

15. ENVIRONMENT

In the development lexicon of today, Environment can no longer be taken as given. Environment is the foundation on which the development edifice is to be constructed. Environment is increasingly becoming central to development. Concerns of environment with emphasis on optimal utilization with respect to sustainability and inter / intra generational equity, are imperatives which have to be favoured into planning exercises.

The survival and well-being of any nation depends on the sustainable social and economic progress that satisfies the needs and aspirations of the present generation without compromising the interest of future generations. The sustainability of healthy environment, an indicator of economic development, is directly or indirectly affected by the growing population, high degree of mechanisation and steep rise in energy use. Environmental degradation problems are on the increase and are much pronounced in densely populated cities.

Environmental degradation is one of the concomitants of economic development and its causes such as increase in green house gases, degradation of land, pollution of air and water, deforestation, loss of bio-diversity and the fragile eco-system pose a challenge to the country's policy makers and planners in ensuring sustainable economic growth. Several initiatives have been taken by the Government for pollution abatement in rivers and lakes besides promoting environmental consciousness among the public at large. Environmental conservation requires creation of awareness and attitudinal change among the people.

Management of the environment has two strands, preservation and conservation of the eco system and biodiversity and control of pollution. The State has entrusted the two departments viz., Department of Environment and Tamil Nadu Pollution Control Board as nodal agencies to deal with the vagaries of environmental issues involved in the implementation of major projects like pollution abatement in the rivers Cauvery, Vaigai and Tamiraparani, pollution abatement in Chennai city water ways, National Lake Conservation Programme, etc. TNPCB deals with the monitoring activities of water pollution, air pollution, management of hazardous wastes, plastic wastes, bio-medical wastes, solid wastes, etc.

Schemes and Monitoring Activities Implemented by the State:

The following schemes are implemented in the State with assistance from the Central government and the World Bank and with the funds provided by the State.

Centrally Sponsored Schemes:

Schemes such as National River Conservation, Chennai City River Conservation, National Green Corps, etc. were sponsored by the Central Government to the tune of Rs.544.34 crores till 31st March 2006. Through the scheme of 'Environmental Information System', Government of India provides web based information on the rich bio-diversity and river cleaning activities of the State at a cost of Rs.12.50 lakhs, of which only Rs.5.00 lakhs had been spent till 31.3.2006.

State Schemes:

Government of Tamil Nadu has provided funds to the tune of Rs.294.91 crores for the implementation of various schemes such as National Lake Conservation Programme, Conservation of Coastal Eco-system, Eco-Restoration Plan, etc. An amount of Rs.165.12 crores had been spent on the above schemes till 31st March 2006.

Schemes implemented with World Bank assistance:

Schemes such as Demarcation of High Tide Line (HTL) along the coast of Tamil Nadu at Kanniyakumari district, Integrated Coastal Zone Management Plan (ICZMP), preparation of coastal vulnerability maps, Bio-remediation of water bodies, etc. are implemented with assistance from World Bank. The above schemes will be continued in 2006-07 at a cost of Rs.12.53 crores.

The details and progress of major programmes implemented by the State through the Department of Environment up to 31-03-2006 are furnished below:

Table – 1: Progress of Various Schemes Implemented as on 31.3.2006

Sl. No.	Name of the Scheme / Programme	Objectives	Funding pattern	Project area and cost	Financial achievements up to 31.03.2006
1.	National River Conservation Plan – Abatement of pollution in 5 polluted stretches of river Cauvery in Tamil Nadu	Interception, diversion and sewage treatment	100% Centrally Sponsored Scheme	Tiruchy, Komarapalayam & Erode – completed. Bhawani under progress Pallipalayam – Approval of the project report is awaited. Project cost Rs.36.28 crores for 10 years from 1996-97.	Rs.21.05 crores has been spent
2.	Chennai City River Conservation Project (CCRCP)	Intercepting & treating sewage in six Chennai City water ways	Centrally sponsored scheme	Coowm, Buchingham Canal, Adyar, Otteri, Nullah, Captains cotton canal & Mambalam drain - out of 16 packages - 13 packages have been completed and three packages in progress - project cost Rs.491.52 crores.	Rs.358.46 crores spent

Sl. No.	Name of the Scheme / Programme	Objectives	Funding pattern	Project area and cost	Financial achievements up to 31.03.2006
3.	National River Conservation Programme	Pollution abatement in 7 towns around river Cauvery, Vaigai & Tamiraparani	- 50% each by Government of India and Government of Tamil Nadu	Tiruchy, Thanjavur, Kumbakonam, Karur, Mailaduthurai, Madurai and Tirunelveli at a cost of Rs.575.30 crores	Rs.325.92 crores
4.	Palar River Conservation	Providing underground sewerage system to minimize pollution of the river Palar	GOI - 70% Municipalities - 25% Industries - 5%	Ambur, Ranipet & Wallajahpet Municipalities Rs.25 crores	GOI approval is awaited
5.	National Lake Conservation Programme (NLCP)	Environmental upgradation through bioremediation	Government of Tamil Nadu	Ooty and Kodaikanal lakes at Rs.6.88 crores	Rs.1.97 crores. Revival of Ooty lake has been completed.
6.	National Green Corps (NGC)	Creation of environmental awareness among school children through NGO & eco-clubs	Government of India	7500 schools located in 30 districts	(Rs.2500 per school/year) Rs.1.87 crores
7.	Formation of technical cell	To facilitate smooth progress of projects and ensure coordination among projects preparing consultants	With World Bank assistance	Technical Cell at Chennai and project coordination unit at Nagapattinam and Thoothukudi at Rs.53 lakhs	Rs.53 lakhs
8.	Environmental awareness camps and competitions	To create awareness on members of eco-clubs	State Government	Competitions – Each district at a cost of Rs.25,000 – Total Rs.7.5 lakhs Camps – Each district at a cost of Rs.50,000 Total cost Rs.15 lakhs	Will commence in 2006-07

Source: Policy Note and the performance budget of the Department of Environment.

Plan Outlay for the year 2005-06:

An outlay of Rs.197.20 crores was earmarked in the Tenth Five Year Plan for 'Ecology and Environment' sector, of which the State's share was Rs.113.05 crores. During the year 2005-06 an amount of Rs.109.96 lakhs was proposed for this sector. The total amount allotted and spent for this sector in the first four years of the 10th Plan period was only Rs.3.29 crores.

Table-2: Plan Outlay -2005-06

Sl. No.	Scheme	Outlay (Rs. in lakhs)
1.	Department of Environment - Ongoing Schemes - New Schemes	58.94 51.00
2.	New Schemes	0.01
3.	Environmental Education, Research and Awareness Programme	0.01
	Total	109.96

Source: Annual Plan 2005-06.

Monitoring Activities Taken up by the State:

The various monitoring activities taken up by the State through the TNPCB are described below in brief.

Control of Water Pollution:

The local bodies and industries which discharge sewage/trade effluents should make an application for the purpose of obtaining consent. Industries are constantly monitored regarding the functioning of their effluent treatment plants. During the year 2004-05, 15499 samples of sewage and trade effluents from the industries were collected and analysed. During 2004-05, 717 '*consent to establish*' orders and 1058 '*consent to operate*' orders under the Water (Prevention and Control of Pollution) Act, amended in 2004-05 were issued. As against an assessed less amount of Rs.3295.64 lakhs a sum of Rs.721.16 lakhs was collected during the financial year 2004-05. Of the total cess collected, 80 per cent is reimbursed and utilised for awareness programmes, projects and training programmes.

Control of Air Pollution:

Industries which let out process emissions are regularly monitored through inspection of the air pollution control measures provided by the units. During 2004-05, ambient air quality surveys had been conducted in 659 industries and 712 '*consent to establish*' orders and 1043 '*consent to operate*' orders were issued. The entire state of Tamil Nadu has been declared as an Air Pollution Control Area.

Common Effluent treatment plants:

Due to financial constraints and lack of space, a large number of small scale industries which are in clusters are unable to have individual effluent plants. The board

which has launched a massive programme to motivate these industries to form Common Effluent Treatment Plants also assists them in mobilising financial resources and in the technical scrutiny of the proposals.

The details of subsidy available for this purpose, the contribution of beneficiaries and the level of institutional assistance are indicated below:

Subsidy from Central Government	- 25% of project cost
Subsidy from State Government	- 25% of project cost
Beneficiaries' contribution	- 20% of project cost by way of share capital collections
Institutional Finance	- 30% of project cost from IDBI, etc.

Till 2004-05, Tamil Nadu has sanctioned Rs.26.88 crores as State subsidy and Government of India has sanctioned Rs.20.60 crores as Central subsidy for establishing 50 CETPs schemes in different sectors as detailed below:

Tanneries	- 24 schemes
Textile Bleaching and Dyeing Units	- 25 schemes
Hotels and Lodges	- 1 scheme

Management of Hazardous Wastes and Chemicals:

In Tamil Nadu so far 2610 industrial units were identified as generating hazardous wastes, of which 2512 units had been issued the authorization under the Act. A number of sites had been identified at SIPCOT industrial estate, Tiruppur and at Karur for establishing a common hazardous waste treatment storage and disposal facility.

Biomedical Wastes Management:

All the health care centres should provide for common biomedical waste treatment and disposal facilities having autoclave, shredder, compactor and incinerator for anatomical waste and secure land fill facility. The institution generating the biomedical waste should ensure that it is handled without any adverse effect on human health and environment. The board has so far inventorised 2449 private hospitals, 317 Government hospitals in the State. Site for 11 common facilities for biomedical waste treatment and disposal have been identified for the private sector health care units in the State, of which nine common facilities are under operation and the remaining two facilities are under various stages of implementation.

Municipal Solid Wastes Management:

For the purpose of management of municipal solid wastes the concept of segregation of wastes at source, reduction, recycle and reuse of waste are being adopted. Municipal authorities have been asked to segregate the wastes as wet compostable waste, dry recyclable waste, inert wastes, construction debris and domestic hazardous waste. In all, 90 Municipalities and one Corporation have been issued NOC for composting of municipal solid waste and setting up of waste processing facility. In order to develop model towns in each district for municipal solid waste management, the Board provides a

seed money of Rs.2 lakhs to one municipality or Rs.1 lakh to one special Village Panchayat in each district, through the District Collectors.

Plastic Waste Management:

Awareness campaigns are conducted to avoid the environmental degradation due to indiscriminate use and disposal of throw away plastics. Training has been imparted to self-help groups for the production of eco-friendly substitutes to plastic items. All district Collectors, Local Bodies, Commissioner of Police, Special Commissioner and Commissioner of Civil Supplies have been addressed to ensure compliance with the provision of Recycled Plastics Manufacture and Usage Rules, 1999 under the Environment (protection) Act, 1986. The board has issued consent to operate for 1635 plastic products manufacturing units.

Air Quality Monitoring:

Table - 3: No. of Air Quality Monitoring Stations

The quality of ambient air is being deteriorated by emissions from the industries and from the ever increasing vehicular population. The State has been declared as an air pollution control area as per the provision of Air (prevention and control of pollution) Act 1981. In Tamil Nadu air quality-monitoring stations are operated under two monitoring programmes viz. National Air Quality Monitoring Programme (NAQMP) and State Ambient Air Quality Monitoring (SAAQM) programme.

District	NAQMP	SAAQM
Chennai	3	5
Coimbatore	3	-
Thoothukudi	3	-
Madurai	3	-
Salem	1	-
Tiruchi	-	5
Total	13	10

Source: Annual Plan, 2005-06.

Vehicular Emission Monitoring:

For testing the emissions from goods transport vehicles, vehicle emission monitoring activities are undertaken in and around Chennai city in three locations at Alandur, Madhavaram and Ambattur. Emission under control certificate is issued only to those vehicles which comply with the emission standards in the tests conducted. In addition, 97 private agencies have been authorized by the Transport Department in Chennai urban agglomeration area to check the emission levels of the vehicles. Action has already been taken to introduce and popularise the use of liquefied petroleum gas which would help in improving air quality.

Table - 4: Vehicle Monitoring Stations

Sl. No.	Details	Number
1.	Vehicle emission monitoring stations provided by TNPCB	8
2.	Vehicle emission monitoring stations provided by the board in MTC depots	6
3.	Emission checking stations provided by Private Agencies	236
4.	Auto Lignified Petroleum Gas Dispensing Stations commissioned in Chennai	12

Source: Annual Plan 2005-06.

Water Quality Monitoring:

Regular monitoring of water quality is required to maintain and restore the wholesomeness of water under Water Prevention and Control of Pollution Act, 1974. The inland water quality is monitored under two major programmes (viz.), Monitoring of Indian National Aquatic Resources (MINARS) Global Environmental Monitoring System (GEMS), which are funded by Central Pollution Control Board, New Delhi. Under the above two programmes the river Cauvery is being monitored and the rivers Thamiraparani, Palar, Vaigai and lakes such as Udthagamandalam lake, Kodaikanal lake and Yercaud lake are being monitored under MINARS programme.

The TNPCB is also monitoring Chennai city water ways (Cooum, Adyar Buckingham canal and Otteri Nullah) to assess the level of pollution by collecting water samples every month both at water bodies and industrial outlets.

A special monitoring cell is operated by TNPCB at its head office at Chennai to monitor the 17 categories of highly polluting industries specified by GOI. In Tamil Nadu, 192 large and medium industries have been identified under the 17 categories of highly polluting industries and are being closely monitored.

Ozone Monitoring Cell:

To identify the industries producing or consuming ozone-depleting substances, a ozone monitoring cell has been established in the head office, Chennai. In the State, 54 industries were identified as consuming ozone-depleting substances and have been suggested to adopt other alternatives. In December 2002, Government of Tamil Nadu formed a standing committee for the implementation of Montreal protocol for phasing out ODS.

Environmental Standards:

Standards are prescribed for the discharge of treated sewage/trade effluents depending upon the mode of disposal either into inland surface water, sewer and marine coastal areas or on land. Ambient Air Quality Standards and Emission Standards have been fixed for polluting industries.

Industrial production is also governed by the need to have modern environment friendly production technology. This is driven not only by enlightened self-interest but also the need to comply with International treaty obligations. Global warming, its grim portents and international agreements like the Kyoto protocol call for a conscious effort to adopt Clean Development Mechanism (CDM). In Tamil Nadu, industries like paper and others have adopted environment friendly technologies. Industries are also aware of the opportunities afforded by the nascent market in 'carbon trading' and have taken steps to use this opportunity.

Environmental concerns and needs have not only to be factored into development but also in planning methodology. In the field of National Accounting Methodology there is a consensus on the need to take into account the environmental costs and evolve Green Accounting Standards so as to render meaningful estimates of National Accounts.

BOX

National Environment Policy: 2006:

The Government of India has approved the National Environment Policy 2006 on 18th May 2006. Balance and harmony between economic, social and environmental needs of the country is very important. There is a response to our national commitment to a clean environment mandated in the Constitution in Articles 48A and 51A (g), strengthened by judicial interpretation of Article 21. Maintaining a healthy environment is not the State's responsibility alone, but also that of every citizen. Public-Private Partnership is crucial in the spectrum of environment management.

Objectives of the Policy:

- Conservation of Critical Environmental Resources.
- Intra-generational Equity: Livelihood Security for the Poor.
- Inter-generational Equity.
- Integration of Environmental Concerns in Economic and Social Development.
- Efficiency in Environmental Resource Use.
- Environmental Governance.
- Enhancement of Resources for Environmental Conservation.