

CHAPTER - IX

SCIENCE TECHNOLOGY & ENVIRONMENT

8.1 SCIENCE & TECHNOLOGY

8.1.1 The Eleventh Plan (2007-12) proposed outlay for this sector is **Rs1500.00** lakhs. The Agreed outlay during 2007-08 is **Rs.125.00 lakhs** out of which the total expenditure is **Rs. 122.36** lakhs. The agreed outlay for Annual **2008-09** is **Rs.200.00 lakhs** which is expected to be fully utilized and proposed outlay for **2009-10** is **Rs.2250.00 lakhs** including One time ACA of Rs. 2000.00 lakhs. Implementation of all S&T programmes and schemes in the State is being carried out by the State Council of Science, Technology & Environment, an autonomous society of the State Government for promotion of Science & Technology in the State.

Some important projects under this sector are as below:-

8.1.2 Science Centres Programme: A first-ever Centre of its kind, the Shillong Science Centre, has been set up in Shillong. The Centre is a place for promoting science awareness among the public, particularly school children. The Centre is functioning as an autonomous society of the State Govt. The project was set-up by the National Council of Science Museums, Kolkata in association with Planning (Science & Technology) Department of the State Government with 90:10 fund contribution from Govt. of India and the State Government. Currently, the Shillong Science Centre is being supported for its day-to-day functioning through the State Plan. During the next financial year (2009-2010), the regular support to the Centre would continue. Provision has also been made for organising and enhancing science awareness programmes in the Centre during the year.

8.1.3 Bio-Resources Development Programme: A Bio-Resources Development Centre has been set-up in the State which is operating as an autonomous society of the State Government. Currently the Centre is implementing a project with the financial assistance from the Department of Bio-Technology, Govt. of India. The Centre is being looked after by a Scientist-in-Charge, currently assisted by 11 (eleven) scientific, technical and administrative personnel. During 2009-10 it is proposed to strengthen the activities of the Centre through a number of projects under this programme .

8.1.4 Remote Sensing: A project on survey and identification of the science and technology needs of the State is currently being taken up by the State S & T Council with the funding from the Department of Science & Technology, Govt. of India. The project has been carried out utilizing remote sensing application based techniques. Considering the potential for remote sensing application in various developmental sectors in the State, a number of remote sensing application projects have been proposed in 2009-10.

8.1.5 The following programmes are proposed to be taken-up during 2009-10 to promote the application of science & technology in the State.

1. **Popularization of Science Programme.**
2. **Introduction of Appropriate Technology Programme**
3. **Specific Projects Programme**
4. **S&T Entrepreneurship Development Programme**
5. **S&T Library & Documentation Programme**

8.1.6 The schematic broad break up during the 11th Plan and Annual Plan (2008-09) is shown in the table below :-

Rs. In lakhs.

| Name of the Scheme | Proposed Eleventh Plan(2007-12) | Annual Plan 2008-09 | | Proposed Outlay 2009-2010 |
|---|---------------------------------|---------------------|-------------------------|---------------------------|
| | | Agreed outlay | Anticipated expenditure | |
| 1. | 4. | 5. | 6. | 7. |
| 1. Popularization of Science | 300.00 | 40.00 | 40.00 | 60.00 |
| 2. Introduction of Appropriate Technology | 500.00 | 70.00 | 70.00 | 77.00 |
| 3. Specific Projects | 50.00 | 5.00 | 5.00 | 5.50 |
| 4. Student Projects Programme(SPP) | 20.00 | 3.00 | 3.00 | NIL |
| 5. S&T Entrepreneurships Development | 50.00 | 4.00 | 4.00 | 5.00 |
| 6. S&T Library and Documentation | 30.00 | 3.00 | 3.00 | 3.50 |
| 7. Science Centres Schemes(SCS) | 150.00 | 20.00 | 20.00 | 25.00 |
| 8. State S&T Cell/Council(SSTCC) | 200.00 | 23.00 | 23.00 | 30.00 |
| 9. (BRDP.) Bio-Resources Dev. Programme. | 150.00 | 26.00 | 26.00 | 38.00 |
| 10. Remote Sensing Application Programme (RSAP) | 50.00 | 6.00 | 6.00 | 6.00 |
| 11. One time ACA | | | | |
| i) Meghalaya Biodiversity Resource Centre | | | | 1000,00 |
| ii) Meghalaya State Advisory council | | | | 1000,00 |
| TOTAL | 1500.00 | 200.00 | 200.00 | 2250.00 |

8.2. INFORMATION TECHNOLOGY

8.2.1. The proposed Eleventh Plan (2007-2012) outlay in respect of Information Technology Department is **Rs.6307.00** lakhs. The agreed outlay for Annual Plan 2007-08 is Rs.625.00 lakhs and the actual expenditure is Rs.690.50 lakhs. The proposed outlay for the Annual Plan 2008-09 is Rs.743.00 lakhs and the anticipated expenditure is Rs.743.00 lakhs. **The proposed outlay for the Annual Plan 2009-2010 is Rs. 755.00 lakhs.**

8.2.2. Achievement during 2008-08:

The Department (i)conducted an IT Business Summit, conducted CISCO CCNA training and provided broadband internet connectivity to educational institutions, (ii) consolidated and augmented the IT infrastructure in all Govt. departments and the State GIS laboratory, (iii) the

IT Park (STPI) in Shillong is fully functional and land for the IT Estate with an IT SEZ at New Shillong Township has been allotted, (iv) the CSC projects under PPP vehicle has been rolled out in phases while the SWAN RPF has been floated and the technical evaluation of Bids is under process, (v) awarded laptops to toppers of MBOSE, ICSE and CBSE, (vi) Symantec International has been providing IT Advisory Services and HRD training to the youths to increase their employability potential, (vii) Conducted DOEACC ITES Course under 'Women Empowerment Programme' (WEP) and also facilitating placements.

8.2.3. The following schemes are to be taken up as State Plan Schemes during 2009-10:-

1: Development of IT Infrastructure : (i) strengthening of Capacity Building Infrastructure in areas like Software Development, Networking, Server Administration, Database Administration, Mobile Computing, BPO etc. through various Internationally recognised Certifications. (ii) to set up a DOEACC Centre in the vicinity of the State capital.

2: Development of e-Governance : (i) Initiated preparation of a blueprint for e-Governance with the technical assistance of Price Water House Coopers. (ii) Concentrating on areas that need to supplement and strengthen the smooth implementation of NeGP and its core component. (iii) Explore the areas of process re-engineering and change management etc. where workshops and projects etc. would be initiated.

3: Other Promotional Activities : The Department would conduct workshops, conferences, summits etc. to promote IT as well as to attract investors in the State.

4: Contribution to ICT Institutions/Meghalaya IT Society : (i) Providing Broadband Internet Connectivity to schools and colleges which are involved in IT education and related activities. (ii) Supporting educational institutions to roll out Industry Certification Courses across the State to make the youths employable in the job market. (iii) To set up a Corpus fund for the Meghalaya IT Society, a registered Society under IT Department, whose primary objective is the effective implementation of NeGP and other schemes of the State/Central Government.

5: HRD/IT Advisory arrangement of IT Department : Proposed to source technical service from the Private Sector by floating an Expression of Interest. Besides the above, setting up of an IT Estate and an IT Special Economic Zone (SEZ) would be encouraged under infrastructure development. Other ICT programmes of the Government would be accessed and implemented vigorously.

8.2.4. The broad break-up of the Eleventh Plan (2007-12) and the Annual Plan 2009-10 are indicated below:-

| Sl. No. | Items | Eleventh Plan 2007-12 Approved Outlay | Annual Plan - 2008-09 | | Proposed Outlay for 2009-10 |
|---------|----------------------------------|---------------------------------------|-----------------------|-------------------------|-----------------------------|
| | | | Agreed Outlay | Anticipated Expenditure | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Development of IT Infrastructure | 500.00 | 90.00 | 90.00 | 180.00 |
| 2 | Development of e-Governance | 100.00 | 15.00 | 15.00 | 15.00 |

| | | | | | |
|---|---|----------------|---------------|---------------|---------------|
| 3 | Other Promotional Activities | 125.00 | 20.00 | 20.00 | 15.00 |
| 4 | Contribution to ICT Institution | 175.00 | 25.00 | 25.00 | 15.00 |
| 5 | HRD/IT Advisory Arrangement of IT Deptt | 500.00 | 100.00 | 100.00 | 75.00 |
| 6 | ACA for NeGP | 4907.00 | 493.00 | 493.00 | 455.00 |
| | Total | 6307.00 | 743.00 | 743.00 | 755.00 |

8.3. ECOLOGY AND ENVIRONMENT

8.3.1. The projected outlay for the Eleventh Five Year Plan (2007-2012) is Rs.700.00 lakhs. The expenditure incurred during the year 2007-08 was Rs.71.72 lakhs against an outlay of Rs.75.00 lakhs. The approved outlay during 2008-09 is Rs.95.00 lakhs which is expected to be fully utilized. **The amount proposed for 2009-10 is Rs.125.00 lakhs.**

8.3.2 The State Government through the State Forest & Environment Department has taken up various schemes of afforestation, roadside plantation, construction of public convenience and maintenance of parks etc. under this sector. The department proposed to carry out these various activities in different parts of the State during the Eleventh Plan. Improvement of ecology and environment with participative approach with traditional Institution /NGO's is also proposed to be taken up during 2009-10 under this programme.

8.4. FORESTRY AND WILDLIFE

8.4.1. The projected outlay for the Eleventh Plan period is Rs.16000.00 lakhs. The actual expenditure incurred during 2007-08 was Rs.2377.99 lakhs against the approved outlay of Rs.2375.00 lakhs. The approved outlay for the Annual Plan 2008-09 is Rs.2800.00 lakhs including Rs.600.00 lakhs under the **Twelfth Finance Commission Award for Maintenance of Forest and Rs. 875.00 lakhs for Zoological Parks and Botanical Gardens. The proposed outlay for the Annual Plan 2009-10 is Rs. 5025.00 lakhs which includes Rs. 3500.00 lakhs under TFC Award.**

8.4.2. Achievements made during the Annual Plan 2007-08:--

i) During the Annual Plan 2007-08 period, plantations were taken up in the blank areas in the Reserved Forests covering an area of 2933 hectares. The target during 2008-09 is 3000 hectares. Tending operations were carried out by way of weeding, fire protection and maintenance.

ii) The number of seedlings distributed to the public under 20-Point programme was 26,03,000 nos. during 2007-08 and the target for 2008-09 is 40,30,000 nos.

iii) Under Communication and Building programme, 30 kms. of forest roads were maintained through construction of bridges, culverts, retaining walls etc and 2 kms. were covered under new roads during 2007-08 and the same is expected to be covered during 2008-09. A total of 20 nos. (twenty) buildings were constructed both Govt. non-residential and residential buildings for accommodation of staff. The target during 2008-09 is 20 nos.

8.4.3 Schemes proposed for 2009-10:-

The schemes/programmes in the Forestry and Wildlife Sector which are being implemented during the Annual Plan 2008-09 shall continue during the Annual Plan 2009-10 as briefly stated below :-

(1). Direction and Administration :

This scheme aims at intensification of management of forest areas with administrative units created to look after and manage the area of forests, and also to take up the development works in the State's forest villages located in some reserved forests of the State. It also includes the establishment expenses of Headquarters organisation. The proposed outlay for 2009-10 is Rs.265.00 lakhs.

(2) Education and Training :

Under this scheme, various forestry personnel are sponsored for undergoing training in Forester's Course, Range Officer's Course, Assistant Conservator of Forests' Course and other training courses meant for officers. A Forest Guard Training School has already been set up during 1994 which needs to be expanded. The proposed outlay for 2009-10 is Rs.75.00 lakhs.

(3). Survey of Forest Resources: Under this scheme, management plans of State Forest Resources are prepared by the Working Plan Division. Survey of bamboos, cane and medicinal plants is also taken up by the Forest Resources Survey Division under this scheme. The proposed outlay for 2009-10 is Rs.22.00 lakhs.

(4). Communication and Buildings:

Under this scheme, road improvement works inside the different reserved forests are taken up to improve the communication network. Construction of office buildings, residential buildings are also taken up for staff posted in the forest areas. A sum of Rs.67.00 lakhs is proposed for the year 2009-10.

(5). Statistical Planning And Evaluation Unit:

This meant for collection of important statistical data from the field in order to have "Data base" in the Department. This unit also deals with Planning & Evaluation of the various field activities of the Department. The proposed outlay for the year 2009-10 is Rs.14.00 lakhs.

(6). Forest Conservation and Development:

Under this scheme, Botanical Gardens and Children Parks in different districts are maintained. Forest protection works are also carried out by way of employing protection staff, construction of sub-beats and patrolling camps, purchase of arms and ammunitions in the Territorial Divisions and Wildlife Divisions of the State. Funds are also provided to meet the salary of staff posted in the Autonomous District Councils. A sum of Rs.172.00 lakhs is proposed for 2009-10

(7). Plantation Schemes:

(a) Plantation in Govt. Forests : This is a regular scheme of the Department under which vacant areas inside the reserved forest are planted up to improve the growing stock

with valuable and most suitable species. The species are mainly Teak, Sal, plywood and other natural miscellaneous species.

(b) Social Forestry Programme: Plantation works are also taken up in degraded areas outside the Reserve Forest. The proposed outlay for the Annual Plan 2009-10 is for (a) and (b) is Rs.550.00 lakhs. This is meant for creation of new plantations, new nurseries, maintenance of old plantations / nurseries inside and outside Reserve Forest.

(8). Preservation of Wildlife:

The Wildlife Wing of the Department undertake works of habitat improvement inside the Balpakram National Park, Nokrek National Park, Siju Wildlife Sanctuary, Nongkhylliem Wildlife Sanctuary, Pitcher Plant Sanctuary, Lum Nehru Park, Lady Hydari Park and Tura Park areas. Eco-development works are also taken up in sites adjoining wildlife-protected areas. More funds shall be tapped under the Central Assistance Scheme to take up works under the Wildlife programme. A sum of Rs.170.00 lakhs is proposed during 2009-10.

(9). Zoological Parks And Gardens:

This scheme is meant for maintenance and improvement of various Zoological Parks and Gardens. An amount of Rs.15.00 lakhs is proposed for 2009-10.

(10). Forest Research:

Under this scheme, studies are carried out to find out the suitability of various species which may be ecologically suitable for growing in plantation areas for our State. Seed orchards, plus trees are also created and maintained to provide good seeds for plantation. A new thrust is also given for cultivation of medicinal plants in the State and for protection of rare and endangered species. A sum of Rs.20.00 lakhs is proposed during 2009-10.

(11). Other Expenditure:

(a) Contribution to Eco-Development Society: Under this scheme, Grant-in-aid is given to the Government owned Eco-Development Society to carry out Eco-Development works for people displaced due to creation of Balpakram National Park in order to reduce their dependence on the protected areas. During 2009-10 an amount of Rs.40.00 lakhs has been proposed.

(b) Public garden: This scheme is meant for the maintenance and improvement of recreation parks and gardens including beautification and improvement of Wards Lake. A sum of Rs 25.00 lakhs is proposed for 2009-10.

(12). Maintenance of PCCF office building : The Eleventh plan projected outlay for maintenance/ improvement of PCCF office building and its campus is Rs. 480.00 lakhs. A sum of Rs.40.00 lakhs is proposed for the Annual Plan 2009-10.

(13). TFC Award :- The Twelfth Finance Commission has recommended a grant of Rs. 65.00 crores spread over the award period 2005-2010 as grants for tackling certain state-specific issues for the following schemes:-

i) Maintenance of Forests :- The Commission has recommended Rs. 30.00 crores for maintenance of forests as it recognizes that forests are a national wealth which needs to preserve it. This shall cover the forest area of 15584 sq. kms. During 2006-07 the State High Level Committee approved an amount of Rs.1141.90 lakhs for the scheme. Out of Rs. 600.00 lakhs allocated each year during 2005-06 & 2006-07, Govt. of India had released Rs. 300.00 lakhs and Rs. 600.00 lakhs respectively. During the financial year 2008-09 an

amount of Rs. 600.00 lakhs has been allocated and the same is yet to be released by Govt. of India.

(ii) Zoological Park:- For protecting endangered species, the TFC recommended an assistance of Rs. 30.00 crore for establishment of a Zoological Park in Meghalaya. During 2006-07 & 2007-08, the TFC had allocated Rs. 750.00 lakhs each year and an amount of Rs. 1200.00 lakhs was released during 2006-07. The State High Level Committee has approved an amount of Rs. 3415.00 lakhs for setting up of 'Zoological Park' under "State Specific Needs," out of which Rs.3000 lakhs will be met out of central funds recommended by TFC and the balance of Rs.415.00 lakhs will be financed by Zoo Authority of India.

(iii) Botanical Garden:- In order to conserve flora, the Commission has recommended an amount of Rs.5.00 crore for establishment of Botanical Garden. The TFC allocation during 2007-08 & 2008-09 is Rs. 125.00 lakhs each year and the amount is yet to be released by Govt. of India.

The proposed outlay for the Annual Plan 2009-10 under TFC Award for Maintenance of Forest, Establishment of Zoological Park and Botanical Garden is Rs. 3500.00 lakhs.

8.4.4. 11th Plan, Annual plan 2008-09 & Annual Plan 2009-10 outlays:-

The break up of the outlay proposed for the 11th Plan, anti. expenditure 2008-09 and the proposed outlay for Annual Plan 2008-09 is as indicated in the table below:-

| Name of scheme | (Rs. lakhs) | | | |
|--|---------------------------------------|-------------------------|---------------------------------|-------------------------|
| | Proposed outlay 11 th Plan | Approved outlay 2008-09 | Anticipated expenditure 2008-09 | Proposed outlay 2009-10 |
| Direction & administration | 1200.00 | 165.00 | 165.00 | 265.00 |
| Education & Training | 500.00 | 75.00 | 75.00 | 75.00 |
| Survey of Forest Resources | 270.00 | 22.00 | 22.00 | 22.00 |
| Statistical Plg & Evaluation | 150.00 | 14.00 | 14.00 | 14.00 |
| Communication & Bldg | 300.00 | 67.00 | 67.00 | 67.00 |
| Forest Conservation & Dev. | 1000.00 | 122.00 | 122.00 | 172.00 |
| Social & Farm Forestry-Plantation | 3000.00 | 500.00 | 500.00 | 550.00 |
| Preservation of wildlife | 2500.00 | 170.00 | 170.00 | 170.00 |
| Zoological Park | 200.00 | 15.00 | 15.00 | 15.00 |
| Public Garden | 200.00 | 25.00 | 25.00 | 25.00 |
| Bamboo Mission | 1500.00 | - | - | - |
| Scheme under TFC Award | 4100.00 | 1475.00 | 1475.00 | 3500.00 |
| Contribution to Eco-Dev. Society | 200.00 | 40.00 | 40.00 | 40.00 |
| Forest Research & Education | 100.00 | 20.00 | 20.00 | 20.00 |
| Asstt. to public sector | 300.00 | 50.00 | 50.00 | 50.00 |
| Comm. & Building- Maintenance of PCCF office | 480.00 | 40.00 | 40.00 | 40.00 |
| Grand Total | 16000.00 | 2800.00 | 2800.00 | 5025.00 |