

DEMAND No. 15

POLICY NOTE 2017-2018

ENVIRONMENT DEPARTMENT

Environment refers to all living and non-living things occurring naturally and encompassing the interaction of all living species, climate, weather, natural resources etc., that affect human life. All human actions in this modern world have the potential to directly influence the ecosystem as a whole.

Air pollution, poor waste management, growing water scarcity, falling groundwater tables, water pollution, preservation and quality of forests, biodiversity loss, and land/soil degradation are some of the major environmental issues being faced today. Several initiatives have been taken up by the Government of Tamil Nadu for pollution abatement in rivers and lakes, eco

restoration of water bodies, besides promoting environmental consciousness among the general public. It is the endeavour of the State government to provide a sustainable environment for all round development of the State.

Climate change refers to any significant change in the parameters of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer. Tamil Nadu has high dependence on natural resources and faces the threat of climate change and its impacts. Available evidence shows that there is high probability of increase in the frequency and intensity of climate related natural hazards and hence increase in potential threat due to climate change related natural disasters. Tamil Nadu has been undertaking a range of sectoral initiatives that are climate friendly.

While Tamil Nadu focuses on fostering industrial development, Tamil Nadu 2023 Vision document stresses the need to preserve the environment. Theme 8 in Vision Tamil Nadu 2023 document stresses upon the fact that environmental preservation shall encompass the entire ecological footprint of human activity and would include increasing forest cover, protection of wetlands, water bodies, coastal zones etc.,

2. DIRECTORATE OF ENVIRONMENT

Created in 1995 the Directorate of Environment is entrusted with the co-ordination of major projects like pollution abatement in Cauvery, Vaigai and Tamiraparani rivers and in the waterways of Chennai City. Besides the National Lake Conservation Programme, Management of Coastal Zone and all other significant environment protection efforts except those dealt with by the Tamil Nadu Pollution

Control Board are the responsibility of this Directorate.

The Directorate is headed by a Director in the rank of Additional Principal Chief Conservator of Forests who is assisted by an Additional Director in the rank of Chief Conservator of Forests. The sanctioned strength of the Directorate is 34 which includes three Deputy Directors, Assistant Conservator of Forests, Assistant Environmental Engineer, Accounts Officer, Sociologist, Forest Ranger, two Assistant Engineers and 22 ministerial staff.

2.1 FUNCTIONS OF THE DEPARTMENT

- Climate Change Adaptation and Mitigation initiatives.
- Coastal Regulation Zone Management.
- Preparation of Environmental Management Plans for towns.

- Creating Environment awareness in schools and colleges through Non-Government Organizations (NGOs), Eco-clubs and National Green Corp (NGC).
- Synergy with Universities/Research Institutes to build capacity for research and training.

3. TAMIL NADU STATE ACTION PLAN ON CLIMATE CHANGE (TNSAPCC)

The National Action Plan on Climate Change, released on 30.06.2008 is a comprehensive framework for sustainable development. NAPCC effectively pulls together a number of government's existing national action plans on water, renewable energy, energy efficiency, agriculture and others, with the unique approach to reduce the stress of climate change.

The Tamil Nadu State Action Plan on Climate Change (TNSAPCC) was endorsed by Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India (GoI) on 31.03.2015. TNSAPCC has identified the following Seven vulnerable Sectors,

- Sustainable Agriculture
- Water Resources
- Coastal Area Management
- Forest and Biodiversity
- Sustainable Habitat
- Energy Efficiency, Renewable Energy and Solar Mission
- Knowledge Management

All the concerned line departments are using the said action plan as base document for their future plan formulations. The Department of

Environment, Nodal Agency for implementing TNSAPCC has submitted proposals under the National Adaptation Fund for Climate Change (NAFCC) and the Green Climate Fund (GCF) in consultation with the National Bank for Agriculture and Rural Development (NABARD), which is the National Implementing Entity for NAFCC and GCF. Similarly, concerned line departments are in the process of submitting proposals for consideration under NAFCC and GCF.

4. NATIONAL ADAPTATION FUND FOR CLIMATE CHANGE (NAFCC)

The Department of Environment, Nodal Agency for implementing the TNSAPCC submitted project proposal on "Management and rehabilitation of coastal habitats and biodiversity for Climate Change Adaptation and Sustainable Livelihood in Gulf of Mannar, Tamil Nadu" which was approved by the MoEF&CC, GoI, under the Grants-in-Aid component of the NAFCC with an administrative approval of Rs. 24.74 crores.

The above project involves carrying out a baseline study to assess vulnerability to climate change of both coastal ecosystems (including biodiversity and fishery) and coastal communities in the Gulf of Mannar, restoration of Habitats (Coral reef and sea grass rehabilitation) in Kariyachalli and Vilanguchalli Islands.

5. GREEN CLIMATE FUND (GCF)

The Green Climate Fund (GCF) was adopted as a financial mechanism of the UN Framework Convention on Climate Change (UNFCCC) to assist developing countries in adaptation and mitigation practices to counter adverse effects of climate change.

The Department of Environment, Nodal Agency for implementing the TNSAPCC in Tamil Nadu is coordinating with the concerned line Departments in submitting proposals under Green Climate Fund (GCF) in consultation with the

National Bank for Agriculture and Rural Development (NABARD).

Presently five projects are under the consideration of funding under GCF in consultation with NABARD.

**6. INTEGRATED COASTAL ZONE
MANAGEMENT PROJECT (ICZMP)
PHASE-II.**

The Integrated Coastal Zone Management Project (ICZMP) for the State, has been prepared with the objective of better co-ordination among implementing agencies for development along the coastal stretch of Tamil Nadu, targeted at socio-economic improvement of the people while keeping natural resources and the environment healthy and capable of sustaining future generation.

Based on the ICZMP, a concept note, base document and Preliminary Project Report have

been sent to Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India, to consider the implementation of the ICZMP Project under Phase-II at a cost of Rs.697.68 crores in Tamil Nadu.

As requested by the MoEF&CC, GoI., the Government of Tamil Nadu has conveyed its commitment of 10% of project cost amounting to Rs.69.70 crores as State Component for Implementation of ICZMP Phase-II .

7. PREPARATION OF COASTAL ZONE MANAGEMENT PLAN

The Ministry of Environment, Forests and Climate Change, Government of India has requested to finalize the Coastal Zone Management Plan (CZMP) for the State of Tamil Nadu so as to enable the Government of India to notify the same. The National Centre for Sustainable Coastal Management (NCSCM) will be engaged for preparation of the Coastal Zone Management Plan for Tamil Nadu as

per the guidelines prescribed in the CRZ Notification 2011.

8. ECO- CLUBS

Tamil Nadu is a forerunner in the environmental awareness movement and initiated the formation of Eco Clubs in the year 1998. Eco-clubs have been formed in all the Government and Government aided High Schools and Higher Secondary Schools in the State. The students of eco-clubs are engaged in various environmental awareness programmes like organizing rallies, marches, human chains, seminars, debates, tree planting, campus cleaning, rainwater harvesting, solid waste management including vermi composting, etc. A sum of Rs.2500/- is being provided to each school for organizing different activities.

At present, 11,469 eco-clubs are functioning in Tamil Nadu. Around, 4,50,000 children

participate in the awareness movement under this programme.

9. NATIONAL GREEN CORPS (NGC)

The National Green Corps programme is being implemented in Tamil Nadu since 2002-2003. The Department of Environment is the Nodal Agency for implementing the National Green Corps (NGC) in Tamil Nadu.

The National Green Corps is functioning in 8000 schools in all over the State. The Government of India have approved a grant of Rs.2500/- per school every year for the activities of NGC. Training is given to master trainers and teacher co-ordinators in each district of the State for NGC activities. Around,3,20,000 children participate in the awareness movement under this programme.

The NGC students are engaged in various environmental awareness programmes such as

school campus cleaning, tree planting, environmental awareness rallies, celebration of at least six green days, vermi composting, enviro expo, enviro competitions, anti-plastic campaign, cultural programmes on environmental awareness, nature camps etc.

10. ENVIRONMENT PROTECTION AND RENEWABLE ENERGY DEVELOPMENT FUND

Tamil Nadu Government is implementing schemes for the protection of the environment and promotion of clean energy. For this purpose, an "Environment Protection and Renewable Energy Development Fund" has been created and a fund of Rs.365 crores is allotted.

The main scope of this fund is for promotional & project based activities such as

- Greening of Tamil Nadu through planting of trees outside the forests areas
- Initiatives and intervention in the field of renewable energy
- Prevention of environmental degradation.

The main objective of this fund is to promote, mitigate adaptive measures to combat effects of climate change in the State.

10.1 ECO RESTORATION OF WATER BODIES:

The restoration and conservation of lakes aims at achieving the desired water quality besides improving the biodiversity conservation and preserving the ecosystem through activities like de-silting, diversion of sewage entering into lakes, deepening of ponds, construction of retaining walls, tree planting etc.

In order to restore the water bodies and wetlands in the State, the Department of Environment is preparing long-term perspective plan for restoration of water bodies in and around Chennai and other parts of Tamil Nadu with the involvement of implementing agencies like Departments of Municipal Administration and Water Supply, Public Works, Fisheries and Local Bodies etc.

The Department of Environment with concerned line departments has undertaken eco-restoration activities in the following water bodies: -

- A sport, fishing cum eco-park at Chetpet lake in Chennai has been developed at a cost of Rs.42.00 crores.
- During the year 2014-2015 and 2015-16, a sum of Rs.33.00 crores was released as first phase for rehabilitation and restoration of Madhavaram (Rettai Eri),

Ambattur and Korattur wetland complex in Thiruvallur district and works have been completed. A sum of Rs.13.00 crores has been allotted for the year 2016-17 and Rs.13.18 crores for the year 2017-18 to continue the eco-restoration activities under Phase-II.

- During the year 2014-15, a sum of Rs.4.50 crores has been released to Directorate of Town Panchayat for implementing eco restoration works in Ayyarkulam and Kuyavankuttai tanks in Perundurai and Sithampatti tank in Karumandi Sellipalayam in Erode district. The works are completed.
- During the year 2014-15, a sum of Rs.3.00 crores has been released to District Collector, Erode for Kuttaithairpalayam in Perode Panchayat and Kambatheeswaran tank in

Punchaikalamangalam in Erode district and works have been completed.

- An amount of Rs.10.01 crores has been released for implementing bio-remediation and awareness activities in Arignar Anna Zoological Park-Vandalur, Guindy National Park, Vedanthangal Bird Sanctuary, Karikilli Bird Sanctuary, Pullicat Bird Sanctuary and Amirthi Mini Zoological Park. All the works have been completed.
- A sum of Rs.3.59 crores has been provided to Forest Department during 2014-15 for eco restoration and rejuvenation of 19 water bodies in Bird Sanctuaries and the works have been completed.
- A sum of Rs.4.00 crores has been released to Public Works Department, as first phase during 2014-15 and Rs.2.41

crores during 2015-16 for restoration of Sarkarperiyapalayam lake in Avinashi Taluk in Tiruppur district and the works have been completed.

11. COASTAL ZONE MANAGEMENT (CZM)

The Government of India issued the Coastal Regulation Zone Notification in 2011 under Environment (Protection) Act, 1986, in supersession of CRZ Notification 1991, to protect the coastal environment and to regulate development activities along the coastal areas, to ensure livelihood security to the fishing communities, other local communities living in the coastal areas, to conserve and protect the coastal stretches and to promote sustainable development in the coastal areas.

The coastal areas have been categorized as four zones as follows in the CRZ Notification 2011.

- CRZ-I (ecologically sensitive),

- CRZ-II (built-up area),
- CRZ-III (Rural area) and
- CRZ-IV (water area which includes the water areas up to 12 Nautical miles (Nm) of the territorial waters and the tide influenced water bodies)

11.1. COASTAL ZONE MANAGEMENT AUTHORITIES

The Ministry of Environment, Forests and Climate Change, Government of India has constituted State Coastal Zone Management Authority (SCZMA) with the Principal Secretary, Environment and Forests Department, Government of Tamil Nadu as the Chairman and the Director of Environment as its Member Secretary besides ten Members, who have been nominated from various Departments, Institutions and agencies. The District Coastal Zone Management Authorities under the Chairmanship

of the respective Coastal District Collectors have been formed by the State Government during 1998. These authorities convene periodical meetings to take decisions pertaining to CRZ matters.

11.2. COASTAL DISASTER RISK REDUCTION PROJECT (CDRRP)

The following schemes were implemented by the Department of Environment with the financial assistance from World Bank under CDRRP.

11.2.1 DEMARCATION OF HIGH TIDE LINE (HTL) ALONG THE COAST OF TAMIL NADU

The Department of Environment has demarcated high tide line for the entire coastline including tidal influenced water bodies and the high tide line reference points have been super imposed on the village cadastral maps on a scale of 1:5000. This work has been completed through

the Institute of Remote Sensing, Anna University at a cost of Rs.2.20 crores and the said HTL maps are made available to the District Authorities.

11.2.2. ERECTION OF STONE PILLARS ON HIGH TIDE LINE (HTL) REFERENCE POINTS

To identify the HTL on ground, high tide line stone pillars have been erected along the coast at a distance of 250 m. interval all along the coast of Tamil Nadu.

11.2.3 PREPARATION OF INTEGRATED COASTAL ZONE MANAGEMENT PLAN (ICZMP)

To take appropriate decision on any development to be undertaken along the coast, the Integrated Coastal Management Plan has been prepared for the coastline of Tamil Nadu. The different layers of information available through the Geographical Information System

(GIS) platform can be used to assess the damage and to plan for mitigation at times of coastal hazard and the said plan is utilized as base document for formulating future plans.

11.2.4 TRAINING AND AWARENESS PROGRAMME

Training and awareness programmes have been conducted in all the 13 coastal districts to enhance awareness about the Integrated Coastal Zone Management Plan among various stakeholders and decision makers.

12. ENVIRONMENTAL INFORMATION SYSTEM (ENVIS)

Environmental Information System Centre provides information on various aspects of the State of Environment and issues related to Tamil Nadu. The centre is engaged in collection, collation, storage, retrieval and dissemination of environmental information. It has established a

public interface through a website *www.tnenvis.nic.in* and through the publication of newsletters, creation of web based data base. Further to facilitate easy access for students, agencies and researchers, the ENVIS Centre has created a computer database of the books available.

In India there are 69 ENVIS centres functioning in different areas. The ENVIS centre functioning under the control of the Director of Environment, Government of Tamil Nadu is the only centre which has **scored A grade** for three consecutive years i.e., 2013-14, 2014-15 and 2015-16 respectively and hence the Ministry of Environment, Forest & Climate Change, Government of India has awarded the Tamil Nadu State ENVIS Centre with **“BEST ENVIS CENTRE AWARD (STATE)”** along with Rupees one lakh for the development of the Centre, for the Year 2015-16 at the National Evaluation

Workshop held on March 17th 2017 at Gandhi Nagar, Gujarat.

13. ENVIRONMENT MANAGEMENT AGENCY OF TAMIL NADU (EMAT):

The Government of Tamil Nadu, has created EMAT, for monitoring the works carried out under National River Conservation Plan (NRCP) and National Lake Conservation Plan (NLCP) and it started functioning from 22nd January 2003. The Principal Secretary to Government, Environment and Forest Department is the Chairman and the Director of Environment is the Member Secretary of the Environment Management Agency of Tamil Nadu.

The following schemes are coordinated by Environment Management Agency of Tamil Nadu.

13.1. ABATEMENT OF POLLUTION IN THE RIVERS UNDER NATIONAL RIVER ACTION PLAN (NRAP) / NATIONAL RIVER CONSERVATION PLAN (NRCP)

Pollution abatement schemes (preventing and diverting the sewage outfall from the towns into the rivers Cauvery, Vaigai and Tamiraparani, and sewage treatment Plant for treating the collected sewage) implemented by Tamil Nadu Water Supply And Drainage Board (TWAD Board) and Chennai Metropolitan Water Supply and Sewerage Board (CMWSS Board) were taken up under the National River Action Plan (NRAP) / National River Conservation Plan (NRCP) in Tamil Nadu. During 1996-97, an expenditure to a tune of Rs.506.53 crores was incurred out of Rs. 510.35 crores sanctioned by the National River Conservation Directorate, MoEF&CC, Gol.

13.2 CHENNAI CITY RIVER CONSERVATION PROJECT (CCRCP)

The works on upgradation of the sewerage system and preventing the entry of raw/partially treated sewage into the Chennai City waterways i.e. Cooum, Buckingham Canal, Adyar, Otteri Nullah, Captain Cotton Canal and Mambalam drain were implemented by CMWSS by creating four sewage treatment plants with a total capacity of 264 MLD. The said works have been completed at a cost of Rs. 392.17 crores out of Rs.491.52 crores, sanctioned during the year 2000 by the National River Conservation Directorate, Ministry of Environment, Forest & Climate Change, Government of India.

13.3. REVIVAL OF OOTY LAKE

The National River Conservation Directorate, Ministry of Environment, Forest &

Climate Change, Government of India sanctioned an amount of Rs.1.75 crores for revival of Ooty Lake. All the works have been completed by the Public Works Department (PWD) during the year 2005 at a cost of Rs.1.73 crores with 100 percent Grant from Government of India.

During 2012-13, as per the instructions of the late Hon'ble Chief Minister of Tamil Nadu, to clean up Ooty Lake on war footing, a sum of Rs. 4.77 crores was sanctioned from Environment Protection and Renewable Energy Development Fund (EPRED Fund) for revival of Ooty Lake and the works were completed. During 2013-14, a sum of Rs.2.12 crores has been released for bio-remediation of Ooty Lake and these works were also completed.

14. OTHER ACTIVITIES OF THE DEPARTMENT

14.1. ENVIRONMENT AWARDS

Environment Awards for the best efforts and contributions in Environmental protection,

environmental management and environmental awareness are given to selected NGOs, institutions, individuals and researchers every year. These awards which were constituted during the year 2000 are distributed on the World Environment Day celebrations on June 5th every year. Ten environmental awards in various categories worth Rs.1.13 lakhs per year are awarded by the Government.

14.1.1 MASS AWARENESS CAMPAIGN

Department of Environment has undertaken mass awareness campaign through Eco clubs and National Green Cops all over the State. Beside Environmental Information Dissemination Centres (EIDCs) have been formed in 57 Educational Districts. The EIDCs have a library containing environment related books, display charts, boards, posters (both in English and Tamil) highlighting issues related to polluted hotspots, climate change, global warming, etc. along with

audio-visual equipments in order to disseminate information to students and the public. Frequent visits to these Centres by the students are encouraged to acquire information on environment related subjects. Five short films/advertisements have also been produced at a total cost of Rs.15.00 lakhs on Land Pollution, Water Pollution, Air Pollution, Industrial Pollution and importance of environment. Copies of the same have been uploaded in the Department website, ENVIS website for the benefit of the public and the students. Soft copies of the films are being sent to all the 8000 NGC Eco-clubs and 11469 Eco-clubs functioning in the State.

**14.2 CREATING ENVIRONMENTAL
AWARENESS AND ECO PROTECTION
ACTIVITIES IN 11 PILGRIM CENTRES
AT A COST OF RS.55.00 LAKHS**

Srirangam, Rameshwaram, Tiruthani, Palani, Tiruchendur, Thanjavur, Marudhamalai, Madurai, Chidambaram, Samayapuram and Srivilliputhur

are important Pilgrim Centres located in Tamil Nadu.

To develop these Pilgrim Centres as environmentally clean and safe by creating awareness among the public with assistance from local bodies, Hindu Religious and Charitable and Endowment Department and Non-Governmental organizations, a sum of Rs.55.00 lakhs has been spent at the rate of Rs.5.00 lakhs per Centre.

Under this programme various activities such as eco competition, rallies, formation of human chain etc., were conducted. Further, dustbins were provided to the temples, Information Boards erected in the temple premises and cloth bags distributed to the public involving students and self-help groups.

TAMILNADU POLLUTION CONTROL BOARD

1. INTRODUCTION

The Tamil Nadu Prevention and Control of Water Pollution Board was constituted by the Government of Tamil Nadu on twenty seventh day of February, Nineteen eighty two (27-2-1982) under section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974). After the enactment of Air Pollution Act the Board was later renamed as "Tamil Nadu Pollution Control Board" (TNPCB) in the year 1983. It enforces the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Water (Prevention and Control of Pollution) Cess Act, 1977, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the rules made under these Acts.

Currently TNPCB enforces the following Acts and Rules.

- The Water (Prevention and Control of Pollution) Act, 1974
- The Tamilnadu Water (Prevention and Control of Pollution) Rules, 1983.
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Water (Prevention and Control of Pollution) Cess Rules, 1978
- The Air (Prevention and Control of Pollution) Act, 1981
- The Tamil Nadu Air (Prevention and Control of Pollution) Rules, 1983.
- The Environment (Protection) Act, 1986
- The Environment (Protection) Rules, 1986
- The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
- Fly Ash Utilization Notification, 1999

- The Batteries (Management and Handling) Rules, 2001
- The Environment Impact Assessment Notification, 2006
- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
- The Bio-Medical Waste Management Rules, 2016
- The Solid Waste Management Rules, 2016
- The Plastic Waste Management Rules, 2016
- The E-Waste Management Rules, 2016
- The Construction and Demolition Waste Management Rules, 2016

2. FUNCTIONS OF THE TNPCB

As defined under section 17 of the Water (Prevention and Control of Pollution) Act, 1974 and under section 17 of the Air (Prevention and Control of Pollution) Act, 1981, the main functions of TNPCB are as follows:

- To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.
- To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution.
- To collect and disseminate information relating to water and air pollution and the prevention, control or abatement thereof.
- To inspect sewage and trade effluent treatment plants for their effectiveness and review plans, specifications for corrective measures.
- To inspect industrial plants or

manufacturing process, any control equipment and to give directions to take steps for the prevention, control or abatement of air pollution.

- To inspect air pollution control areas for the purpose of assessment of quality of air therein and to take steps for the prevention, control or abatement of air pollution in such areas.
- To lay down, modify or annul effluent standards for the sewage and trade effluents and for the emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source.
- To evolve economically best viable treatment technology for sewage and trade effluents.
- To collect samples of sewage, trade effluent and emission of air pollutants

and to analyze the same for specific parameters.

- To collaborate with Central Pollution Control Board in organizing the training of personnel engaged or to be engaged in programme relating to prevention, control or abatement of water and air pollution and to organise mass education programme relating thereto.
- To perform such other functions as may be prescribed by the State Government or Central Pollution Control Board.

3. ORGANISATION SETUP

The organization structure of TNPCB is a three-tier system consisting of a Head-office at Chennai, Zonal offices and District offices with total staff strength of 656 (May 2017). The Board functions with 6 Zonal Offices headed by Joint Chief Environmental Engineers (Monitoring), 36 District Offices headed by District

Environmental Engineers, 2 Flying Squads headed by Environmental Engineer at Erode and Tiruppur. To assist the Board in monitoring the industries, 5 Advanced Environmental Laboratories (AELs) and 10 District Environmental Laboratories are functioning. These laboratories carry out analysis of samples of water, sewage, trade effluent, stack emission, ambient air and hazardous waste. The AELs at Chennai, Salem, Coimbatore, Cuddalore, and Madurai have been accorded certification by National Accreditation Board for Testing and Calibration of Laboratories. The AELs at Chennai, Salem and Cuddalore are OSHAS 18001 certified laboratories.

4. CONSENT MANAGEMENT

Industries have to obtain consent for discharge of sewage / trade effluent into any stream or well or into sewer or land under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 and to operate them in air

pollution control area under section 21 of the Air (Prevention and Control of Pollution) Act, 1981. The Government of Tamil Nadu vide G.O. Ms. No. 4 Environment Control Department dated 28.09.1983 has declared the entire state of Tamil Nadu as air pollution control area.

For harmonization of industrial classification, the Central Pollution Control Board has categorized the industries as Red, Orange, Green and White based on their pollution potential and relative pollution index. TNPCB adopts the same categorization. Further, TNPCB has classified the industries as Large, Medium and Small scale based on their gross fixed assets. Industries with GFA less than Rs. 5 crores is small scale, Rs 5 to 10 crores is medium scale and GFA more than Rs. 10 crores is large scale.

The consent is issued to the industries in two stages. In the 1st stage, 'Consent to Establish

(CTE)' is issued under the Water (Prevention and Control of Pollution) Act, 1974 & Air Prevention and Control of Pollution) Act, 1981 depending upon the suitability of the site before the industry takes up the construction activity. In the 2nd stage, 'Consent to Operate (CTO)' is issued before commissioning the industrial unit after the compliance of conditions of 'Consent to Establish' issued. The Board has delegated powers to the field officers at the Zonal and District Level to grant consent to the industries considering the category and size of the project. The Engineers in field offices inspect the industries under their jurisdiction periodically to assess the adequacy of pollution control measures adopted by the industries to treat sewage, trade effluents and emissions and to monitor their performance. They also investigate environmental pollution related complaints from the public and other organizations. From 1st April 2016 to 30th April 2017, the Board has issued 951 CTE orders and 3012 CTO orders under both the Acts.

4.1 REVISION OF VALIDITY PERIOD OF CONSENT

In order to harmonize the consent validity period with validity period of environmental clearance issued by MoEF&CC/SEIAA, the Board vide Board Proceedings No. 5 dated 02.08.2016 revised the validity period of Consent to Establish and Consent to Operate issued under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981.

a) **CONSENT TO ESTABLISH** validity period is as follows:

Projects	Validity Period
All EIA Projects	7 Years (1 Fee)
All Non-EIA Projects	5 Years (1 Fee)

b). **Consent to Operate** validity period is as follows:

Red	Orange	Green
5 Years (5 Fees)	10 Years (5 Fees)	14 Years (7 Fees)

5. ONLINE CONSENT MANAGEMENT AND MONITORING SYSTEM

In order to bring efficiency and transparency in consent management, TNPCB has implemented E-Governance in consent management. Accordingly TNPCB has developed a web based software package for Online Consent Management and Monitoring System (OCMMS). This system facilitate the industries for online submission of application for getting Consent to Establish / Consent to Operate / Renewal of Consent and also to ascertain the status of application.

This system allows to carry out the consent management processes such as application scrutiny, raising inspection, raising clarification, submitting inspection report, preparing consent order and forward consent order through online

with digital signature affixed. It helps for online monitoring for processing the application. From 20.1.2015 onwards, the applications are accepted only through OCMMS. In order to facilitate the industries to apply online through OCMMS, Help Desk has been established in all the 36 district offices. Web portal for online consent application is **tnocmms.nic.in**. From 20th January 2015 to 31st May 2017, CTE has been issued to 2855 units and CTO has been issued to 11,781 units and Renewal of consent has been issued to around 20,508 units through online.

6. ONLINE GRIEVANCE REDRESSAL SYSTEM

In order to ease public to get quick redressal of their complaint, TNPCB has launched an online grievance redressal system from 1st March 2016 onwards. The public can file complaint relating to industrial pollution to TNPCB online. The offline complaints received are also uploaded in the software for online processing of complaints. The

complaint is investigated, processed online and the action taken is intimated to the petitioner. From 1st March 2016 to 31st May 2017, 3450 complaints (Offline & online) were received and processed.

6.1 CM CELL & AMMA CALL CENTRE PETITIONS

A Separate Cell is functioning at Head Office to redress the petitions received through CM Cell and Amma Call centre. CM Cell petitions are disposed off within 15 days and Amma Call Centre petitions are disposed off within 7 days. From 1st April 2016 to 31st May, 2017, 428 nos. of CM Cell petitions and 1138 nos. of Amma Call centre petitions were received and disposed off.

7. MONITORING OF INDUSTRIES

The Board vide B.P. Ms. No. 22 dated 25.2.2004, has fixed norms for inspection and sample collection based on size and category of the industry for effective monitoring purpose.

Type of Industry	Category	Inspection	Sample Collection
Large	Red	Once in 3 months	Once in a month
	Orange	Once in 6 months	Once in 4 months
	Green	Once in 2 years	----
Medium	Red	Once in 4 months	Once in 3 months
	Orange	Once in 6 months	Once in 6 months
	Green	Once in 2 years	----
Small	Red	Once in a year	Once in 3-6 months
	Orange	Once in 2 years	Once in 6 months
	Green	Once in 2 years	----
17 Category of Industry		Once in a month	Once in a month

From 1st April 2016 to 31st May 2017, the Board has carried out ambient air quality survey

in the vicinity of 1035 industrial units, collected and analyzed 27207 sewage and trade effluent samples.

8. CARE AIR CENTRE

TNPCB is operating a Care Air Centre at Corporate Office, Chennai for assessing real time air quality status. The 17 category of highly polluting industries, Red-Large industries, common hazardous waste incinerator facility are connected to this centre. The centre monitors the stack emission and ambient air quality of these units on 24x7 basis. The parameters monitored in this centre includes:- Stack Monitoring: Particulate matter, Sulphur-di-oxide, Nitrogen oxides. Ambient Air Quality monitoring: PM_{2.5}, PM₁₀, SO₂, NO_x. When the emission levels exceed the norms, the inbuilt system will inform the concerned industry, the District Environmental Engineer and Member Secretary through an automated Short Messaging System (SMS) and Electronic Mail (e.mail) enabling them to take

immediate remedial action. As on 31st May 2017, 378 units are connected to this centre for stack emission monitoring, 104 units are connected for ambient air quality monitoring.

9. WATER QUALITY WATCH CENTRE

In order to monitor the quality of effluent discharge from industries and the water quality of water bodies on continuous basis (24x7), TNPCB has established a Water Quality Watch Centre at the Corporate Office, Chennai. It is functioning since July 2015. This centre monitors the quality of treated effluent at the outlet of the treatment plant on continuous (24x7) basis through online. The 17 category highly polluting industries, Red-Large industries, Common Effluent Treatment Plants are connected to this centre. As on 31st May 2017, 143 units are connected to this centre; of which 71 units are connected for zero liquid discharge monitoring and 72 units for treated effluent discharge monitoring. Three online

monitors installed in river Thamirabarani are connected to this centre. The parameters monitored through this centre includes: pH, TDS, DO, Flow.

10. COMMON EFFLUENT TREATMENT PLANTS

The Ministry of Environment, Forest and Climate Change, Government of India initiated an innovative technical and financial support scheme for SSI units, considering their constraints in complying with pollution control norms individually. The scheme promotes common facilities for treatment of effluents from SSI units located in clusters through financial assistance. TNPCB plays a supportive role towards the establishment of Common Effluent Treatment Plants (CETPs) for clusters of small-scale industries in various parts of the State. The Board assists in the technical scrutiny of the proposals to ensure appropriate technology for CETPs.

In Tamil Nadu, 44 CETPs were established and commissioned, out of which 13 CETPs are for Tanneries, 30 for Textile Bleaching & Dyeing units and 1 CETP is for Hotel & Lodges. Among 13 CETPs for tanneries, 11 CETPs are in operation with Zero Liquid Discharge (ZLD) system. In the remaining two CETPs, one CETP has provided primary and secondary treatment system and opted for dilution of treated effluent with treated sewage to meet the standards prescribed by the Board. In the other one CETP, the installation of ZLD system is under progress. Among 30 CETPs established for textile dyeing processing units, 19 CETPs have implemented the ZLD system. The remaining 11 CETPs are closed in view of orders of Hon'ble High Court due to their inability to provide ZLD systems. The CETP at Kodaikanal collects and treats the wastewater arising from the hotels and lodges located around the Kodai Lake.

11. HAZARDOUS WASTE MANAGEMENT

The Hazardous and Other Waste (Management and Transboundary) Rules, 2016, was notified by the Ministry of Environment, Forest and Climate Change, Government of India. The rule defines hazardous waste and lays down specific guidelines for the storage, recycling, transportation and disposal. As per the rules, the generator of hazardous waste is responsible for its treatment and disposal. TNPCB is granting authorization for handling the hazardous wastes.

As on 31st May, 2017, TNPCB has identified 3,550 units generating hazardous wastes and issued authorization under the rules. These units generates about 7.80 lakh tons of hazardous waste annually, out of which 2.90 lakh tons is landfillable, 3.70 lakh tons is recyclable and 1.20 lakh tons is incinerable. The Board is taking effective steps in handling and management of

hazardous wastes, its treatment and disposal in an environmentally safe manner. There are two common Treatment, Storage and Disposal Facilities (TSDF) in Tamilnadu under operation.

Sl.No.	Name and address of the facility	Capacity
1	M/s. Tamilnadu Waste Management Limited, SIPCOT Industrial Complex, Gummidipoondi, Tiruvallur District.	Authorized to handle 1,00,000 TPA for landfill, 1T/Hr for incineration. Total land area 26.9 acres.
2	M/s. Tamilnadu Waste Management Limited, Unduorumikidakulam village, Tiruchuli Taluk, Virudhunagar District.	Authorized to handle 1,50,000 TPA for landfill. Total land area 80 acres.

Pioneering efforts were taken by TNPCB to utilize the hazardous waste in the form of sludge generated from Common Effluent Treatment Plants (CETPs) of textile processing units as raw

material for co-processing in the cement factories. As on 31st May, 2017, 59,174 Tonnes of ETP sludge have been disposed to various Cement industries for co-processing. For reprocessing of hazardous wastes, TNPCB has issued authorization to 26 units for recycling of non-ferrous wastes, zinc and copper scrap, 14 units for reprocessing of used oil and 12 units for reprocessing of waste oil.

11.1 ONLINE HAZARDOUS WASTE MANAGEMENT AUTHORIZATION

As a part of ease of doing business, TNPCB has launched online application and processing for issue of authorization for handling hazardous waste from 01.03.2016. Now the industries apply for authorization online and it is processed and issued online. Using this facility, the industry can track the status of the application. As on 31st May 2017, the Board has received application online

from 1733 units. These are being processed and authorization issued.

12. BIO-MEDICAL WASTE MANAGEMENT

The Bio-Medical Waste Management Rules, 2016, was notified by the Ministry of Environment, Forest and Climate Change, Government of India. These rules shall apply to all persons who generate and handle bio-medical waste in any form. It is the responsibility of the generator and the operator of the common bio-medical waste treatment and disposal facility (CBMWTF) for safe handling and disposal of the bio-medical waste. The State Government of Health shall ensure for implementation of the rule in all health care facilities. SPCB shall issue authorization to the health care facilities and CBMWTF.

In the State, the TNPCC has so far authorized 3720 bedded private hospitals, 368 bedded

Government hospitals and 573 non bedded hospitals. All these hospitals have made agreement with the CBMWTF for the collection, transport, treatment and scientific disposal of the biomedical waste. There are 11 CBMWTF under operation at various parts of Tamil Nadu. On an average, daily 43 tonnes of bio-medical waste is handled by these facilities. In addition, three facilities are under establishment in Tiruvallur, Cuddalore and Tiruppur Districts.

12.1 ONLINE BIO-MEDICAL WASTE MANAGEMENT AUTHORIZATION

TNPCB has launched online bio-medical waste application receipt and processing module on 1.3.2016. The hospitals can apply for authorization online for handling their bio-medical waste. The application will be processed and authorization will be issued online. This system allows the hospitals to track the status of their application. Upto 31st May 2017, 875 hospitals

have applied for authorization through online. These applications are processed and authorizations are being issued.

13. SOLID WASTE MANAGEMENT

The Solid Waste Management Rules, 2016 was notified by the Ministry of Environment, Forest and Climate Change, Government of India. As per the rules, collection, transportation, processing, recycling, treatment and disposal of the solid waste is the responsibility of the local bodies. The role of State Pollution Control Board (SPCB) is to issue authorization to the local bodies, monitor environmental standards and ensure adherence to conditions as specified for waste processing and disposal sites. So far, the TNPCB has issued authorization to 5 Corporations, 50 Municipalities and 94 Town Panchayats for composting of municipal solid waste and setting up of waste processing facility.

14. PLASTIC WASTE MANAGEMENT

The Plastic Waste Management Rules, 2016, was notified by the Ministry of Environment, Forest and Climate Change, Government of India. As per the rules, the local body shall be responsible for the development and setting up of infrastructure for segregation, collection, storage, transportation, processing and disposal of the plastic waste. Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness. The persons engaged in manufacture of carry bags, recycle plastic bags, multilayered packaging, recycling or processing of plastic waste shall obtain registration certificate from the State Pollution Control Board. The role of SPCB is to enforce the provisions of these rules relating to registration, manufacture and disposal of plastic wastes.

TNPCB has identified 471 plastic carry bags manufacturing units and 140 plastic recycling

units. Awareness programme is conducted through District Administration for which TNPCB provides a fund of Rs. 50,000/- (Rupees Fifty Thousand Only) every year to each District Collector since 2015. TNPCB has addressed all the local bodies to comply with the provisions of the said rules.

15. E- WASTE MANAGEMENT

The E-Waste Management Rules, 2016 was notified by the Ministry of Environment, Forest and Climate Change, Government of India. As per the rules, the producer of the electrical and electronic equipment shall be responsible for collection and channelization of e-waste generated. The manufacturer of the electrical and electronic equipment, refurbisher, dismantler, recycler of e-waste shall get authorization from SPCB. SPCB shall monitor on the compliance for environmentally sound management of e-waste. TNPCB has issued authorization for 35 units (16

collection centres, 14 dismantlers, 5 recyclers) under the E-Waste Management Rules.

16. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

The Construction and Demolition Waste Management Rules, 2016 was notified by the Ministry of Environment Forest and Climate Change, Government of India. As per the rules, the waste generator shall be responsible for collection, segregation of concrete, soil and others and storage of the same, as directed or notified by the concerned local body. The local bodies shall be responsible for transportation, processing and disposal of the waste. SPCB shall grant authorization for the waste processing facility and monitor the implementation of these rules. The Board has addressed all the local bodies to take effective steps to comply with the Rules.

17. AMBIENT AIR QUALITY MONITORING

TNPCB is executing National Air Quality Monitoring Programme (NAMP) in association with Central Pollution Control Board (CPCB) in 8 cities / major towns of Tamilnadu at 28 locations. The objectives of the NAMP are to determine status and trends of ambient air quality; to ascertain whether the prescribed ambient air quality standards are met out. Under NAMP five air pollutants viz ., PM_{2.5}, PM₁₀, Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂), and Ammonia (NH₃) are monitored. The monitoring of pollutants is carried out for 24 hours (4-hourly sampling for gaseous pollutants and 8-hourly sampling for particulate matter) with a frequency of twice a week. The locations are given below.

Sl. No.	City/Town	Sample Location	Land Use
1	Chennai	Kathivakkam	Industrial zone
		Manali	Industrial zone
		Thiruvottiyur	Industrial zone

Sl. No.	City/Town	Sample Location	Land Use
		Kilpauk	Commercial (traffic intersection)
		Thiyagaraya Nagar	Commercial (traffic intersection)
		Nungam-bakkam	Commercial (traffic intersection)
		Anna Nagar	Residential zone
		Adyar	Residential zone
2	Coimbatore	District Collector Office	Mixed zone
		Ponnaiyaraja-puram	Residential zone
		SIDCO building	Industrial zone
3	Madurai	Highways Project building	Residential zone

Sl. No.	City/Town	Sample Location	Land Use
		Susee Cars and Trucks Co Ltd	Industrial zone
		Madurai Corporation office (south)	Mixed zone
4	Salem	Sowdeswari College	Mixed zone
5	Tiruchirappalli	Gandhi Market	Commercial zone
		Main Guard Gate	Traffic intersection
		Bishop Heber College	Mixed zone
		Golden rock	Residential zone
		Central Bas stand	Traffic intersection
6	Thoothukudi	Raja Agencies	Industrial zone
		SIPCOT	Industrial

Sl. No.	City/Town	Sample Location	Land Use
			zone
		AVM Building	Mixed zone
7	Mettur	Raman Nagar	Residential zone
		SIDCO	Industrial zone
8	Cuddalore	Echankadu village	Residential zone
		Imperial College	Commercial zone
		SIPCOT	Industrial zone

During the period 2016-17, the average values of Sulphur-di-oxide (SO₂) and Nitrogen-di-oxide (NO₂) were found to be well within the prescribed standards for ambient air in all the stations. PM₁₀ value exceeded in few places, mainly due to vehicular movement.

17.1 CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS

In addition to NAMP monitoring, the Board has installed six automatic Continuous Ambient Air Quality Monitoring (CAAQM) stations. Four stations are installed at Chennai (viz) Koyambedu, Royapuram, Perungudi (Sai Nagar), Kodungaiyur and one station each at SIPCOT Gummidipoondi and SIPCOT Thoothukudi. All the monitoring stations are in operation. These stations monitor PM₁₀, PM_{2.5}, SO₂, NO₂, NH₃, O₃, CO and Benzene on a continuous basis. Similarly, the Board proposes to provide one CAAQM station each at SIPCOT Perundurai, SIDCO Coimbatore and Manali for which instrument has been procured and it will be installed and commissioned shortly. Further to extend this programme to other urban and major industrial areas, the Board

is in the process of establishing 25 Nos. of CAAQM stations at a total cost of Rs. 45 crores.

17.2 MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION

TNPCB has commissioned one mobile continuous ambient air quality monitoring station at a cost of Rs. 1.25 crores to monitor the ambient air quality on real time basis in Chennai city. The Mobile station has the facility to monitor Sulphur-di-oxide (SO₂), Nitrogen-di-oxide (NO₂), Ammonia (NH₃), Ozone (O₃), Carbon monoxide (CO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Particulate matter size less than 10 micron (PM₁₀) and Particulate matter size less than 2.5 micron (PM_{2.5}). The station also have weather monitoring equipments to measure Wind Direction, Wind Speed, Ambient Temperature, Relative Humidity, Solar Radiation, Rainfall, Barometric Pressure etc. This mobile station is used to monitor the air quality in hotspots of

Chennai city and other places and also during emergency situations.

17.3 NATIONAL AMBIENT NOISE MONITORING NETWORK PROGRAMME

Noise is generated from a variety of indoor and outdoor sources such as industries, transport vehicles, construction activities, generator sets, fire crackers. The Noise Pollution (Regulation and Control) Rules, 2000 were notified by MoEF & CC under the Environment (Protection) Act, 1986 and amended in January 2010. Database on noise level is required for policy formulation, setting standards and ensuring compliance of the existing rules.

TNPCB in association with CPCB has established 10 Real Time Ambient Noise Monitoring Stations in Chennai City under National Ambient Noise Monitoring Network Programme. The locations are 1.Egmore, 2.T.Nagar,

3.Perambur, 4.Guindy, 5.Triplicane, 6.Pallikaranai, 7.Velachery, 8.Washermanpet, 9.Anna Nagar, 10.Sowcarpet. The monitoring data reveals that the ambient noise level in Chennai city is exceeding the prescribed standard which is due to vehicular movement and construction activities.

18. WATER QUALITY MONITORING

TNPCB in association with CPCB is implementing Global Environmental Monitoring System (GEMS) and Monitoring of Indian National Aquatic Resources (MINARS) projects in the state. Under this programme, the water quality of major rivers and lakes are monitored at 55 locations on monthly basis. The monitoring data is furnished to the CPCB. The report of analysis reveals that

Sl.No.	Water Bodies	No. of stations	Suitability of Water quality
1	Cauvery and its tributaries	33	Outdoor bathing, drinking water source with conventional treatment followed

Sl.No.	Water Bodies	No. of stations	Suitability of Water quality
			by disinfection and also for fish culture and wild life propagation.
2	Tamirabarani	12	Outdoor bathing, drinking water source with conventional treatment followed by disinfection
3	Palar	1	Drinking water source with conventional treatment followed by disinfection.
4	Vaigai	1	Drinking water with conventional treatment followed by disinfection and fish culture and wild life propagation
5	Lakes	8	Drinking water with conventional treatment followed by disinfection and fish culture and wild

Sl.No.	Water Bodies	No. of stations	Suitability of Water quality
			life propagation

The source of pollution of the water bodies is mainly due to mixing of sewage from the towns and villages located near the banks. The Board has directed all the local bodies to provide sewage treatment plants.

18.1 CHENNAI CITY WATERWAYS MONITORING PROGRAMME

TNPCB is monitoring the water quality of four water ways in Chennai city i.e., Adyar River, Buckingham Canal, Cooum River and Otteri Nallah in 30 monitoring locations to assess the pollution level by collecting water samples on monthly basis since April 2003 both in water bodies and sewage / industrial outlets into the said water bodies. The report of analysis reveals that the Biochemical Oxygen Demand(BOD), Total

Dissolved Solids (TDS) and Chlorides exceed the standards when compared with the IS 2296-1982 Class A Standard prescribed for inland surface waters. This is due to mixing of sewage into the water bodies. Necessary steps are being taken to improve the pollution level in these water ways.

18.2 CONTINUOUS WATER QUALITY MONITORING STATIONS

TNPCB has installed online continuous water quality monitors at three locations each in Noyyal river and Kalingarayan canal in the textile industrial belt of Tiruppur and Erode districts, to monitor the water quality on continuous basis. Similarly three online monitors are installed in river Thamirabarani. These stations monitor pH, total dissolved solids and dissolved oxygen on continuous basis. TNPCB is in the process of installing three monitors in river Cauvery in Namakkal and Karur Districts.

19 LEGAL MATTERS

19.1 APPELLATE AUTHORITY

The Appellate Authority of Tamil Nadu Pollution Control was constituted by the Government of Tamil Nadu under the Chairmanship of Hon'ble Justice (Retd), High Court of Madras with two technical members. The Authority is functioning at No.51, Gangadeeswarar Koil Street, Purasaivakkam, Chennai-86. As per section 28 of the Water (Prevention and Control of Pollution) Act, 1974, and as per section 31 of the Air (Prevention and Control of Pollution) Act, 1981, any person aggrieved by an order made by the Tamil Nadu Pollution Control Board, shall prefer an appeal to this authority, within 30 days from the date of the order is communicated. As on 31st May 2017, 97 appeals have been filed. Out of these 46 appeals were disposed off, and the remaining 51 are under trial.

19.2 NATIONAL GREEN TRIBUNAL

The National Green Tribunal, Principal Bench, New Delhi was established on 18.10.2010 under the National Green Tribunal Act 2010, for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources. As per the National Green Tribunal Act, 2010, any person aggrieved by an order or decision of the Board and/Appellate Authority issued under Section 28, 29 and 33A of the Water (Prevention and Control of Pollution) Act, 1974, under Section 13 of Water (Prevention and Control of Pollution) Cess Act, 1977, under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 and under Section 5 of the Environmental (Protection) Act, 1986 may file an application to NGT within 30 days of the order issued by the Board / Appellate Authority.

The NGT, Southern Bench was established in 2012 and has been functioning at TNPCB Building, Arumbakkam, Chennai-106. As on 31st May, 2017, 709 cases were filed. Among these, 390 cases were disposed off and 319 are under trial.

19.3 ACTION AGAINST POLLUTING UNITS

In order to check any unauthorized industrial discharge into the water bodies in Erode, Namakkal, Karur, Tiruppur and Coimbatore districts, flying squads have been conducting surprise inspection on a regular basis. Based on inspection, action is being taken against the illegal units in coordination with District Co-ordination committees. During the period 1st April 2016 – 31st May 2017, 203 unauthorized units were evicted. Apart from that the Board has issued show cause notice to 5896 units and closure

direction to 222 units in the State who have violated the provisions of Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 during the period 1st April 2016 to May 31st, 2017.

20. OTHER ACTIVITIES OF THE BOARD

20.1 PUBLIC HEARING

As per the Environmental Impact Assessment Notification, 2006, certain categories of industrial projects require prior environmental clearance from the Ministry of Environment, Forests and Climate Change, Government of India or State Environmental Impact Assessment Authority (SEIAA) depending on the size of the project. As per the notification, TNPCB conducts public hearing under the chairmanship of the District Collector. After conducting public hearing the proceedings of the meeting is sent to the Ministry of Environment, Forest & Climate Change / State Level Environment Impact Assessment Authority. During the period April 2016 to May 2017, the Board has conducted public hearings for 30 projects.

20.2 CLEANER TECHNOLOGIES

TNPCB is keen on promoting a holistic approach to environment protection by enforcing adoption of cleaner technology options rather than mere end-of-pipe treatment. In recent years several industrial units in Tamil Nadu have switched over to cleaner technologies such as;

- Adoption of double conversion and double absorption technology in sulphuric acid manufacturing
- Gas carburizing instead of cyanide salt in heat treatment and cyanide free electroplating.
- Adoption of membrane cell process replacing mercury cell process in caustic soda manufacturing

- Adoption of dry process instead of wet process to reduce air pollution in cement factories
- Utilization of 25 to 30% of fly ash in Portland Pozzolana Cement manufacturing
- Activated carbon manufacturing units have gone for waste heat recovery boiler and eliminated the dedicated boiler to produce steam for the activation purpose. This system eliminates the consumption of coal / wood as fuel for the boiler and thus avoids greenhouse gaseous emission.
- Pulp and paper industries have been encouraged to go in for elemental chlorine free bleaching to reduce the formation of organo-chlorides including dioxins.

20.3 MASSIVE TREE PLANTING PROGRAMME

TNPCB has supported the Forests Department in Massive Tree Planting Programme for planting of 64 lakhs seedlings, 65 lakhs seedlings, 66 lakhs seedlings and 67 lakhs seedlings during the year 2012, 2013, 2014 and 2015 respectively. The Board has released fund of Rs.28.84 crores, Rs.20 crores, Rs.17.99 crores and Rs.16.832 crores for the tree planting programme during the year 2012, 2013, 2014 and 2015 respectively.

20.4 ENVIRONMENTAL CAMPAIGN AND PUBLIC PARTICIPATION

Environmental campaign has become an important tool to achieve effective compliance of various pollution control norms. Large scale public involvement can strengthen environment movements for the sake of implementation of

environment-friendly rules and regulations by the government machinery. Towards this end, the TNPCB conducts various types of environmental awareness programmes every year on the following occasions.

- **Bhogi Festival:-** Board conducts awareness programmes not to burn the waste materials such as waste tyres, tubes, plastic materials, cloths etc in open places. In Chennai city, Board conducts ambient air quality monitoring during pre-bhogi and bhogi festival days in 15 locations. The results are published in the TNPCB web site and dailies.
- **Vinayagar Chathurthi:-** Awareness programmes are conducted through the Collectors in all the district headquarters and towns not to use Plaster of Paris and paints to make the Vinayagar idols. The Board also monitors water quality of the identified water bodies before and after

immersion of idols in the specified locations.

- **Deepavali Festival:-** Awareness programmes are conducted to discourage bursting of crackers from 10 P.M to 6 A.M and also not to burst crackers of more than 125 decibel (average). The Board also monitors ambient air quality and noise level in Chennai and other cities viz., Trichy, Coimbatore, Madurai, Tirunelveli, Vellore, Salem, Hosur, Tiruppur, Dindigul and Cuddalore during Pre-Deepavali and Deepavali days. The results are published in the TNPCB web site and dailies.
- **Karthigai Mahadeepam Festival:-** The Plastic Awareness campaign is conducted every year in Thiruvannamalai Town during the Karthigai Mahadeepam Festival. In order to encourage the people to avoid plastic carry bags and to use

alternate like cloth bag, paper bags, jute bags, TNPCB conducts a programme by giving coupons to the people who bring cloth bag, jute bags and select the winners by lucky draw. Winners are given gold and silver coins. This programme has helped to create a great deal of awareness among the people.

- **Government Exhibitions:-** TNPCB actively participates in the Government Exhibitions conducted every year at Island Grounds in Chennai and in the District Head Quarters by providing stall and exhibits models on effluent treatment plant, air pollution control measures, solid waste management and other information related to environmental protection. In 2016-17, TNPCB participated in the Government Exhibitions held in Chennai- Island Grounds and in Tirunelveli, Nagercoil, Madurai, Coimbatore,

Thanjavur, Salem, Namakkal, Cuddalore and Tiruvannamalai. Large number of students and people have visited the stalls and benefited. The TNPCB stall was awarded 3rd price in the 2017 exhibition.

- **World Environment Day:-** World Environment Day is observed on 5th June of every year to raise awareness to take positive environmental action to protect nature and the planet earth. TNPCB observes the day by conducting awareness programme to the school students and the public. On this day, green awards are distributed to the best performing industries.
- **Ozone Day:-** 16th September of every year is observed as International Day for the preservation of the Ozone Layer. During the month of September 2016, Ozone day was observed in Districts in association with Industries and

Educational Institutions.

20.5 ENVIRONMENTAL TRAINING INSTITUTE

TNPCB has established Environmental Training Institute (ETI) in the year 1994. The main objective of this institute is to impart training to staff of the Pollution Control Board, representatives of Industry and non-governmental organizations. During the year 2016-17, i.e., up to 31.05.2017, the ETI has conducted 46 training programmes, in which 843 participants have been trained. Training programme includes

- Pollution Control Laws and Rules
- Integrated Coastal Zone Management
- Environmental Economics
- Air Quality and Health
- Wastewater Treatment

- Right to Information Act
- Online Consent Management and Monitoring System
- Identification and quantification of hazardous wastes
- Solid Waste Management
- Plastic Waste Management
- Vehicle emission monitoring

20.6 GREEN AWARDS

Green awards are being given every year to Industries who have adopted best practices in achieving best environmental quality in emission, discharge of waste water, solid and hazardous waste management and green belt development. Similarly Green Awards are also given to the District Collectors who have taken action for the betterment of environment in their districts.

Accordingly Green awards are given to the industries and District Collectors every year.

21 HIGHLIGHTS OF PERFORMANCE AIR AND WATER POLLUTION CONTROL

- In order to monitor ambient air quality on continuous basis, the Board has installed six Continuous Ambient Air Quality Monitoring Stations (CAAQMS) at cost of Rs.6 crores. The Board is also in the process of installing further 25 Nos. of CAAQMS in the State at a cost of Rs. 45 crores.
- The Board has established one mobile continuous real time ambient air quality monitoring station to monitor the ambient air quality of Chennai city at a cost of Rs. 1.25 crores.
- In order to monitor the quality of stack emission, ambient air and effluent

discharge from red – large and highly polluting industries on continuous basis (24x7), the Board has established a Care Air Centre and Water Quality Watch Centre at head office.

- In order to monitor ambient noise level of Chennai city on real time basis, TNPCB has installed ten noise monitoring stations in Chennai.
- Action was taken to revive the 754 textile dyeing units located in Tiruppur which were closed due to directions of the Hon'ble High Court of Madras. At present 18 CETPs with 458 member units and 95 units with Individual Effluent Treatment Plant which have provided ZLD plant have been permitted to operate. In view of the above action by TNPCB, the pollution level in the form of Total Dissolved Solids (TDS) in the Noyyal

River at Orathupalayam dam has come down.

- TNPCB has installed online continuous water quality monitoring stations at three locations in each of water bodies of Noyyal river, Kalingarayan canal, Thamirabarani river at a total cost of Rs. 0.65 crores. The Board is in the process of installing similar station in river Cauvery.
- The moratorium imposed by the Ministry of Environment Forests & Climate Change, Government of India to the critically polluted areas of Manali, Cuddalore and Coimbatore, were lifted due to the continuous follow-up action of the Board in effective implementation of action plan by the industries,

- In order to avoid deaths during cleaning of tanks in Effluent Treatment Plants, Training programmes were conducted to the ETP operators and more than 3000 persons have been trained.

HAZARDOUS WASTE MANAGEMENT

- The Board has taken effective initiatives for the disposal of Effluent Treatment Plant (ETP) sludge from Textile Dyeing units and so far, about 59,174 Tonnes of sludge has been disposed off to various Cement industries for co-processing.

STRENGTHENING OF LABORATORIES

- In order to get recognition at the National level, TNPCB has got NABL accreditation for its 5 Advance Environmental Laboratories in Chennai, Coimbatore, Salem, Cuddalore, and Madurai.

- Three AELs in Chennai, Salem and Cuddalore have been accorded OHSAS 18001 certification.
- Now District Environmental Laboratories were established at Maraimalai Nagar Office at Kancheepuram district and in Perundurai Office at Erode district.
- In order to upgrade analytical capability of Board Laboratories, water sample and air sample analysis instruments were procured and supplied at a cost of Rs. 4.91 cores.

INFRASTRUCTURE DEVELOPMENT

- Twelve District office buildings were constructed and inaugurated at a cost of Rs. 21.23 crores. Construction work is in completion stage for two more buildings, (Perundurai and Vaniyambadi)

- 216 Nos. of laptops at a cost of Rs.1.41 crore were provided to all the Senior officers and Engineers of the TNPCB for speedy disposal of work.
- For effective monitoring of industries and protecting the environment, six zonal offices headed by Joint Chief Environmental Engineers at Chennai, Vellore, Coimbatore, Trichy, Madurai and Salem and eight district offices headed by District Environmental Engineers at Coimbatore North, Tiruppur South, Ariyalur, Sivagangai, Ramanathapuram, Dharamapuri, Theni and Ooty were newly formed.

COMPUTERIZATION OF TNPCB ACTIVITIES

- In January 2015, TNPCB launched Online Consent Management and Monitoring System (OCMMS). The entire process of applying for consent under Water & Air Acts, processing of application, payment

of fees and issuing of consent are done online.

- In March 2016, the TNPCB introduced online complaint management system which enables the citizen to file the pollution related complaint online and get it redressed.
- In March 2016, TNPCB introduced module for online submission of application for getting authorization under Hazardous Waste and Bio-medical Waste Management Rules.
- On 1st May 2017, TNPCB has launched a E-Noting Module to facilitate online communication for exchange of communication between TNPCB and industries.

K.C.KARUPPANAN

MINISTER FOR ENVIRONMENT