TAMILNADU POLLUTION CONTROL BOARD

1. INTRODUCTION

Government of Tamilnadu constituted the Tamilnadu Prevention and Control of Water Pollution Board on the 27th February 1982, under Section 4 of the Water (Prevention and Control of Pollution) Act, 1974. Later renamed as Tamil Nadu Pollution Control Board (TNPCB) in the year 1983, the Board has today grown into one of the best Pollution Control Board in the Country. Starting with only 17 employees, the Board has now an overall strength of 597 employees and functioning in all districts of Tamilnadu, with own office buildings and well equipped laboratories. The TNPCB primarily enforces the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981,

the Environment (Protection) Act, 1986 and Rules made under these Acts.

1.1 Mandate of the Board

The mandate of the TNPCB is prevention and control of pollution in the State of Tamilnadu by implementation of various Acts and Rules under the umbrella Act of the Environment Protection Act, 1986 as amended. The main tools used for protection of the Environment include conducting inspections of Industrial establishments, collecting samples for analysis, collection of data, extending technical and scientific support involving reputed educational institutes, and coordination with State Government in implementation of the environmental rules and regulations as a Regulatory Authority. Following Acts and Rules are implemented by the Tamilnadu Pollution Control Board;

Acts

- The Water (Prevention and Control of Pollution) Act, 1974
- The Air (Prevention and Control of Pollution) Act, 1981
- The Environment (Protection) Act, 1986

Rules

- The Tamilnadu Water (Prevention and Control of Pollution) Rules, 1983
- The Tamilnadu Air (Prevention and Control of Pollution) Rules, 1983
- 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 Solid Waste Management Rules, 2016
- The Plastic Waste Management Rules, 2016
- The Construction and Demolition Waste Management Rules, 2016
- The E-Waste Management Rules, 2016
- The Bio-Medical Waste Management Rules, 2016
- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

2. FUNCTIONS

TNPCB is a statutory organization whose main function is to promote cleanliness of water bodies, streams and wells, control and abatement of water pollution and to prevent, control or abate air pollution, improve the quality of air and protect the environment as a whole.

The main frame and functional divisions of the head office consists of Planning and Development section, Technical section, Administration section, Finance and Accounts wing, Legal cell, Construction wing, Laboratory, Computer section, complaint redressal cell and online monitoring section. The field level offices cover activities related to inspections, survey, sample collection and analysis and co-ordination with District administration etc.

2.1 Role and Functions under the Water and Air Acts

The functions of 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 are as follows:

- To plan a comprehensive programme for prevention, control or abatement of pollution of streams and wells and air pollution in the State and to secure the execution thereof;
- 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 or trade effluents, treatment works and plants and to review plans, specifications or other data relating to plants set up for the treatment and the system for the disposal of sewage or trade effluents.

- To inspect, at all reasonable times, any control equipment, industrial plant or manufacturing process and to give, by order, such directions to such persons as it may consider necessary to take steps for the prevention, control or abatement of air pollution;

- To inspect air pollution control areas at such intervals as it may think necessary, assess the quality of air therein and 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 quality of receiving waters resulting from the discharge of effluents and to classify waters of the State;
- To lay down, in consultation with the Central Pollution Control Board (CPCB), standards for emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollution into the atmosphere from any other source;
- To evolve economical and reliable methods of treatment of sewage and trade effluents;
- To evolve methods of utilization of sewage and suitable trade effluent in agriculture;

- To evolve efficient methods of disposal of sewage and trade effluents on land;
- To collaborate with Central Pollution Control Board in organizing the training of persons engaged or to be engaged in programme relating to prevention, control or abatement of water and air pollution and to organize mass education programme relating thereto;
- To encourage, conduct and participate investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;
- To advise the State Government with respect to the location of any industry which is likely to pollute a stream or well or cause air pollution;
- To establish or recognize Laboratory or

laboratories to enable the Board to perform its functions efficiently, including analysis of samples of water from any stream or well or of samples of any sewage or trade effluents and emission of air pollutants.

- To perform such other functions as may be prescribed or as may, from time to time, be entrusted to it by the Central Pollution Control Board or the State Government.

3. ORGANISATION SETUP

The Board, as per the provisions of the Acts, includes a Chairman, a Member Secretary and 15 other members nominated by the State Government. Out of the 15 members, 5 officials are nominated by the State Government, 5 persons represent local authorities, 3 non-officials represent the interests of agriculture,

fishery or industry or trade and 2 persons represent the companies or corporations owned by the State Government.

The TNPCB functions with a three-tier structure with the Corporate Office at the apex, followed by seven Zonal offices at intermediary level and 38 District offices at the base to form a pyramidal structure. The Board with its head office at Chennai has total staff strength of 597 employees as on 31st March 2018. The seven zonal offices headed by Joint Chief Environmental Engineers (Monitoring) are located at Chennai, Vellore, Trichy, Salem, Coimbatore, Madurai and Tirunelveli. The 38 District Offices located in almost every district of Tamilnadu are headed by District Environmental Engineers. The Board has formed two Flying Squads, considering the sensitivity of the area, each headed by an Environmental Engineer at Erode and Tiruppur districts. The Board is

supported with 16 Laboratories including 5 NABL accredited laboratories.

4. CONSENT MANAGEMENT

4.1 Industries Classification

As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and of the Air (Prevention and Control of Pollution) Act, 1981, it is mandatory for the industries generating effluent and discharging emissions to get consent of the Board to establish (CTE) any industrial or other activity, before commencing establishment. Consent to operate (CTO) is obtained after establishment of the unit but before commencing production. Industries or other establishments seeking consent are classified as Small, Medium and Large scale based on the value of Gross Fixed Assets (GFA). The units having GFA up to Rs.5 Crore fall under small scale, between

Rs. 5 to 10 Crore are medium scale units and those with more than Rs. 10 Crore fall under large scale. The Industries are also categorized as Red, Orange, Green and White based on the pollution index. The TNPCB has constituted various committees with appropriate delegation of powers to avoid delays in grant of CTE, CTO and Renewal of Consent etc. Industries are periodically inspected by the field officers to check the operation of pollution control measures and compliance of consent conditions.

4.2 Consent Validity Period

As a part of ease of doing business, TNPCB has extended consent validity period to the industries. Accordingly CTE is issued with validity of 7 years in case of Environmental Impact Assessment (EIA) projects and 5 years in case of non-EIA projects. CTO is issued for 5 years for Red Category, 10 years for Orange Category, and 14 years for Green category on payment of

necessary consent fees. For White Category industries, there is no mandatory necessity of obtaining consent of the Board to operate, merely intimation to TNPCB would suffice. TNPCB has also introduced 'Auto Renewal' for the Red-Small and all Orange & Green category industries. Using this facility, Renewal Consent orders are being issued to the industries without inspection but with specific undertaking given by the unit. Monitoring is carried out regularly for all units by field level officers.

4.3 Online Consent Management and Monitoring System

In line with the e-governance policy of the State Government, TNPCB has implemented Online Consent Management and Monitoring System (OCMMS) in January 2015, with an object of bringing transparency and promptness in consent management. This system facilitates the industries for online submission of

application for getting Consent to Establish (CTE) / Consent to Operate (CTO) / Renewal of Consent (RCO), Auto Renewal of CTE/CTO. Further, the status of application can also be ascertained online. The application received in OCMMS is processed and consent is issued through online. From 1st April 2017 to 31st March 2018, the Board had issued CTE to 1094 units and CTO to 4441 units.

5. COMMON EFFLUENT TREATMENT PLANTS

The concept of common effluent treatment plant has largely been accepted as a solution for collecting, conveying, treating and disposing of industrial waste waters and domestic sewage. Considering the contribution made by the SSI units in the industrial development of the country and the constraints in complying with pollution control norms individually by these units, the Ministry of Environment, Forest and Climate Change, Government of India initiated

an innovative technical and financial support scheme. The scheme promotes common facilities for treatment of effluents from SSI units located in clusters through financial assistance. The present pattern of financial assistance is: 50 % of total project cost as Central subsidy, 25% of total project cost as State subsidy, 25% of total project cost as project proponent's share. With a view to ensure active participation of the proponent, at least 40% of the proponent contribution has to come from the proponent and balance 60% could be raised through loan from Banks/Financial Institutions.

TNPCB plays a facilitating role towards the establishment of Common Effluent Treatment Plants (CETPs). The Board assists in the technical scrutiny of the proposed plans for the CETPs. 33 CETPs are in operation, of which, 19 CETPs are for Textile bleaching and dyeing industries treating 102 MLD of effluent from 468

member units, 13 CETPs for Tanneries treating 28.741 MLD of effluent from 678 Member tanneries, and one CETP is for Hotels & Lodges operating in Kodaikanal. As per the Court directions, all the 19 CETPs of Textile bleaching & dyeing units have provided Zero Liquid Discharge (ZLD) plant and recycle the treated effluent. 11 CETPs of tannery sector have provided ZLD Plant. The remaining 2 CETPs have opted for dilution of treated effluent model.

6. ONLINE CONTINUOUS EMISSION AND EFFLUENT MONITORING SYSTEMS

National Environment Policy 2006 envisages strengthening of testing infrastructure and network for monitoring ambient environmental quality and to progressively ensure real-time monitoring and online availability of the monitoring data. Based on the policy imperatives, TNPCB is moving forward towards achieving real time monitoring system in all

spheres of pollution prevention, control or abatement. For strengthening the monitoring and compliance through self-regulatory mechanism, online emission and effluent monitoring systems are installed and connected to the Central Server by the developers and industries.

6.1. Care Air Centre

In order to have a centralized system to monitor the industries on 24x7 basis, TNPCB has established Care Air Centre at the Board's Head Office. Care Air Centre helps assess real time emissions online from factories and alert the management of the polluting industries whenever required. All the 17 category of highly polluting industries, red-large industries, common hazardous waste incinerator facilities, common bio-medical waste facilities have been directed to provide online continuous emission monitoring system and connect the same to this

Centre. As on 31st March 2018, 340 units have connected their stack / ambient air quality monitors to this centre. $PM_{2.5}$, PM_{10}, SO_2, NO_x and other industry specific parameters are monitored on continuous basis. Any excess alone permissible limit is immediately intimated to the concerned industry for rectification. This online monitoring data is displayed in the TNPCB web site. www.tnpcb.gov.in

6.2. Water Quality Watch Centre

TNPCB has established a Water Quality Watch Centre at Head Office. 17 categories of highly polluting industries and Red-Large industries generating effluents and Common Effluent Treatment Plants are connected to this centre. It displays real-time water quality data collected remotely by sensors installed in rivers, lakes and other water bodies. The quality of effluent, discharged through outlet is monitored on a continuous basis. As on 31st March 2018,

210 units are connected to this centre, of which 112 units are connected for zero liquid discharge monitoring and 97 units for treated effluent discharge monitoring and one for river monitoring. Three online monitors installed in River Thamirabarani are connected to this centre and the parameters viz., pH, TDS, DO, and Flow are monitored.

7. WASTE MANAGEMENT

In 2016, the Ministry of Environment, Forest and Climate Change, Government of India have notified six Waste Management Rules by replacing the earlier rules. The new rules are more comprehensive and define the responsibility of each stake holder, mode of collection, treatment and disposal of each category of waste and lay down the environmental standards which the waste processing facilities have to meet.

7.1 Solid Waste Management

As per the Solid Waste Management Rules, 2016, collection, transportation, processing, recycling, treatment and disposal of the solid waste are the responsibilities of the local bodies. The role of SPCB is to issue authorization to the local bodies, monitor environmental standards and adherence to conditions as specified for waste processing and disposal sites.

All the Urban Local Bodies have framed bye-laws incorporating user charges for handling the solid waste and spot fines are in force. As on 15th March 2018, 160 applications for authorization have been received by the Board, out of which 121 authorization have been issued and 39 applications seeking authorization are under scrutiny. The daily total quantity of solid waste generation in Tamilnadu is 14,658 tonnes, out of which 14,417 tonnes of waste is being collected and managed by the Local bodies.

TNPCB has been taking several measures to address the solid waste management problems in the State.

7.2 Plastic Waste Management

Plastic products have become an integral part in our daily life. Plastics are not degradable and are cause for increasing concern around the world. As per the Plastic Waste Management Rules, 2016, 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 bags made of virgin or recycled plastic, shall not be less than 50 micron in thickness. Persons engaged in manufacture of carry bags, recycled plastic bags, multilayered packaging, recycling or processing 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, manufacture and disposal of plastic wastes. For the purpose of effective monitoring of implementation of these rules, the Government has constituted a State Level Advisory Committee vide G.O. (Ms). No. 148 Municipal Administration and Water Supply (MA.IV) Department, dated 25.10.2016

So far, TNPCB has issued registration to 305 plastic product manufacturing units, 17 multilayered plastic packaging manufacturing units. TNPCB had also issued public notices in news papers on 16.02.2017 to all the manufacturers, importers, stockiest, distributors, sellers and users of plastic and compostable carrybags about the compliance of Rules.

7.3 Construction and Demolition Waste Management

The Construction and Demolition Waste Management Rules, 2016 apply to individual,

organization and authority that generates wastes from construction and demolition of building. Construction and Demolition materials consist of the debris generated during the construction, renovation and demolition of building, roads and bridges. The waste generator shall be responsible for collection, segregation of concrete, soil and other wastes and storage of the same as directed 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. TNPCB has directed the local bodies to establish waste processing facilities.

7.4 E- Waste Management

As per the E-Waste Management Rules, 2016, the producer of the electrical and electronic equipment shall be responsible for

collection and channelization of the 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 the compliance for environmentally sound management of e-waste. The CPCB has issued guidelines for implementation of the rules. The Government of Tamil Nadu has issued E-Waste Policy of Tamil Nadu 2010. TNPCB has issued authorization for 22 units (17 Dismantlers and 5 Recyclers) under the Rules.

7.5 Bio-Medical Waste Management

The Bio-Medical Waste Management Rules, 2016 apply to all persons who generate and handle bio-medical waste in any form. It is the responsibility of the generator of the waste as well as the operator of the common bio-medical waste treatment and disposal facility (CBMWTF) to ensure safe handling and disposal of the bio-

medical waste. Biomedical waste must be properly managed and disposed of to protect the environment, general public and also healthcare and sanitation workers who are at risk of exposure to biomedical waste as an occupational hazard. The State Government in Health and Family Welfare Department shall ensure the implementation of the rules in all health care facilities. SPCB shall issue authorization to the health care facilities and CBMWTF. In order to oversee the implementation of the rules and to advice on improvements, the Government has constituted a State Level Advisory Committee and District Level Advisory Committees in all the districts.

TNPCB has so far issued authorization to 3,539 Hospitals. About 43.7 tonnes of bio-medical waste is generated daily in the State. All the 3,539 hospitals have made agreement with the CBMWTF. There are 11 Common Bio-Medical

facilities in operation in Tamilnadu. The common facility operator collects, transports, treats and scientifically disposes the biomedical waste. As part of ease of doing business, TNPCB launched an online module for making application for authorization in March 2016. The application is processed and authorization is issued online. As on 15th March 2018, 1,156 Hospitals were issued with authorization through online module.

7.6 Hazardous Waste Management

As per the Hazardous and Other Waste (Management and Transboundary) Rules, 2016, the generator of hazardous waste is responsible for its treatment and disposal. SPCB shall grant authorization for handling the hazardous wastes.

TNPCB has identified 3,776 units in the State as hazardous wastes generating units and issued authorization for safe management of the waste. During 2016-17, a quantity of 6,40,732

tonnes of hazardous waste was generated from these units. Out of this, about 2,44,670 tonnes was land filled either in captive land fill or in common land fill facility. 28,546 tonnes of waste was incinerated in captive and common incinerators. 85,831 tonnes was co-processed in cement kiln, and 2,48,712 tonnes was sent for recycling. The remaining waste has been stored in the unit's premises which will be disposed in due course.

The Board is taking effective steps in handling and management of hazardous wastes, its treatment and disposal in an environmentally safe manner. Two common Treatment, Storage and Disposal Facilities (TSDF) are under operation, one at Gummidipoondi in Tiruvallur District and the other at Undurumikidakulam village, Tiruchuli Taluk, Virudhunagar District. In March 2016, as a part of ease of doing business, TNPCB launched an online portal for applying

and issuing authorization under Hazardous Waste Management rules. Now the industries apply online for authorization and it is processed and authorization is issued through online. As on 15th March 2018, the Board has granted authorization to 2,290 units through online.

8. WATER QUALITY MONITORING

The basic objective of the Water (P&CP) Act, 1974 is to maintain and restore the wholesomeness of water. To achieve this objective, regular monitoring of water quality of water bodies is required. Hence, TNPCB is monitoring water quality of inland water bodies under two major programmes namely Global Environmental Monitoring System (GEMS) and Monitoring of Indian National Aquatic Resources (MINARS) with 70% financial assistance from CPCB. Water samples are collected on monthly basis and analyzed in TNPCB laboratories and water quality is assessed. The samples are

collected at 55 stations - Cauvery and its tributaries (33 stations), Palar (1 station), Vaigai (1 station), Tamirabarani (12 stations), Lakes (8 lakes - Udhagamandalam, Kodaikanal, Yercaud, Veeranam, Porur, Poondi, Pulicat and Red hills). The reports reveal that these water bodies are coming under Class B, C or D category which is suitable for drinking water source after conventional treatment and disinfection.

The source of pollution of these water bodies is mainly due to mixing of domestic sewage and dumping of solid waste from the towns and villages located near the banks. The Board has directed the local bodies to provide sewage treatment plants and solid waste management facilities on a priority basis.

8.1 Chennai City Water Ways Monitoring Programme

There are four water ways in Chennai city i.e Adyar River, Buckingham Canal, Cooum River

and Otteri Nallah. TNPCB is monitoring the water quality of these waterways to assess the level of pollution by collecting water samples at 30 locations every month both in the water bodies and at industrial outfalls. The report of analysis reveals that the Biochemical Oxygen Demand, Total Dissolved Solids and Chlorides exceeded the standards when compared with the IS 2296-1982 Class A Standard prescribed for inland surface waters, subject to pollution. This is mainly due to mixing of sewage into the water bodies. As per the directions of Hon'ble National Green Tribunal (Southern Zone), action is being taken to restore river Cooum by the concerned Departments.

8.2 Continuous Water Quality Monitoring Stations

In order to monitor the water quality of river Noyyal and Kalaingarayan canal in the textile industrial belt of Tiruppur and Erode,

TNPCB has installed online continuous water quality monitors in three locations each in Noyyal river and Kalingarayan canal. Similarly three online monitors have been installed in river Thamirabarani and connected to Water Quality Watch Centre at Head office. These stations monitor pH, total dissolved solids and dissolved oxygen on a continuous basis. TNPCB is also in the process of installing three monitors each in river Cauvery and river Bhavani.

9. AMBIENT AIR QUALITY MONITORING

Air is important for all living organisms on the earth. Quality of ambient air is getting affected due to natural means and pollution from anthropogenic activities like industrialization, transport sector, burning of solid waste, firing of crackers etc. In order to assess the ambient air quality, TNPCB is operating 28 ambient air quality monitoring stations in eight cities/towns of the state: Chennai (8), Coimbatore (3),

Madurai (3), Salem (1), Tiruchirapalli (5), Thoothukudi (3), Mettur (2), Cuddalore (3) under National Air Quality Monitoring Programme (NAMP) with 50% financial assistance of Central Pollution Control Board. Five air pollutants *viz* ., $PM_{2.5}$, $PM_{10,}$ Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), and Ammonia (NH_3), are monitored. $SO_{2,}$ NO_2, NH_3 were found to be well within the prescribed standards in all the stations. PM_{10} exceeded in few places which is mainly due to vehicular movement.

Based on the survey results CPCB has declared Thoothukudi in Tamilnadu as non-attainment city with reference to exceedance of $\mathbf{PM_{10}}$ level in ambient air. Action plan for improvement of air quality of Thoothukudi has been prepared and action is being taken for implementation by the respective stake holder departments.

9.1 Continuous Ambient Air Quality Monitoring Stations

TNPCB has installed seven Continuous Ambient Air Quality Monitoring Stations (CAAQMS) from its own fund. Four stations are in Chennai (viz) Koyambedu, Royapuram, Perungudi, Kodungaiyur, and one station each at SIPCOT Gummidipoondi, SIPCOT Thoothukudi and SIPCOT Perundurai. These stations monitor PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, O_3, CO and Benzene on a continuous basis. In addition to the above, the Board with 50% funding from CPCB is operating one CAAQMS at Manali and establishing one station in Coimbatore. Further, the Board is in the process of procuring 25 CAAQMS from its own fund to establish the stations in major towns and industrial complexes to generate data base on the ambient air quality.

9.2 Mobile Continuous Ambient Air Quality Monitoring Station

In order to monitor the air quality in different parts of Chennai city and create awareness among the public about the air quality, TNPCB commissioned one Mobile CAAQMS. This mobile monitoring station is used to carry out the air quality survey in complaint prone areas, traffic intersections etc as well as during Deepavali and Bhogi.

9.3 National Ambient Noise Monitoring Network Programme

Rapid industrialization, urbanization, use of modern means of transport and increasing scale of human activities are some of the human-induced factors responsible for noise pollution. Noise pollution affects sleep, listening ability, physical and mental well being of human. In order to monitor the ambient noise level in Chennai City, TNPCB in association with CPCB has established 10 Real Time Ambient Noise

Monitoring Stations 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 may be attributed mainly due to vehicular traffic.

10 LEGAL MATTERS

10.1 Appellate Authority

Section 28 of the Water (Prevention and Control of Pollution) Act, 1974, and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981, provides an opportunity for appeal on the orders issued by the SPCB. Accordingly, any person aggrieved by the orders of TNPCB shall prefer an appeal within a period of 30 days to the Appellate Authority constituted by the

Government of Tamil Nadu under the Chairmanship of Hon'ble Justice (Retd), High Court of Madras with two technical members. As on 15th March 2018, 486 appeals have been filed. Out of these 434 appeals were disposed, and the remaining 52 are under trial. TNPCB provides administrative and financial support to the Authority.

10.2 National Green Tribunal

National Green Tribunal Act, 2010, provides opportunity for filing application in National Green Tribunal (NGT) established under the Act against any order or decision of the SPCB and Appellate Authority issued under Section 28, 29 and 33A of the Water (Prevention and Control of Pollution) Act, 1974, under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 and under Section 5 of the Environmental (Protection) Act, 1986. Any aggrieved person may file an application to National Green

Tribunal within 30 days of the order issued by the Board / Appellate Authority. The Principal Bench of the NGT is functioning at New Delhi and NGT (Southern Zone) is functioning at Chennai. As on 15th March, 2018, 757 cases related to TNPCB have been filed. Out of these, 447 cases were disposed and 310 cases are under trial.

10.3 Action against Polluting Units

The Board has been taking strict action against any industry not complying with the conditions imposed on them as per various Acts and Rules. Illegal units are also being dealt with prompt action like closure and demolition. As per the orders of the Hon'ble Supreme Court in W.P (C). No. 375 of 2012 dated 22.02.2017, TNPCB issued a Public Notice in News Papers on 10.5.2017 to all the Industrial units discharging effluent to make their ETP fully operational within three months so as to meet the

standards. The units not adhering the prescribed standards have been issued show cause notice and the units which continued to violate have been issued closure direction after giving personal hearing. During the period 1st April 2017 to 15th March 2018, 8,205 units were issued show cause notice and 351 units were issued with closure directions.

For effective monitoring of the industries and to check any unauthorized industrial discharge into the water bodies in Erode, Namakkal, Karur, Tiruppur and Coimbatore districts, the Board has formed two flying squads. They conduct surprise inspections including night time on regular basis. Based on inspection, action is taken against the illegal units in coordination with District Co-ordination Committees (DCC). During the period 1st April 2017 – 15th March 2018, 255 unauthorized units were evicted. By considering effective

functioning of DCC in these districts, the Government vide G.O. (Ms). No. 23 Environment and Forests (EC.1) Department dated 1.3.2018 has constituted DCC headed by the District Collector in all the Districts to take action against unauthorized units discharging untreated effluent into water bodies.

11. OTHER ACTIVITIES OF THE BOARD

11.1 Grievance Redressal Centre

With an object of guiding Entrepreneurs and Project Proponents for applying consent, about latest technology in pollution prevention and control and cleaner technologies, etc., besides answering queries of the general public on pollution related matters, TNPCB has established a Grievance Redressal Centre in the Head Office. It is functioning from 08.02.2018 onwards and can be contacted on phone No. 044-22353154.

11.2 Online Grievance Redressal System

In March 2016, TNPCB introduced Online Grievance Redressal System which facilitates the public to file pollution related complaints online (http://www.pcbolgprs.in). The complaint is investigated and action taken is intimated to the complainant. From 1st April 2017 to 15th March 2018, 459 complaints were received online and redressed.

11.3 CM Cell and Amma Call Centre Petitions

TNPCB established a separate Cell in Head Office to take immediate action on 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 seven days. From 1st April 2017 to 15th March, 2018, 302 No. of CM Cell petitions and 183 nos. of Amma Call centre petitions were received and disposed. On 07.03.2018, the

Hon'ble Chief Minister has presented a shield to TNPCB as second prize among the Government Departments for speedy redressal of CM Cell petitions.

11.4 Environmental Training Institute

TNPCB's Environmental Training Institute **(**ETI) is functioning at Head Office. This institute provides training in association with Expert Institutions to the staff of the Pollution Control Board, Industries and non-governmental organizations on subjects related to environmental protection. During the year 2017-18, the ETI has conducted 36 training programmes, in which 345 participants have been trained.

11.5 Technical Conferences

In Year 2017, TNPCB has organized three technical workshops as detailed below.

- TNPCB has conducted one day workshop on 7.1.2017, to the industries on wastewater treatment plant operation and maintenance. There were 128 participants from various categories of industries.

- One day work shop was conducted on 30.1.2017, on Solid Waste Management Rules, 2016. There were 125 participants from the Corporations, Municipalities and Town Panchayats. They were trained on the salient features of Solid Waste Management Rules and their duties and responsibilities.

- One day workshop was conducted on 7.3.2017, on E-Waste Management Rules, 2016. There were 80 participants from the stake holders including local bodies, Electronic goods

manufacturers, bulk consumers of electronic goods, E-Waste refurbisher, dismantlers and recyclers. They were trained on the salient features of E-Waste Management Rules and their responsibilities.

11.6 Public Hearing

The Environmental Impact Assessment Notification, 2006 issued by Ministry of Environment, Forest and Climate Change provides for public hearing to address the concerns of local affected persons on the proposed projects. Public hearing is one of the mandatory requirements for projects listed in the notification for getting environmental clearance. As per the notification, TNPCB conducts public hearing under the Chairmanship of the District Collector and forward the proceedings to the Ministry of Environment, Forest and Climate Change / State

Environmental Impact Assessment Authority as the case may be. During the period 1st April 2017 to 15th March 2018, the Board has conducted public hearings for 28 projects.

11.7 Clean Technologies

Waste reduction and opportunities for waste recycling considerably reduce the cost and effort in handling industrial wastes besides helping to protect against adverse environmental impacts. Clean technologies minimize the generation of waste streams in the production processes and utilize waste in other production processes, rather than treating the waste after generation. In general, cleaner technologies are less intensive in use of raw materials and energy, than conventional technologies, which rely on pollution abatement after generation. With the active support and encouragement from TNPCB, many industrial units in Tamil Nadu have switched over to clean technologies such as;

i. For cement production, the cement industries have adopted dry process instead of wet process to save energy and reduce air pollution.

ii. Cement Industries utilize 25 to 30% of fly ash in Portland Pozzolana Cement manufacturing, which eliminates fly ash disposal problem in thermal power plants.

iii. Sulphuric acid manufacturing units adopted double conversion and double absorption technology which reduces SO_2 emission.

iv. 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 avoided emission of greenhouse gases.

v. Pulp and paper industries are encouraged to go in for elemental chlorine free bleaching to reduce the formation of organo-chlorides including dioxins.

vi. Engineering Industries have adopted gas carburizing instead of cyanide salt in heat treatment and cyanide free electroplating to avoid water pollution.

vii. Chlor-alkali industries switched over to membrane cell process, replacing mercury cell process which eliminates water pollution.

11.8 Scientific Study through Expert Institutions

i. In order to assess the impact of oil spill by collision of two ships in Ennore Port area on 28th January 2017 on the marine environment, TNPCB conducted a study through IIT Madras. The report titled 'Assessment of the Effect of Oil Spill at Ennore Port on Marine Environment' has been received.

ii. The people of Rasipalayam village, Sulur Taluk, Coimbatore District have complained that ground water of their area is polluted due to the industrial activities. In order to know the possible source of pollution, the Board has entrusted a hydro-geological study to National Geophysical Research Institute, Hyderabad and the study has been completed.

iii. In order to assess the carbon foot print for the operation of Zero Liquid Discharge Plant, TNPCB carried out a study through IIT Madras in November 2017, taking a Textile Processing CETP as the sample.

iv. In order to assess Pollution Index Score for single boiled rice mill and parboiled rice mill, TNPCB carried a pollution assessment study through Technical Experts from IIT Madras and Sri Ramachandra University. Based on the study, the Board has categorized single boiled rice mills under green category.

v. With a view to assess the environmental quality of Critically Polluted Areas of Manali, SIPCOT- Cuddalore, SIPCOT-Ranipet, Kurichi-Coimbatore, TNPCB has engaged a third party laboratory recognized under the Environment (Protection) Act, 1986 and carried out the

study in 1st April 2017 and 31st October 2017.

vi. TNPCB has carried out a detailed study on Ready Mix Concrete Unit and issued guidelines in August 2017.

vii. As per the orders of the Hon'ble National Green Tribunal Southern zone, TNPCB has carried out a detailed study through expert committee and issued guidelines for Hot Mix Plant in July 2016.

viii. TNPCB has carried out a detailed study on Solid/Hollow block manufacturing units and issued guidelines in 2016.

ix. In order to find solution for disposal of salt generated from ZLD system of Tannery CETPs, the All India Skin and Hide Manufactures Association (AISHTMA) has engaged Central Salt & Marine Chemical Research Institute, Bhavnagar, Gujarat.

They have demonstrated a technology for segregation of ordinary salt (NaCl) and industrial salt (Na_2SO_4) from the mixed salt so as to reuse the same. Based on that AISHTMA has proposed to set-up two salt recovery treatment plants in Vellore district.

11.9 Funding for Pollution Abatement Projects

i. TNPCB has provided fund of Rs. 25.81 Crore to the Director of Environment for eco restoration of lakes in Erode and Tiruvallur districts. The eco restoration involves activities like de-silting, diversion of sewage entering lake, deepening of ponds, construction of retaining walls, tree planting etc.,

ii. TNPCB also provided fund of Rs. 3 Crore to IIT Madras for Establishment of Centre for Urbanization, Buildings and

Environment (CUBE). This centre will address the issues pertaining to water supply and sewerage systems, sustainable construction technologies, urbanization and its related problems.

11.10 Environmental Awareness and Public Participation

Environmental Awareness is the sine qua non (absolutely necessary) for protection of Environment. It helps the people to understand the consequences of human activities on environment. TNPCB conducts various kinds of environmental awareness programmes every year on the following occasions.

11.10.1 World Environment Day:

World Environment Day is observed on 5 th June of every year to raise awareness to take positive environmental action to protect nature and the planet earth. On June 5th 2017, TNPCB

conducted awareness programme to the school students, and the public. The industries observed the day by planting trees, conducting awareness programmes for the workers.

11.10.2 Ozone Day: 16th September of every year is observed as International Day for the preservation of the Ozone Layer. During the month of September, 2017, Ozone day was observed in Districts in association with Industries and Educational Institutions.

11.10.3 Bhogi Festival: Board conducts awareness programmes not to burn the waste materials such as waste tyres, tubes, plastic materials, clothes etc in open places through pamphlets, announcements through public systems etc. 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.

11.10.4 Vinayagar Chathurthi Festival: Awareness programmes are conducted through the Collectors in all the district headquarters 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.

11.10.5 Deepavali Festival: Awareness programmes are conducted not to burst crackers from 10 P.M to 6 A.M and also not to burst crackers creating sounds of more than 125 decibel (average) during deepavali celebrations. The Board 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.

11.10.6 Karthigai Mahadeepam Festival: 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. Winners are given various prizes.

11.10.7 Government Exhibitions: TNPCB actively participates in the Government Exhibitions conducted every year at Island Ground in Chennai and in the District Head Quarters by establishing stall and exhibits models on effluent treatment plant, air pollution control measures, solid waste management, and other information related to environmental protection. In 2017-18, TNPCB participated in the Government Exhibitions held in Chennai

(Island Ground) and in Tirunelveli, Nagercoil, Madurai, Coimbatore, Thanjavur, Salem, Namakkal, Cuddalore, Tiruvannamalai. Large number of students and people visited the stalls. TNPCB has been awarded third prize for its Pavilion exhibit in 43rd India Tourist and Industrial Fair 2017 held at Island Ground, Chennai.

11.10.8 Green Awards: In order to encourage the industries, TNPCB presents green award every year to the Industries who have adopted best practices in achieving environmental quality in emission, discharge of waste water, solid and hazardous waste management and green belt development. Similarly Green Awards are also presented every year to the District Collectors who played a proactive role in promoting sustainable development in their districts. From year 2017 onwards, TNPCB also presents Green Award to the Educational Institutions /

Universities / Centre of Excellence. The selection for the award is done by an Expert Committee and awards are presented by the Hon'ble Chief Minister / Hon'ble Minister for Environment.

12. HIGHLIGHTS OF PERFORMANCE IN 2017-2018

i. In order to disseminate the monitoring data on the quality of effluent discharge and stack emission let-out by the 17 category highly polluting industries and CETPs, TNPCB has connected the online continuous monitoring data to the Board website. Members of the Public can monitor the same anytime by accessing the website.

ii. TNPCB established two new District Environmental Engineers office at Kumarapalayam and Gummidipoondi bifurcating the existing District Offices at Namakkal and Tiruvallur respectively for

effective monitoring of industries and for the benefits of entrepreneurs and public.

iii. TNPCB established two new Zonal offices headed by Joint Chief Environmental Engineer (monitoring) at Salem and Tirunelveli respectively bifurcating the existing zonal offices at Coimbatore and Madurai for effective monitoring of industries and for enabling speedy delivery of service to entrepreneurs and public.

iv. TNPCB created one post of Chief Environmental Engineer similar to other State Pollution Control Boards and State Government Engineering Departments for effective functioning.

v. Powers have been delegated to the Field Officers for grant of Consent to certain category of industries for speedy disposal of consent applications.

vi. TNPCB established video conference facility between Head Office and five zonal offices at a cost of Rs. 35 lakh for conducting review meetings.

vii. TNPCB established a new District Environmental Laboratory at Perundurai at a cost of Rs. 215 lakh for effective monitoring of industries in SIPCOT Industrial Complex, Perundurai.

viii. TNPCB upgraded three District Environmental Laboratories at Vellore, Trichy and Tirunelveli as Advanced Environmental Laboratories by providing sophisticated instruments for analysis of water and air samples at a cost of Rs. 150 lakh.

ix. TNPCB constructed and inaugurated six new District Environmental Engineer's office buildings at Coimbatore (North),

Coimbatore (South), Vaniyambadi, Perundurai, Erode and Oragadam and one Joint Chief Environmental Engineer's (Monitoring) Office at Vellore at a total cost of Rs. 14.41 Crore. Two DEE's office buildings at Tiruvallur, Nagapattinam are under construction at a cost of Rs. 4 Crore.

x. Green Awards were presented to District Collectors and Industries who excelled in environmental protection by the Hon'ble Chief Minister on 11.10.2017.

xi. TNPCB has provided Rs. 25.81 Crore fund to the Director of Environment for eco-restoration of lakes in Erode, Tiruvallur districts.

xii. TNPCB has provided Rs. 3 Crore fund to IIT Madras for Establishment of Centre for

Urbanization, Buildings and Environment (CUBE)

xiii. TNPCB has been awarded SKOCH ORDER-OF-MERIT for implementation of Online Consent Management and Monitoring System (OCMMS) by SKOCH Group.

xiv. TNPCB has been awarded second prize among all Government Department for clearing CM's Cell petitions by the Hon'ble Chief Minister on 7.3.2018.

xv. TNPCB has been awarded third prize for its Pavilion exhibit in 43rd India Tourist and Industrial Fair 2017 held at Island Grounds, Chennai.

xvi. To improve the health and physical fitness of the TNPCB personnel, a fitness center has been established at the Head Office with effect from 8.2.2018.

xvii. Grievance Redressal Centre was established at Head Office on 8.2.2018 to guide Project Proponents in proper compliance of various environmental laws as well as the general public in resolving pollution related grievances.

K.C.KARUPPANAN
MINISTER FOR ENVIRONMENT

Green Belt in Cement Grinding Unit in Kancheepuram District

Roof Top Solar Panels in a Coal based Power Plant in Tiruvallur District

On 22/05/2018, Beach Cleaning activity is conducted at Palavakkam
in the presence of the Honorable Minister for Environment