sandal tending operations and improvement of growing stock etc. were undertaken. The objectives of the programme are:

1. To improve socio-economic conditions of tribals by providing gainful employment and create sustainable economic base through income generation activities
2. To involve the local tribal community to conserve and improve the forest resource and manage on sustainable basis for their benefit on participatory approach
3. To improve basic infrastructure in tribal area, and
4. To undertake environmental protection works like awareness creation, water-harvesting methods and human resources development, to conserve and enrich their traditional knowledge.
To achieve the above objectives, an amount of Rs. 50 crores is provided in the Tenth Plan.

7. Production Forestry (Rs. 18.83 crores)

As per the Forest Sector Study Report of the TATA Economic Consultancy Services, Chennai, it is estimated that the current annual requirement of timber is about 53 million tonnes, whereas the annual production is only 1,240 tonnes. More than 3/4 of the timber requirement of the State is being met by import of timber from other countries and States. To meet the requirement of the local people to the extent possible in respect of timber and forest produce, large scale planting of primary and secondary timber species on forest lands, poramboke lands and canal bunds as well as encouraging the planting of timber species by public in private lands will be taken up. Under ‘Production Forestry’, raising Teak plantations, raising Bamboo plantations, raising Medicinal plantations and maintenance of existing medicinal centres are to be taken care of. For the above, an amount of Rs. 5 crores is provided in the Tenth Plan. In addition, for an externally aided project for raising teak along canal banks in Thanjavur, a sum of Rs. 13.83 crores is provided.

8. Extension Forestry (Rs. 53.05 crores)

The programme attempts to ensure the increase of tree cover to 33% of total land area of Tamil Nadu meeting the objective of the National Forest Policy 1988. At present, there are 4 Vana Vigyan Kendras (Forest Science Centres) established under SIDA aided Social Forestry Project, which have been later on renamed as forestry extension centres and this can function as centres for organizational learning. In Tamil Nadu the forestry extension activities are carried out at present through 4 forestry extension centres and 15 extension and interpretation centres. To have effective forestry extension activities, another 10 numbers of Forestry Extension Centres at the rate of one for each district is essential. These centres will be located in Tiruvallur, Karur, Namakkal, Perambalur, Ariyalur, Ramanathapuram, Tiruvarur, Nagapatinam, Kanyakumari and Nilgiris districts with all infrastructure facilities. The forestry extension component will result in increasing the tree cover in private lands substantially, which in turn would enhance the ecological security of the State. This project will help to increase the tree cover in the non-forest area, apart from improving the productivity of farmland, wasteland etc. It will also generate large quantity of tree-based resources in rural Tamil Nadu, which will encourage rural income and employment through micro enterprises. An outlay of Rs. 32.63 crores is provided for Tenth Five year plan. In addition to this, the project on “Human Resources and Socio-Economic Development of Tamil Nadu State through Transfer of Technology of Bio-fertilizer Production, Tree Husbandry and Post Harvest Technology” at a cost of Rs. 20.42 crores will be implemented.

9. Community Forestry (Rs. 224.80 crores)

Community forestry involves the raising of trees on public and community lands. The programme also covers raising of trees by individual/institutional landowners having keen interest in growing trees. Awareness
campaign will be conducted in rural and urban areas towards the elimination of unproductive cattle population in the State, which causes heavy damage to afforestation works. Various components have been identified depending on the land status. They are:

1. Village karadu (or) poromboke lands afforestation
2. Roadside planting
3. Tank foreshore planting
4. Railway lands and Defence lands afforestation
5. Padugai lands afforestation
6. Industrial area afforestation
7. Private land afforestation
8. Municipal / Town area wastelands afforestation
9. Homestead planting and
10. Research and supporting activities

An amount of Rs. 124.32 crores is provided under State scheme and a sum of Rs.100.48 crores is provided under the externally aided programme.

10. Forestry Research (Rs. 87.02 crores)

The main focus and thrust of Forest Research in Tamil Nadu is on biodiversity conservation and bio-productivity enhancement. There is a considerable increase in demand on forest produce both for consumptive and capital needs. To evolve suitable agro-forestry practices which are adoptable, cost-effective, generating high income as well as enhancement of quality and quantity there is no exclusive research institute. To meet the present and future needs of forestry, it is proposed to establish a research institute during the plan period. An amount of Rs. 24 crores is provided to carry out various research programmes during the Tenth Plan period. In addition to the above, Externally Aided Projects to the tune of Rs. 63.02 crores will be implemented towards establishment of Bio productivity and Bio diversity Research Institute and towards establishment of gene pool garden.

11. Human Resource Development (Rs. 12.17 crores)

Human Resource Development in the Governmental context is a process by which the employees of the Government are helped in a systematic way to acquire and sharpen capabilities required to perform various functions associated with their present or expected future roles. In order to achieve this, training aspect for developing appropriate skills of the employees becomes a necessity. For the appropriate training and skill development measures, an amount of Rs.12.17 crores is provided in the Tenth Five Year Plan.

12. Infrastructural Development Including Communication and Roads (Rs. 104.20 crores)

Forests need to be protected and saved from the encroachers, smugglers, terrorists and also from the antisocial elements such as ganja
cultivators etc. having shelter and refuge for their unlawful activities inside the forests. To protect, conserve and to expand the forests coverage, it is necessary to upgrade the infrastructural development including communication and roads. The following measures will be taken during the plan period.

i) Construction of office and residential buildings, ii) improvement of existing forest roads for better communication and for intensive inspections, iii) provision of communication facilities such as telephones, Fax machines, cell phones, computers with Internet facilities and intercom facilities, iv) provision of office infrastructural development, v) provision of PC based Geographical Information System, vi) additional vehicles and vii) infrastructure for wildlife rescue.

An amount of Rs. 104.20 crores is provided for this purpose.

13. Forest Settlement (Rs. 8.20 crores)

Tamil Nadu is one of the States which is deficient in Forest Coverage. As against the requirement 33.33%, the State has only 17.58% of its total geographical area under Forest. Hence, the Forest Settlement works to bring in further areas as Reserved Forests assumes importance. The following measures are to be taken to speed up the settlement work:

i) A Directorate of Forest Survey and Records will be established in the Forest Department to look after the forest settlement work. The Forest Settlement Officers will work under the control of this Directorate, ii) Deputy Collectors will be appointed as Forest Settlement Officers instead of Tahsildars, iii) The forest court may be converted into 'Forest Tribunal' consisting of a Sub-Judge, a District Revenue Officer and a Deputy Conservator of Forests.

A sum of Rs. 8.20 crores is provided for this purpose in the Tenth Plan.

**Tenth Five Year Plan outlay**

The outlay for Forests sector is arrived at Rs. 1200 crores, as follows:

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<th>Scheme</th>
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<td>Externally Aided Projects</td>
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<td>Total</td>
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<td>Centrally Sponsored Schemes</td>
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<td>Grand Total</td>
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The outlay approved by the Union Planning Commission is Rs.1348.10 crores as against the outlay now indicated at Rs. 1200 crores (State Sector plus Externally Aided Projects). The reduction is in view of the need to accommodate the inevitable higher requirements of other sector. Inter-sectoral adjustments will be made in the Annual Plans and in the Mid-Term Appraisal with the approval of the Union Planning Commission.
### Tenth Five Year Plan - Outlay and Targets

**(Rs. in crores)**

<table>
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<tr>
<th>Sl. No</th>
<th>Scheme / Programme</th>
<th>State Scheme</th>
<th>Externally Aided project</th>
<th>Total</th>
<th>Centrally sponsored scheme</th>
<th>Grand Total</th>
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<tbody>
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<td>1</td>
<td>Conservation of Biodiversity</td>
<td>-</td>
<td>13.83</td>
<td>13.83</td>
<td>145.11</td>
<td>158.94</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Ecological Restoration of Degraded forests</td>
<td>-</td>
<td>583.62</td>
<td>583.62</td>
<td>-</td>
<td>583.62</td>
<td>270000 ha.</td>
</tr>
<tr>
<td>3</td>
<td>Special Area Management (WGDP/HADP/EGDP/Coastal Area Management)</td>
<td>-</td>
<td>-</td>
<td>337.49</td>
<td>337.49</td>
<td>356070 ha.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Catchment Area Management</td>
<td>24.28</td>
<td></td>
<td>24.28</td>
<td>-</td>
<td>24.28</td>
<td>7500 ha.</td>
</tr>
<tr>
<td>5</td>
<td>Protection Forestry</td>
<td>70.00</td>
<td></td>
<td>70.00</td>
<td>30.00</td>
<td>100.00</td>
<td>8650 Km</td>
</tr>
<tr>
<td>6</td>
<td>Tribal Development</td>
<td>-</td>
<td></td>
<td>50.00</td>
<td>50.00</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Production Forestry</td>
<td>5.00</td>
<td>13.83</td>
<td>18.83</td>
<td>-</td>
<td>18.83</td>
<td>4125 ha.</td>
</tr>
<tr>
<td>8</td>
<td>Extension Forestry</td>
<td>32.63</td>
<td>20.42</td>
<td>53.05</td>
<td>-</td>
<td>53.05</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Community Forestry</td>
<td>124.32</td>
<td>100.48</td>
<td>224.80</td>
<td>-</td>
<td>224.80</td>
<td>26675 ha</td>
</tr>
<tr>
<td>10</td>
<td>Forest Research</td>
<td>24.00</td>
<td>63.02</td>
<td>87.02</td>
<td>-</td>
<td>87.02</td>
<td>-</td>
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<tr>
<td>11</td>
<td>Human Resources Development</td>
<td>12.17</td>
<td></td>
<td>12.17</td>
<td>-</td>
<td>12.17</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>Infrastructure Development (Buildings, Communications, Roads.)</td>
<td>104.20</td>
<td></td>
<td>104.20</td>
<td>-</td>
<td>104.20</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Forest Settlement</td>
<td>8.20</td>
<td></td>
<td>8.20</td>
<td>-</td>
<td>8.20</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>404.80</strong></td>
<td><strong>795.20</strong></td>
<td><strong>1,200.00</strong></td>
<td><strong>562.60</strong></td>
<td><strong>1,762.60</strong></td>
<td><strong>6,64,370 ha 8650 Km</strong></td>
</tr>
</tbody>
</table>