Environment and Forest Department

Policy Note 2016-2017

Demand No.15

Tamil Nadu Pollution Control Board

TAMILNADU POLLUTION CONTROL BOARD

1. INTRODUCTION

Under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974), the Government of Tamil Nadu constituted the 'Tamil Nadu Prevention and Control of Water Pollution Board' on February 27, 1982. The Board was later renamed as Tamil Nadu Pollution Control Board (TNPCB) in the year 1983. The TNPCB was entrusted with the added responsibility of Air Pollution Control under the provisions of the Air (Prevention and Control of Pollution) Act, 1981. The enactment of the Environment (Protection) Act, 1986, which is umbrella legislation for enforcement of measures for protection of environment and several notifications of Rules under the Act further widened the scope of activities of the TNPCB. The TNPCB has been continuously playing a key role in abatement and control of pollution in the state.

Currently, TNPCB enforces various environmental legislations as notified from time to time by Government of India. It includes the following:-

- 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
- The Environment (Protection) Rules, 1986
- The Noise Pollution (Regulation and Control) Rules, 2000
- The Battery (Management and Handling) Rules, 2001
- The Hazardous and other Wastes (Management, and Transboundary Movement) Rules, 2016
- The Biomedical Waste Management Rules, 2016
- The Solid Waste Management Rules, 2016
- The Plastic Waste Management Rules, 2016
- E-Waste Management Rules, 2016.
- Construction and Demolition Waste Management Rules, 2016.

2. FUNCTIONS

The main functions of TNPCB, as defined in the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981, are:

- Advise the State Government on any matter concerning the prevention, control and abatement of water and air pollution and also to advice with respect to the suitability of any premises or location for carrying on any industry which is likely to pollute a stream or well or cause air pollution;
- Lay down standards for treatment of sewage and trade effluents and for emissions from automobiles, industrial plants, and any other polluting source;
- Develop reliable and economically viable methods for treatment of sewage, trade effluents and air pollution control equipment;
- Evolve efficient methods of utilization of treated sewage and treated trade effluents in

agriculture; taken in to account of soil structure and type of crops;

- Identify any areas within State as air pollution control areas to be notified under the Air (Prevention and Control of Pollution) Act, 1981;
- Assess the quality of ambient air and water and inspect wastewater treatment installations, air pollution control equipments, industrial plants or manufacturing processes to evaluate their performance and to take steps for the prevention, control and abatement of air and water pollution;
- To perform such other functions as may be prescribed by the State Government or Central Pollution Control Board.

3. ORGANISATION SETUP

The TNPCB functions with three-tier system consisting of Corporate Office at Chennai, Regional offices and District offices with total staff strength of 705. There are 5 Regional offices headed by Joint Chief Environmental Engineers at Chennai, Vellore,

Coimbatore, Trichy and Madurai. Besides, there are 36 district offices headed by District Environmental Engineers. In order to ensure a constant watch on the units in the textile industrial belt, the Board has two flying squads headed by Environmental Engineers functioning at Erode and Tiruppur.

In order to support the Board in effective monitoring of industries, water bodies and air quality of the State, the TNPCB has established 15 Environmental Laboratories in the districts. Among these, 5 Laboratories functioning at Chennai, Salem, Coimbatore, Cuddalore, and Madurai are Advance Environmental Laboratories (AEL) having sophisticated instruments to undertake analysis of additional parameters. These five AELs have been accorded certification by National Accreditation Board for Testing and Calibration of Laboratories (NABL).

4. CONSENT MANAGEMENT

Under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974, the industries are required to obtain consent of the State Pollution Control

Board (SPCB) for discharge of sewage / trade effluent into any stream or well or into sewer or land. Further under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, the industries are required to obtain consent to operate the plant in air pollution control areas. 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.

Central Pollution Control Board has categorized the industries as Red, Orange, Green and White based on their pollution potential. 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 Gross Fixed Asset 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. Presently around 46,000 units are under the purview of TNPCB.

TNPCB issues consent to the Industries in two stages. In the first stage, 'Consent to Establish' is issued under the Water (P&CP) Act, 1974 and Air (P&CP) Act,

1981 for establishing the industry by considering the impact on environment and the proposed pollution abatement measures subject to certain conditions. In the second stage, 'Consent to Operate' is issued for commissioning the plant for production, on compliance of conditions imposed in the 'Consent to Establish'. The Board has delegated powers to the field officers at the Regional 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 others organizations. From 1st April 2015 to 30th June, 2016, the Board has issued 'Consent to Establish' to1452 industries and 'Consent to Operate' to 2385 industries under the Water (Prevention and Control of Pollution) Act, 1974 as amended and the Air (Prevention and Control of Pollution) Act, 1981 as amended.

5. ONLINE CONSENT MANAGEMENT AND MONITORING SYSTEM (EASE OF DOING BUSINESS)

TNPCB has implemented E-Governance in consent management. Accordingly TNPCB has provided the facility of Online Consent Management and Monitoring System (OCMMS). OCMMS is a web based generic application software package for automating the workflow associated with consent management and monitoring which is one of the basic functions of the Board. This system allows the industries for online submission of application for Consent to Establish / Consent to Operate / Renewal of Consent, uploading of documents, online submission of clarification and for knowing the status of application. The online payment of consent fees is to be made functional shortly.

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. It helps for online monitoring of the processing of application. From 20.1.2015 onwards, the applications are accepted only

through OCMMS. In order to facilitate the industries to apply online through OCMMS, Care Centre has been established in all the 36 district offices. This system brings efficiency and transparency in consent management.

6. ONLINE GRIEVANCE REDRESSAL SYSTEM

TNPCB has launched online grievance redressal system on 1.3.2016. The public can file compliant relating to industrial pollution to TNPCB through online. The compliant will be investigated and the action taken will be intimated to the petitioner through electronic mail. Upto 30th June 2016, 182 online complaints were received, investigated and disposed off.

7. MONITORING OF INDUSTRIES

In order to effectively monitor industries, the Board has fixed norms for inspection and sample collection based on size and category of the industry, vide B.P. Ms. No. 22 dated 25.2.2004.

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 2015 to 30th June 2016, the Board has carried out ambient air quality survey in 1443 units, collected and analyzed 8070 sewage and 19850 trade effluent samples.

8. CARE AIR CENTRE

In order to monitor both source emissions and ambient air quality on a real time basis of the industries located in the State, TNPCB has established Care Air Centre for Accessing Real Time Air Quality Information Report at the Corporate office, Chennai. This is a continuous real time emission monitoring system of connected industries belonging to Red category and especially for 17 category of highly polluting units, which is functioning on 24 X 7 basis. This is the first of its kind in the India. When the emission levels exceed the norms, the inbuilt system will inform the concerned industry and the District Environmental Engineer, Member Secretary through an automated Short Messaging System (SMS) and Electronic Mail (e.mail) to take immediate remedial action. Upto 30th June, 2016, 351 units are connected to Care Air Centre for online monitoring. Of these, 334 units are connected for stack emission monitoring and 90 units for Ambient Air Quality monitoring.

9. WATER QUALITY WATCH CENTRE

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. Upto 30th June 2016, 82 units are connected to this centre; of which 44 units are connected for zero liquid discharge monitoring and 38 units for treated effluent discharge monitoring. This type of monitoring system will leads to self monitoring and improve the environmental water quality.

10. COMMON EFFLUENT TREATMENT PLANTS

Keeping in view the key role played by Small Scale Industries (SSI) units and the constraints in complying with pollution control norms individually by these units, the Ministry of Environment, Forest and Climate Change initiated an innovative technical and financial support scheme to ensure their growth in an environmentally compatible manner. 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 proposal plans for the CETPs. The details of CETPs established in the following sectors are as follows:-

Tanneries	13 Schemes
Textile Bleaching & Dyeing Units	30 Schemes
Hotels & Lodges	1 Scheme

Among 13 CETP schemes established 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 achieve ZLD standards. The one CTEP at Kodaikanal collects and treats the wastewater arising from the hotels and lodges located around the Kodai Lake.

11. SOLID WASTE MANAGEMENT

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Solid Waste Management Rules, 2016. As per the rules, solid waste means solid or semi solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities. As per the rules, the local bodies are responsible for the collection, treatment and disposal of solid wastes.

The Board is the monitoring authority under the said rules and is responsible for granting authorization to local bodies for processing and disposal of solid waste. The Board has issued direction to all the Local Bodies to establish waste processing facilities. So far, the Board has issued authorization to 5 Corporations, 48 Municipalities and 73 Town Panchayats for composting of municipal solid waste and setting up of waste processing facility. The Board is advocating the concept of waste segregation at source, waste reduction, recycle and reuse to avoid any environmental issues during handling.

12. PLASTIC WASTE MANAGEMENT

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Plastic Waste Management Rules, 2016. As per the rules, plastic waste means any plastic discarded after use or after its intended use is over. 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.

As per the rules, carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness. The persons engaged in manufacture or import of carry bags or multilayered packaging or plastic sheets or like shall obtain registration certificate from the State Pollution Control Board. The role of State Pollution Control Board is to enforce the provisions of these rules relating to registration, for the manufacture of plastic products and multilayered packaging and disposal of plastic wastes. So far, TNPCB has identified 471 plastic carry bags manufacturing units and 140 plastic recycling units. Among these, TNPCB registration is issued to 219 units. In order to create awareness on plastic to the public, TNPCB provides a fund of Rs. 50,000/- (Rupees Fifty Thousand Only) every year to each District Collector since 2015. TNPCB addressed all the local bodies to effectively comply with the provisions of the said rules.

13. HAZARDOUS WASTE MANAGEMENT

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. As per the rules, hazardous

waste means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment. The hazardous waste generator shall follow the steps namely prevention, minimization, reuse, recycling, recovery, utilization including co-processing and safe disposal of hazardous waste. SPCB shall grant authorization for handling the hazardous wastes.

TNPCB has identified 3,545 units generating hazardous wastes and issued authorization under the rules. In Tamil Nadu about 6.92 lakhs tonnes of hazardous waste is annually generated in which 2.97 lakhs tonnes is landfillable, 3.43 lakhs tonnes is recyclable and 0.52 lakhs tonnes is incinerable. The Board is taking effective steps in handling and management of hazardous wastes, its treatment and disposal in an environmentally safe manner. One common hazardous waste Treatment Storage and Disposal Facility (TSDF) has been established at SIPCOT Industrial Estate, Gummidipoondi and it is in

operation. Another TSDF at Unduorumikidakulam village in Virudhunagar district is under establishment.

TNPCB has taken pioneering efforts to utilize the hazardous waste generated from Common Effluent Treatment Plants (CETPs) of textile processing units as fuel/raw material for co-processing in the cement factories. So far, about 50,000 tonnes of ETP sludge have been disposed to various Cement industries for co-processing. Similar trails are being taken-up for using hazardous waste generated from tannery CETPs in co-processing in the cement factories. A common facility for pre-processing of hazardous waste has been established in Ranipet by M/s. Gujarat Enviro Protection and Infrastructure Limited. The facility pre-processes the hazardous waste so as to use the same for co-incineration in cement kiln.

13.1 ONLINE HAZARDOUS WASTE MANAGEMENT AUTHORIZATION

TNPCB has launched online hazardous waste application receipt and processing module on 1.3.2016. The industries can apply for authorization for handling

their hazardous waste through online. The application will be processed and the authorization will be issued through online. This system allows the industry to track the status of their application. Upto 30th June 2016, 399 units have applied for authorization through online. These applications are processed and authorizations are being issued.

14. BIO-MEDICAL WASTE MANAGEMENT

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Bio-Medical Waste Management Rules, 2016. As per the rules, bio-medical waste means any waste, which is generated during diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps. The bio-medical waste generator and the operator of the common bio-medical waste treatment and disposal facility (CBMWTF) shall be responsible for safe handling and disposal of the bio-medical waste. The State Government of Health Department shall ensure for implementation of the rule in all health care facilities.

SPCB shall issue authorization to the health care facilities and CBMWTF. It shall monitor the compliance of various provisions of the rules. TNPCB has so far authorized 6261 Private and Government hospitals in the State under the rules. All these hospitals have made agreement with the CBMWTF for the collection, transport, treatment and scientific disposal of the biomedical waste. The CBMWTF consists of autoclave, shredder, incinerator and secured land fill facilities. In Tamil Nadu, 11 CBMWTF are under operation. On an average, daily 43 Tonnes of bio-medical waste is handled by these facilities. There are 3 such facilities in the districts of Tiruvallur, Cuddalore and Tiruppur are under establishment.

15. E- WASTE MANAGEMENT

The Ministry of Environment, Forest and Climate Change, Government of India notified the E-Waste (Management) Rules, 2016. This rule will come into force from the 1st day of October, 2016. Electronic waste or e-waste comprises of old, end of life electrical and electronic appliances such as telephones, cellular telephones, computers, laptops, television sets,

refrigerators, washing machine, air-conditioners, fluorescent and other mercury containing lamps etc. The rules apply to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment.

As per the rules, the producer of the electrical and electronic equipment shall be responsible for collection and channelization of e-waste generated from the 'end-of-life' of their products for recycling under Extended Producers Responsibility. State Pollution Control Board shall grant and renew authorization to the manufacturers, dismantlers, recyclers and refurbishers. SPCB shall monitor on the compliance of Extended Producer Responsibility by the producer of electrical or electronic equipment for channelization of e-waste for recycling to ensure environmentally sound management of such waste. SPCB shall conduct random inspection of dismantler or recycler or refurbisher, maintain online information regarding authorization granted,

implementation of programmes to encourage environmentally sound recycling, and action against violations of the rules. TNPCB has issued authorization for 35 units (producers - 4, collection centres- 13, dismantlers - 13, recyclers - 5) under the e-Waste (Management & Handling) Rules.

16. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Construction and Demolition Waste Management Rules, 2016. These rules are newly notified exclusively to manage waste from construction activities. These rules apply to every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organization or authority who generates construction and demolition waste such as building materials, debris and rubble. The local bodies shall ensure proper management of construction and demolition waste. SPCB shall grant authorization for the waste processing facility and monitor the implementation of these rules. TNPCB has addressed all the local bodies

to identify sites for collection and processing facility for the construction and demolition wastes.

17. WATER QUALITY MONITORING

TNPCB is monitoring the water quality of major rivers and its tributaries at 55 locations, under the Monitoring of Indian National Aquatic Resources (MINARS) programme and under the Global Environmental Monitoring System (GEMS) as detailed below:-

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 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
5	Lakes	8	Drinking water with conventional treatment followed by disinfection and fish culture and wild life propagation

17.1 CONTINUOUS WATER QUALITY MONITORING STATIONS

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

18. AMBIENT AIR QUALITY MONITORING

With the increased industrial and commercial activities in the vicinity of major cities, the quality of the ambient air is being affected by emissions from the industries and from the ever increasing vehicular population. For monitoring ambient air quality in major cities and Towns of Tamil Nadu, TNPCB conducts ambient air quality survey at 28 locations under National Air Quality Monitoring Programme (NAMP) by installing high volume samplers. The locations are given below.

Sl.No.	City/Town	Sample Location	Land Use
1	Chennai	Kathivakkam	Industrial zone
		Manali	Industrial zone
		Thiruvottiyur	Industrial zone
		Kilpauk	Commercial (traffic intersection)
		Thiyagaraya Nagar	Commercial (traffic intersection)
		Nungambakkam	Commercial (traffic intersection)
		Anna Nagar	Residential zone
		Adyar	Residential zone
2	Coimbatore	District Collector Office	Mixed zone
		Ponnaiyarajapuram	Residential zone
		SIDCO building	Industrial zone

3	Madurai	Highways Project building	Residential zone
		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 Bus stand	Traffic intersection
6	Thoothukudi	Raja Agencies	Industrial zone
		SIPCOT	Industrial 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

All the above stations are functioning on 24 hours basis, Twice a week, the samples collected from NAMP stations are analysed for the Particulate Matter (PM_{10}) and gaseous pollutants such as oxides of Sulphur and Nitrogen. During the period 2015-16, the average values of oxides of Sulphur and Nitrogen were found to be well within the prescribed standards for ambient air in all the stations. PM_{10} exceeded in few places which is mainly due to vehicular movement.

18.1 CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS

Besides manual air quality 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. All monitoring stations monitor PM_{10}, $PM_{2.5}$, SO_2, NO_2,NH_3, O_3, CO and Benzene on a continuous basis. Important features of the system are;

i. Data updation at a frequency of 15 minutes from the locations.
ii. Immediate reporting of violation of Ambient Air Quality Standards.
iii. Data validation with working ranges and instrumental ranges.
iv. Common System can fetch the available data from any CAAQM Stations in state.
v. Connectivity through mobile or landline communication network.
vi. Instant access to previous and current data in desired formats.
vii. The software can also analyze the data as desired normally like comparisons with other stations, hourly, eight hourly, monthly, yearly data analysis etc.

18.2 MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION

In March 2016, TNPCB has commissioned one mobile continuous ambient air quality monitoring station to monitor the ambient air quality on real time basis. The Mobile station has the facility to monitor Sulphur di oxide (SO_2), Nitrogen di oxide (NO_2), Ammonia (NH_3), Ozone (O_3), Carbon monoxide (CO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Particulate matter size less than 10 micron (PM_{10}) and Particulate matter size less than 2.5 micron ($PM_{2.5}$). The station also have weather monitoring station to measure wind direction, wind speed, ambient temperature, related humidity, solar radiation, rainfall, barometric pressure etc. This mobile station can be used to monitor the air quality in hotspots of Chennai city and other places. TNPCB is the first State Board in the country to have a mobile continuous ambient air quality monitoring facility.

19. OTHER ACTIVITIES OF THE BOARD

19.1 CLEANER TECHNOLOGIES

TNPCB has been concerned in promoting a holistic approach to environment protection by enforcing adoption of cleaner technology rather than mere end-of-pipe treatment. Several industrial units in Tamil Nadu have switched over to cleaner technologies such as;

- 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
- 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.

- Pulp and paper industries are encouraged to go in for elemental chlorine free bleaching to reduce the formation of organo-chlorides including dioxins.
- 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 eliminated the consumption of coal / wood as fuel for the boiler and thus avoided greenhouse gaseous emission.

19.2 TECHNOLOGY DEMONSTRATION CENTRE

TNPCB has established a Technology Demonstration Centre at Indian Institute of Technology Madras and have entered into a Memorandum of Understanding (MoU). A sum of Rs.5 crores has been allocated for this purpose. The Technology Demonstration Centre has conducted treatability studies for rice mills, sago and small scale textile processing units. The Centre has conducted awareness programme on fire management on waste landfill site for the Municipal Authorities, Fire Department and TNPCB officials. The Centre has also conducted technical

workshop for sago industries for better understanding of the characteristics of sago waste water, anaerobic treatment, biogas generation, optimizing the process parameters to enhance the composition and quantity of biogas generated. This Centre designed and fabricated the Upflow Anaerobic Sludge Blanket Reactor (UASB) to demonstrate best available technology for anaerobic treatment of sago waste water and energy generation. Further work in this regard is continuing.

19.3 MASSIVE TREE PLANTING PROGRAMME

TNPCB has supported the Forests Department for Massive Tree Planting Programme by planting 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 granted 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.

19.4 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 in a better way to have the most desired results. Towards this end, the TNPCB has conducted various types of environmental awareness programmes every year on the following occasions:-

- **Vinayagar Chathurthi Festival:-** 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 that specified locations.
- **Deepavali Festival:-** Awareness programmes are conducted to prevent the bursting of crackers from 10 P.M to 6 A.M and also not to burst crackers

creating sounds 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.

- **Bhogi Festival:-** Board conducts awareness programmes not to burn the waste materials such 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.
- **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 use alternate like cloth bag, paper bags, jute bags, TNPCB conducts a programme by giving coupons to the people who brings cloth bag, jute bags and select

the winners by lucky draw and give gold and silver coins. This has created huge awareness among the people.

- **Mahamaham Festival:-** TNPCB has conducted extensive awareness programme during the Mahamaham Festival in January 2016. 'Maasilla Mahamaham' rally was conducted on 7.1.2016 in Kumbakonam in which more than 1000 school students participated. Workshop on 'Clean Kumbakonam' was conducted on 22.1.2016 in which more than 500 school students participated. On 2.2.2016, plastic awareness rally was conducted in which more than 1000 college students participated. On 3.2.2016, human chain was conducted with a theme of 'Clean Kumbakonam', in which more than 1500 school students participated. The Board has also participated in the Special Exhibition conducted for Mahamaham Festival.

- **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 on Environmental Protection. In 2015-16, TNPCB participated in the Government Exhibitions held in Island Grounds and in Tiruvannamalai, Trichy, Thanjavur, Nagercoil. Large number of Students and People have visited the stalls and benefited. In Theni District, TNPCB installed a stall in the Vaigai Peruvizha festival for creation of environmental awareness to the people.

19.5 ENVIRONMENTAL TRAINING INSTITUTE

Environmental Training Institute **(**ETI) established in the year 1994 is an organizational wing of the TNPCB. The main objective of the training institute is to impart training to staff of the Pollution Control Board, representatives of Industry and non-governmental organizations. During the year 2015-16, the ETI has conducted 27 training programmes, in which 1464 participants have been trained. Training programme includes:-

- Identification and quantification of hazardous wastes
- Pollution Control Laws and Rules
- Integrated Coastal Zone Management
- Environmental Economics
- Air Quality and Health
- Plastic Waste Management
- Wastewater Treatment
- Right to Information Act

19.6 OFFICE BUILDING CONSTRUCTIONS

Among the 36 District Offices, the Board has its own building for 17 offices. For the remaining 19 District offices, buildings are nearing completion in 6 districts namely Coimbatore North, Coimbatore South, Oragadam, Erode, Perundurai and Vaniyambadi. For 3 Districts namely Tiruvallur, Nagapattinum and Salem, land has been acquired and Detailed Project Report is under preparation by Public Works Department. For 9 Districts namely Tiruppur North, Tiruppur South, Thiruvannamalai, Theni, Nagarcoil, Ooty, Ariyalur, Dharmapuri and Ramanathapuram lands are yet to be

acquired. For one District (i.e) Karur, the construction work was suspended due to litigation in the Supreme Court.

19.7 GREEN AWARDS

As per the announcement made in the Legislative Assembly during the year 2011-12, Green awards are 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.

19.8 APPELLATE AUTHORITY

As per the 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 State Pollution Control Board may prefer an appeal to authority constituted by the State Government. The Government of

Tamil Nadu has constituted an Appellate Authority 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. From April 2015 to June 2016, 82 appeals have been filed. Among these 26 appeals were disposed off and the remaining 56 appeals are under trial.

19.9 NATIONAL GREEN TRIBUNAL

The National Green Tribunal (NGT) was established at New Delhi on 18.10.2010, for effective and expeditious disposal of cases relating to Environmental Protection and Forest Conservation. As per the National Green Tribunal Act, 2010, any person aggrieved by an order or decision of the Board/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 apply to NGT

within 30 days of the order issued by the Board / Appellate Authority .

The first bench of National Green Tribunal for Southern Zone was constituted in 2012 and the second bench was constituted in 2015. The NGT is functioning at TNPCB Building, Arumbakkam, Chennai-106. TNPCB has facilitated for the establishment of NGT Southern Zone. So far 563 cases involving TNPCB were filed. Among these, 300 cases were disposed off and 263 cases are under trial.

19.10 LIBRARY

TNPCB Library was established during the year 1989. At present, it has a collection of about 11,421 books and reports. The Library subscribes to 51 Journals (English & Tamil), 10 Newspapers and 11 Magazines related to environment. This is one of its kinds in the Country, which has large collections of books and journals on Environment. Membership is open to all the stakeholders in the environmental sector. For automation of library, Lib Sys software is installed and it is in use.

20. HIGHLIGHTS OF PERFORMANCE

TNPCB aims at developing all round capabilities to protect the environment by preventing and controlling pollution through effective law enforcement and by adopting best environmental management practices to keep the State on course of sustainable development. As a result, the Board has promoted the State of the Art Technology not only for technical components and issues but has strived for modernization in administration also. It has achieved many 'Firsts' in India in various initiatives. The Board has always set an example for the other State Pollution Control Boards in the country in helping the small scale sector to establish CETPs. The Board is the first in the country in implementing Zero Liquid Discharge (ZLD) concepts in Textile and Tannery sectors. The Board is the first one in the country to establish the CARE AIR Centre for online continuous monitoring of air emissions. So far 351 industries have been connected online and are being monitored round the clock. Similarly, TNPCB is the first State Board for the establishment of Water Watch Centre. TNPCB is also the first Board in the

country to establish 11 CBMWTFs for treating and disposal of bio-medical waste.

TNPCB is the only State Board in the Country that has obtained certification from National Accreditation Board for Testing and Calibration Laboratories for its five Advanced Environmental Laboratories. It is the first State Board in the country that has a mobile continuous ambient air quality monitoring station. In order to monitor the water quality of important water bodies on continuous basis, TNPCB has installed online continuous monitors. The Board is constantly having interaction with all the stakeholders by way of meetings, workshops, awareness programmes, training etc., for prevention of pollution and better compliance of environmental laws in the State.

TNPCB has launched OCMMS for online submission of application for consent, processing and issue of consent. The Board has also launched online hazardous waste application receipt, processing and online grievance redressal system, which are all milestones in e-governance. TNPCB is taking all efforts by way of prevention and control of pollution from the industrial activities so as to protect the environment in the

State. TNPCB will be guided in all its endeavors by its Vision Statement –“To forge partnerships with the stakeholders for responsible and sustainable development of the State”.

K.C. KARUPPANAN
MINISTER FOR ENVIRONMENT