

DEMAND No.15

POLICY NOTE 2019-2020

DEPARTMENT OF ENVIRONMENT

The sustainable management of the environment and natural resources is vital for economic growth and human wellbeing. When managed well, renewable natural resources, watersheds, productive landscapes and seascapes can provide the foundation for sustained inclusive growth, food security and poverty reduction. Keeping the objectives of environmental conservation and abatement of pollution, emphasizing the importance of sustainable development, the Government of Tamil Nadu is implementing various environmental schemes.

Climate change have wide-ranging effects on the environment and on socio-economic and related sectors, including water resources, agriculture and food security, human health, terrestrial ecosystems and biodiversity and coastal zones. Changes in rainfall pattern are likely to lead severe water shortages and flooding, melting of glaciers can cause flooding and soil erosion and rising

temperatures will cause shift in crop growing seasons which affects food security and changes in the distribution of disease vectors putting more people at risk from diseases such as malaria and dengue fever. Temperature increase will severely raise the extinction rate of many habitats and species, particularly coral reefs, forest ecosystems and mountain habitats. Increasing sea levels will cause greater risk of storm surge, inundation and wave damage to coastlines and areas with low lying deltas. A rise in extreme events will have effects on health and lives as well as associated environmental and economic impacts.

There are two main policy responses to climate change viz mitigation and adaptation. Mitigation addresses the root causes by reducing greenhouse gas emissions, while adaptation seeks to lower the risks posed by the consequences of climatic changes. Both approaches will be necessary, because even if emissions are dramatically decreased in the next decade, still adaptation will be needed to deal with the global changes that have already been set in motion. Integrating or mainstreaming

adaptation and mitigation into development plans, programmes and projects is an important strategy to ensure that adaptation and mitigation can match the scale and urgency of the climate change problem.

The Nationally Determined Contribution (NDC) and Paris Agreement aims to strengthen the global response to threat of climate change in the context of sustainable development and efforts to eradicate poverty. Considering the above, the Department of Environment is revising the Tamil Nadu State Action Plan on Climate Change (2020-2030).

The Government of Tamil Nadu (GoTN) has formulated the Vision TN 2023 with the aim of catapulting Tamil Nadu onto a higher economic growth trajectory, while ensuring that it benefits all sections of society. Out of the ten themes in the Vision for Tamil Nadu for 2023, the Theme 8(Nurturing a rich heritage and preserving the ecology) and the Theme 9 (Protecting against vulnerability) are stressed upon in the draft document of revision of State Action Plan for Climate Change (2020-2030).

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, Coastal Zone Management and all other significant environment protection efforts except those dealt by the Tamil Nadu Pollution Control Board are the main 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 include 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

- Creating Environment awareness in schools and colleges through Non-Government Organizations (NGOs), Eco-clubs and National Green Corp (NGC).
- Eco-restoration activities.
- Climate Change Adaptation and Mitigation initiatives.
- Implementing the provisions of the CRZ Notifications.
- Coastal Zone Management.
- Preparation of Environmental Management Plans for towns.
- Dissemination of Information on Environment related subjects by ENVIS.
- Synergy with Universities/Research Institutes to build capacity for research and training.

3. Tamil Nadu State Action Plan on Climate Change (TNSAPCC)

India's first National Action Plan on Climate Change (NAPCC) depicting the existing and future policies and programmes addressing climate mitigation and adaptation was released on 30.06.2008. The NAPCC identifies eight core "National Missions" which represents a multi-pronged, long-term and integrated approach for achieving key goals in the context 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 listed below,

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

- Knowledge Management

The MoEF&CC, Gol has requested to revise the Tamil Nadu State Action Plan on Climate Change with technical support from German Corporation for International Cooperation (GIZ) and accordingly action has been taken to revise the TNSAPCC with the objectives to re-examine the State specific, impact, risk and vulnerability, to take stock of the implementation of the SAPCC, to re-examine various actions (adaptations and mitigation) in the light of climate goals set in INDC and to prepare new short range(2023) and long range plans up to 2030.

The first inception and consultative workshop was conducted on 20.09.2018 by the Department of Environment, with the participation of all line and sectoral departments/ agencies. The suggestions/ views / details have been obtained nearly from all the stakeholders and a draft report is completed. The revision of SAPCC document will emphasize on disaster management and mitigation, Sustainable Development Goals and Composite Vulnerable Index (CVI) for the State in general and districts in particular based on 63 indicators. The

districts will be categorized into very low, low, moderate, high, very high and extremely high vulnerable categories for appropriate formulation and implementation of adaptation options in the State. After getting the inputs on the said draft report, from the line Departments, the final draft will be placed for the views of the decision makers/ policy makers for comments and suggestions by June 2019. The draft revised TNSAPCC will be submitted to the MoEF&CC, Gol by September 2019.

The Department of Environment, Nodal Agency is implementing all the Climate Change related programmes and coordinating with the concerned line Departments on the TNSAPCC in the State for submitting proposals under Green Climate Fund (GCF) and National Adaptation Fund for Climate Change (NAFCC) in consultation with the National Bank for Agriculture and Rural Development (NABARD).

3.1 National Adaptation Fund for Climate Change (NAFCC)

The Department of Environment, Nodal Agency for implementing the TNSAPCC has 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, India” which is approved by the MoEF&CC, GoI, under the Grants-in-Aid component of the NAFCC with an administrative approval of Rs. 24.74 crores. This is the first NAFCC project in India on Coastal Area Management and in line with TNSAPCC.

This 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, protection of Vann island and eco-development activities in coastal villages. The project work is nearing completion.

The MoEF&CC, GoI has also approved the project, “Climate Proofing of Rainfed Watersheds in Salem and Virudhunagar District of Tamil Nadu” by the Tamil Nadu Watershed Development Agency (TAWDEVA) and a sum of Rs.23.80 crores has been sanctioned to implement the project by TAWDEVA.

3.2 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.

Several projects are under the active consideration of MoEF&CC, GoI for funding under Green Climate Fund for both adaptation and mitigation options. Approval for the project titled “Protection and Restoration of Appa and Kosawari Islands of Gulf of Mannar, Tamil Nadu” proposed by the Department of Environment at a cost of Rs. 98.00 crores is awaited. The Detailed Project Report is under preparation for the project titled “Improved resilience of

Urban Ecosystems through targeted restoration of Wetlands” proposed by the Tamil Nadu Forest Department at a cost of Rs.147.00 crores and is being sent to MoEF&CC, Gol shortly for the approval.

3.3 National Mission on Strategic Knowledge Management for Climate Change (NMSKCC)

Realising the importance of knowledge sharing and data dissemination to tackle the deleterious impacts of climate change, the National Mission on Strategic Knowledge Management was framed as part of the National Action Plan on Climate Change.

The National Mission on Strategic Knowledge for Climate Change (NMSKCC) project funded by the Department of Science and Technology aims for establishment of the Tamil Nadu State Climate Change-Knowledge Management Cell (TNSCC-KMC) along with the collaboration of Center for Climate Change and Adaptation Research, Anna University, Chennai with the a project cost of Rs. 1.99 crores for a duration of 5 years (2016 -2021).

Developing Climate Knowledge Portal for the State of Tamil Nadu is completed and will be launched soon. The Tamil Nadu State Climate Change – Data Bank, in the web portal will act as repository of all the sector wise knowledge on climate change vulnerability which is scattered at present.

The Quarterly News letter issues from the TNSCCC-KMC will promote the Climate Knowledge to policy makers, researchers, students and the community as well to enhance their ability to increase their resilience on ongoing Climate Change.

3.4 Tamil Nadu State Climate Change Cell (TNSCCC)

Realizing the importance of the role of State government initiatives on climate change and in par with India's National Action Plan on Climate Change, Department of Environment established a Climate Change Cell (TNSCCC) on 1st December, 2014. The cell provides the central focus for Tamil Nadu State Government's climate change related initiatives and activities. The vision of TNSCCC is to respond to global climate change by building capacity and create awareness at the local level

and the mission of TNSCCC is to establish a platform to collect, collate and disseminate climate change information pertaining to Tamil Nadu State to various stakeholders in order to enable effective climate change governance and climate change services.

4. 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 has started functioning from 22.01.2003. 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 EMAT is implementing the National Green Corps (NGC) activities besides executing various eco-restoration activities in the State through various agencies viz., Municipal Administration and Water Supply, Public Works, Fisheries and Local Bodies etc.

4.1 National Green Corps (NGC)

The Department of Environment is the Nodal Agency for implementing the National Green Corps (NGC) in Tamil Nadu and active since 2002-2003. There are 8000 NGC Eco clubs functioning in 32 districts@ 250/district. The MoEF&CC, Gol approved a grant of Rs. 5000/- per school during 2018-19 for the activities of NGC. Training is given to the teacher coordinators 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 like celebrating at least six Green Days in schools, school campus cleaning, tree planting, environmental awareness rallies, vermicomposting, enviro-expo, enviro-competitions, anti-plastic campaign, cultural programmes on environmental awareness, nature camps, Swachh Bharat etc.

4.2 Eco-restoration of water bodies:

The restoration and conservation of the 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.

The Department of Environment through EMAT and with concerned line departments has undertaken various eco-restoration activities and the following are focused during the current year.

- The Phase-I activities for rehabilitation and restoration of Madhavaram (Rettai Eri), Ambattur and Korattur wetland complex in Thiruvallur district is completed at a cost of Rs. 20.00 crores. Under Phase-II, a sum of Rs.26.00 crores is allotted for 2015-2016 and 2016-2017 and the eco-restoration works are completed. During 2017-2018, under Phase-II a sum of Rs.13.18 crores is allotted to continue the eco-restoration activities and will be completed during the current year.
- During 2016-2017, eco-restoration of Paruthipattu Lake in Avadi in Thiruvallur district was taken up at

a cost of Rs.28.16 crores by the Public Works Department and the works towards the first installment, Rs.7.16 crores were completed. A sum of Rs.21.00 crores was released during the year 2018 and the works are under progress.

- The Government issued order for the Eco-restoration of five tanks during the year 2018 from the financial assistance of State Environment Impact Assessment Authority (SEIAA) at a cost of Rs.12.84 crores and necessary proposals have been obtained from the Concerned agencies viz., Commissioner of Municipal Administration, Chennai for Nallathaneer kulam, Thiruthani Municipality, Tiruvallur District at a cost of Rs.1.50 crore, District Collector, Namakkal for Vennandur Eri at Venandur at a cost of Rs.3.50 crores, District Collector, Erode for Andikulam Eri, Senguttai Eri and Karadipatti Eri at a cost of Rs.3.34 crores, Rs.2.28 crores and Rs.2.15 crores respectively. All the works are under progress.

4.3 Environment Protection and Renewable Energy Development Fund (EPRED)

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.365.00 crores has been utilized in the past.

The main objective of this fund is to promote, mitigate and adaptive measures to combat effects of climate change in the State. The eco-restoration of water bodies are taken up under EPRED funds under EMAT.

The main scope of this fund is for promotional & project based activities like 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 etc.

5. Coastal Zone Management (CZM)

The MoEF&CC, GoI 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).

At present, the MoEF&CC, Gol have promulgated CRZ Notification 2019, which will be implemented in Tamil Nadu after the preparation of Coastal Zone Management Plan (CZMP), based on the provisions of the CRZ Notification 2019.

5.1 Coastal Zone Management Authorities

The MoEF & CC, Gol 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. As on date, the SCZMA have convened 105 meetings and taken decisions on the several coastal related projects and issues in Tamil Nadu.

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.

**Details of Projects scrutinized by the Tamil Nadu
State Coastal Zone Management Authority
(TNSCZMA)**

Year	Total Nos. of applications received	Recommended to NCZMA	Cleared by SCZMA	Rejected & clarification sought for
1999	6	4	0	2
2000	2	0	1	1
2001	6	5	1	0
2002	2	2	0	0
2003	9	8	1	0
2004	11	9	2	0
2005	24	19	5	0

2006	14	12	2	0
2007	22	15	6	1
2008	78	27	51	0
2009	33	20	10	3
2010	57	33	19	5
2011	03	02	01	0
2012	46	23	22	1
2013	35	22	09	4
2014	24	10	13	1
2015	21	5	15	1
2016	41	14	25	2
2017	31	14	15	2
2018	16	13	3	0
2019 utpo 21.5.19	28	7	19	2
Total	509	264	220	25

5.2 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.

a) 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 of the State 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 in the District Authorities.

b) 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.

c) 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.

5.3 Integrated Coastal Zone Management Plan (ICZMP) Phase-II

Sustainable management of coastal and marine resources is essential to our State's economic growth. The Integrated Coastal Zone Management Plan (ICZMP) for the State was 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 the MoEF&CC, Gol for consideration under the implementation of the ICZMP Project under Phase-II with an integrated approach to coordinate activities of various Departments/Agencies for the sustainable management and usage of coastal resources maintaining the natural environment.

As per the instructions of the MoEF &CC, Gol, the proposals for the ICZMP Phase-II for Tamil Nadu is revised and forwarded to the Gol for a sum of Rs. 306.20 crores for implementation of several projects in the coastal areas of Tamil Nadu.

To execute the projects to be sanctioned under the ICZMP, a State Project Monitoring Unit (SPMU) has been created at the Department of Environment with a Project Director, an Additional Project Director and a Programme Officer. The SPMU will act as the Secretariat to the project steering committee charged with the day-to-day coordination and implementation of the ICZM activities in the State.

The proposed activities focused on the Sustainable Management and development of Coastal Zones under the following Thematic Areas.

- a) Conservation of coastal & marine ecological resources
- b) Coastal Pollution management and related infrastructure upgrade
- c) Livelihood security of coastal communities.
- d) Capacity building & implementation of ICZM Plans.

The SICOM (Society of Integrated Coastal Management) of MoEF&CC., GoI have requested to submit projects under some of the following fields of above Thematic Areas.

- a) Coastal Vulnerability Protection
- b) Sea Level Raising
- c) Instead of Gardening mangroves /corals, sustainability to be linked to local communities.
- d) Livelihood Tourism, Eco-Tourism
- e) Construction of Geo-tubes instead of Hard structures as Coastal erosion measures, etc.,

Accordingly, preliminary project reports under ICZMP Phase-II have been forwarded to Govt. of India for approval comprising the projects under the Conservation of and Protection of Coastal Resources, Water and Air Quality management of coastal and marine areas, for the Livelihood security of coastal communities and for the Capacity Building.

5.4 Preparation of Coastal Zone Management Plan

As per the provisions of the Coastal Regulation Zone (CRZ) Notification, 2011, the Department of Environment entrusted the work of preparation of draft CZMPs for all the coastal districts of Tamil Nadu to the National Centre for Sustainable Coastal Management (NCSCM), Chennai, which is an authorized agency approved by MoEF&CC, GoI, for the said purpose.

The MoEF&CC, GoI have conveyed the approval of the Coastal Zone Management Plan (CZMP) for Tamil Nadu, based on the recommendations of the National Coastal Zone Management Authority (NCZMA) on 24.10.2018. The approved Coastal Zone Management

Plan (CZMP) in 117 maps has been uploaded in the Website of Department of Environment (<http://www.environment.tn.nic.in>) and ENVIS (<http://tnenvis.nic.in>) on 29.11.2018. Soft copy of the approved CZMP has been sent to all the 13 District Coastal Zone Management Authorities and the Stakeholder Departments for necessary action.

The MoEF&CC, GoI have promulgated CRZ Notification 2019 on 18.01.2019. Hence, action will be taken for the preparation of Coastal Zone Management Plan (CZMP) through National Center for Sustainable Coastal Management (NCSCM) as per the provisions of the CRZ Notification 2019, which is mandatory for the State. On receipt of revised CZMP as per the new CRZ Notification 2019, public hearings, public consultations shall be arranged before sending to the MoEF&CC, GoI for approval through Government of Tamil Nadu.

5.5 Blue Flag Beach Programme for Tamil Nadu

The Mahabalipuram Beach has been chosen to develop, as per the principles of Blue Flag Beach Programme in Tamil Nadu, as a pilot project. The main focus of Blue Flag Beach programme is to attract the domestic and international tourists besides sustainably manage beach spaces & conservation of natural resources. The District Collector of Kancheepuram has nominated the Department of Town Panchayats, Kancheepuram as an executing agency to implement the Blue Flag Beach Programme at Mahabalipuram. Beach management Committee (BMC) under the Chairmanship of the District Collector has been constituted to monitor and supervise the activities to be implemented under the Blue Flag Beach programme. The proposal will be implemented with the financial assistance from the MoEF&CC, Gol.

5.6 Geographic Information System (GIS) Cell

The Department of Environment established a GIS Cell as a part of Emergency Tsunami

Reconstruction Project (ETRP) funded by the World Bank. GIS Cell has monitored the project components under ETRP/CDRRP like demarcation of High Tide Line (HTL), preparation of Integrated Coastal Zone Management Plan (ICZMP), Coastal Vulnerability maps, erection of Stone pillar on High Tide Lines along the coast of Tamil Nadu etc.

The Department of Environment is a State body which gives clearance for projects which are proposed in the Coastal Regulation Zone. To monitor the violations in CRZ area, the GIS Cell is accompanying the Green Squad and identifying and mapping the location with the help of GPS instruments and furnishes reports and based on which action has been taken.

The GIS Cell is monitoring the project works viz.,
i) preparation of CZMP in 1:25000 scale through NCSCM ii) Integrated Coastal Zone Management Project for Tamil Nadu under Phase II iii) Oil spill Disaster Contingency plan for Tamil Nadu iv) Disaster Management Plan of Department of Environment iv) Report of the Committee on Assessment of

Environmental impact of Oil spill occurred due to collision of two ships in the sea off Ennore, Chennai. Training and awareness programmes on ICZMP have also been conducted through GIS Cell.

6. Environmental Information System (ENVIS)

The Environmental Information System Centre sponsored by the MoEF&CC, Gol is functioning in the Department of Environment from October 2002. This Centre provides information on various aspects about the State of Environment and related issues of Tamil Nadu. Also the ENVIS centre is engaged in collection, collation, storage, retrieval and dissemination of environmental information through a website *www.tnenvvis.nic.in* and publication of Newsletters, creation of web based database, answering environmental queries etc. are some of the activities covered under ENVIS.

The Additional mandate of ENVIS scheme from 2017-2018 are to conduct the Green Skill Development Programme (GSDP) and Grid Based Decision Support System (GRIDSS). ENVIS HUB in the Department of Environment, has conducted certificate course in

Master Trainer in Waste Management training under GSDP for twenty science and engineering graduates drawn from the various slum locations in and around Chennai City. On a pilot scale, ENVIS HUB carried out GRIDSS in Thiruvallur district and prepared seventeen sectoral GRID based maps.

7. Other Activities of the Department

7.1 Environment Awards

Environment Awards for the best efforts/contributions in Environmental protection, environmental management and environmental awareness are given to selected NGOs, institutions, individuals and researchers from the year 2000 and 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. Applications have been invited from the public for the awards for the year 2018.

7.2 Mass Awareness Campaign

The Department of Environment has undertaken mass awareness campaign through Eco clubs and National Green Cops in the State. The Environmental Information Dissemination Centres (EIDCs) have been formed in 69 Educational Districts consisting of a library containing environment related books, display charts, boards, posters (both in English and Tamil) highlighting environmental and climate change issues along with audio-visual equipments in order to disseminate information to students and public. Frequent visits to these EIDC's by the students are encouraged to acquire first hand information on Environment related subjects.

7.3 Tree planting programme in schools through children in Tamil Nadu

To encourage and involve the students in Environmental related activities and to keep the school premises green and clean, the Government has sanctioned a sum of 144.00 lakhs for tree plantation and maintenance in 960 Eco clubs and NGC schools (30 schools/districts) in the State. A sum of Rs.5,000/- per

school has been distributed this year. Incentives and certificates are being distributed to the students who are involved in this programme. This programme is extended to another 960 schools in the State during 2018-2019.

7.4 Conducting Eco-Competitions and Eco -Camps

To disseminate the importance of environment to the students, eco-competitions among the NGC students in three disciplines of quiz, elocution and drawing for two sections viz., students up to 8th standard and above 8th standard in all the Revenue districts have been conducted at a cost of Rs.64.00 lakhs (Rs.2.00 lakhs /district) during 2018-2019. Besides, prizes with certificates, eco-tours, separately for boys and girls, have also been conducted for the winners. Similar programme will be conducted during 2019-2020.

7.5 Display of Information Boards relating to coastal zone eco-systems

The Government has issued orders for the display of Information Boards relating to coastal zone eco-systems in the coastal areas of the State. Expression of Interest

has been received from NGOs/ Institutions/ Coordinators in December 2018. The proposals have been scrutinized by the Committee and based on their recommendations, financial assistance has been released. The works are under progress and it will be ensured to complete the works during 2019.

7.6 Conducting street plays, campaign, dramas in coastal hamlets

In the coastal areas of the State, activities like burning of solid wastes, tyres, dumping of fish wastes into water bodies, creeks, river mouths, construction of unauthorized buildings etc., which creates adverse impact on the environment. Hence, to create awareness on the ill effects of above mentioned activities, street plays, cultural programmes, dramas through NGOs/ Environmental Educational Coordinators have been conducted in 13 coastal districts at a cost of Rs.32.50 lakhs.

7.7 Awareness campaign on the ill effect of plastics “Message on wheels”

Inculcating awareness among students and public on ill effect of plastic is very much essential as plastics have created severe damage to the environment. Various awareness activities like folk songs, dramas, street plays like Villupattu, traditional dances were conducted by selected organizations / NGOs through mobile vans from 2013-2014 to 2016-2017 which received appreciation from public. Hence, the programme was carried out at a cost of Rs.64 lakhs (Rs.2.00 lakhs/ district in 20 places) during 2019.

7.8 Environmental Awards for best three Ad-films

An amount of Rs. 7.00 lakhs, 6.00 lakhs and 5.00 lakhs will be awarded for the best three Ad-films and about 146 Ad-films have been received from the producers/ agencies. The Government has formed a selection Committee to select the best films for the Environmental Awards. The Committee submitted the report and the Awardees will be finalized shortly.

7.9 E-learning

Under this programme, 57 EIDCs (Environmental Information Dissemination Centre) of schools have been linked to the Department of Environment Server at a cost of Rs.14.44 lakhs during 2016-2017 to facilitate the students to interact with the Experts during the green days celebrations regularly. During the year 2019, 12 EIDCs will be linked to the Department Server.

8. Sustainable Development Goals

The 2030 Agenda for Sustainable Development provides a global blueprint for dignity, peace and prosperity for people and the planet now and in the future. The Sustainable Development Goals (SDGs) are a universal set of 17 Goals and 169 targets to help organize and streamline development actions for greater achievement of human wellbeing, while leaving no one behind by 2030.

Goal 13: Climate Action: Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy

Climate change presents the single largest threat to sustainable development everywhere. It has widespread, unprecedented impact and disproportionately burdens the poorest and most vulnerable. The increasing global temperatures, changing weather patterns, melting glaciers and rising sea levels, makes life more vulnerable to natural disasters such as floods, droughts, tsunamis, and cyclones. Urgent action to halt climate change and deal with its impacts is integral to the successful implementation of the Sustainable Development Goals (SDGs). As per India's Nationally determined Contribution (NDC) and Paris agreement which is aiming to strengthen the global response to threat of climate change in the context of sustainable development and efforts to eradicate poverty by holding the increase in the global average temperature to well

below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.

The Department of Environment is the Nodal Department for the Climate change adaptation and mitigation activities in the State. The Department of Environment is dealing with the SDG 13 on Climate Action which aims to integrate climate change measures into State policies and strategies and further aims to plan and promote mechanisms for raising capacity for effective climate change-related planning and management. SDG 13 is closely interrelated with other SDG's like SDG 1,2,3,4,5,6,7,9,10,11,12,and 14 and this inter-linkage of SDG's is considered for the effective action.

In line with the Government of India's National Action Plan on Climate Change, the Department of Environment. Government of Tamil Nadu has adopted its State Action Plan on Climate Change (SAPCC) in

year 2015. The focus areas identified in the TNSAPCC (2015-2020) are Sustainable Agriculture, Water resources, Coastal Area Management, Forest and Biodiversity Energy Efficiency, Renewable Energy and Solar Mission, Sustainable Habitat, and Knowledge Management. At present, the “Revision of TNSAPCC” is in progress and the document will be submitted to the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC, GoI) by September, 2019.

Targets

- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
- Integrate climate change measures into national policies, strategies and planning.
- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

- Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilising jointly USD 100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalise the Green Climate Fund through its capitalisation as soon as possible.
- Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing states, including focusing on women, youth and local and marginalised communities.
- Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental

forum for negotiating the global response to climate change.

The Department of Environment is implementing various programmes viz., Tamil Nadu State Action Plan on Climate Change (TNSAPCC), National Adaptation Fund for Climate Change (NAFCC) project 'Management and rehabilitation of Coastal Habitats and Biodiversity for Climate Change Adaptation and Sustainable Livelihood in Gulf of Mannar, spreading environment awareness amongst school students through the formulation of eco clubs under the Government of India's National Green Corps Programme, programmes under Environmental Information System ENVIS, National Mission on Strategic Knowledge for Climate Change (NMSKCC) to Establishing/Strengthening the State Climate Change Cell in the State to provide database on climate change in all sectors etc. The above activities will serve as a pathway for achieving Sustainable Development Goal especially with respect to SDG 13.

9. Complete ban on use and throw plastics

The late Hon'ble Chief Minister of Tamil Nadu Dr. J. Jayalalithaa, has been the pioneer in the introduction of plastic road technology during 2003-04, to prevent environmental hazards due to accumulation of Plastic wastes. As per her directions to make Tamil Nadu as a Plastic Free state, an amount of Rs.218.67 crores was utilized in relaying of roads, for a total length of 1596 kms, by using approximately 1596 tonnes of plastic wastes, between 2011-2012 and 2014-2015.

For sensitizing the public about the ill effects of non degradable plastics and to avoid the usage of plastics to control the degradation of Environment, the Department of Environment have conducted Mass Awareness Campaign through "Message on Wheels" with the assistance of Non Governmental Organizations between 2013-14 and 2018-19. Further, to sensitizing and to take plastic free movement forward, several regional workshops, district workshops have been conducted through all the District Collectors, Government Departments, Industries, Business associations and Non-Governmental Organizations.

As the plastic waste generated, especially by the use and throw away plastics, is causing ill effects to the Environment and Public Health apart from affecting cattle, birds etc., and in the continuation of above said initiatives, it is decided to issue complete ban in Tamil Nadu, with effect from January first of 2019, on the use of carry bags and plastic cups of all thickness and size, made with full or part of Plastics.

Accordingly, the Hon'ble Chief Minister of Tamil Nadu has made an Announcement on the floor of the Assembly on 05.06.2018 that towards achieving the goal of "Plastic free Tamil Nadu" banned certain items of "use and throwaway plastics" such as plastic carry bags, plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups and plastic tumbler, water pouches and packets, plastic straws and plastic flags irrespective of thickness, as they are causing serious environmental hazards and health problems amongst the human beings as well as plants and animals and also the plastic wastes causing blockage sewers and drains apart from resulting in pollution of water bodies.

In continuation of the above Announcement, Government have issued orders banning on one time use and throwaway plastics irrespective of thickness w.e.f 01.01.2019 under Environment (Protection) Act, 1986 in G.O. (Ms) No. 84, Environment & Forests (EC.2) Department, dated 25.06.2018.

10. Tamil Nadu State Environment Policy

The Government of Tamil Nadu accords the highest priority to preserve and protect its ecological footprint and environmental resources, in light of the responsibility placed upon it as per the Constitution of India section 48 A. The National Environment Policy announced by Government of India in 2006 (NEP 2006) highlighted the role of environmental degradation as a causal factor in enhancing and perpetuating poverty and the growing evidence of poor environmental quality adversely affecting human health and social development outcomes. Government of Tamil Nadu deemed it necessary to bring out this State-specific Environment Policy to address issues specific to the environmental context in Tamil Nadu and to provide

a holistic policy framework, in the context of the outcomes targeted under the Vision TN 2023.

Environment is an important cross-cutting subject requiring commitment and attention of stakeholders from all departments and agencies of Government of Tamil Nadu, Industry, Academia, Civil Society and Public-at-large. Accordingly, the Policy takes into account the actions on environment covered under policies formulated by other departments and agencies of Government of Tamil Nadu. The views, suggestions from consultations with stakeholders from industry, academia, civil society and the public-at-large have been obtained by conducting consultation meetings / sector wise meetings etc. and the same have been duly considered and incorporated in formulating the TN Environment Policy 2017. To facilitate implementation of the TN Environmental Policy 2017, TN Environment Mission under the stewardship of Hon'ble Chief Minister Government of Tamil Nadu is being constituted. The Tamil Nadu Environmental

Policy 2017 prepared by the Department of Environment and released by the Hon'ble Chief Minister of Tamil Nadu on 26.07.2017, envisages a dynamic document which would be periodically reviewed to align it with newer information, knowledge and developments to keep it current and contemporary.

11. Climate Change Adaptation in Rural Areas of India (CCARAI) Projects Implemented in Tamil Nadu

The Government of India and State Governments of India integrate adaptation to climate change in their sector policy decisions and rural development programmes to reduce the risks posed by climate variability and change. The Indo-German Development Project, CCA RAI aims to strengthen rural communities to live with climate variability and change with project partners of the Ministry of Environment, Forest and Climate Change (MoEF&CC) and four Indian States (Madhya Pradesh, Rajasthan, Tamil Nadu and West Bengal) with the German Corporation for International Co-operation (GIZ) to address India's differing agricultural and climatic zones. It operates at

the National, State and local levels, supporting the integration of climate change adaptation into development planning and policy decisions.

The CCA RAI projects in Tamil Nadu demonstrates practical solutions at community level guided by India's National Action Plan on Climate Change (NAPCC) and Tamil Nadu State Action Plan on Climate Change (TNSAPCC) with the Department of Environment being the Nodal for all the climate change adaptation and mitigation projects implemented in the State with focus on different fields of work, pursuing a cross-sectoral, integrated approach.

The main objective of CCA RAI project is to enhance the adaptive capacities of vulnerable rural communities in rural India so that they are better equipped to cope up with climate variability and change.

The following are the successful pilot projects in Tamil Nadu implemented under CCARAI during 2012-2016 :

- Integrated Mangrove Fishery Farming System (IMFFS) in Cuddalore district implemented by MSSRF.
- Rehabilitation of coastal habitats in the Gulf of Mannar, Tuticorin implemented by SDMRI.
- Tank silt application and rainwater harvesting in Madurai implemented by DHAN foundation

12. State Environment Impact Assessment

Authority (SEIAA) –Tamil Nadu

In S.O. 1533, dated 14th September 2006, the Ministry of Environment and Forests (MoEF), GoI have notified EIA Notification 2006 under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 by imposing certain restrictions and prohibitions on new projects or activities, on the expansion or modernization of existing projects and activities based on their potential environmental impacts.

Under the notification, it is mandatory of getting for **prior Environmental Clearance** for certain new

projects, expansion or modernization of existing projects based on their potential on environmental impact. Projects falling under **Category 'A'** in the Schedule to the Notification, requires Environmental Clearance from the Ministry of Environment, Forest & Climate Change (MoEF & CC), Gol and for matters falling under **Category 'B'**, depending upon the thresholds of the activities requires Clearance at State Environment Impact Assessment Authority (SEIAA).

The Notification provides for constitution of a **SEIAA** empowered to grant Environmental Clearance to mitigate pollution and protect environment. To assist SEIAA, a **State Expert Appraisal Committee (SEAC)** is constituted. The Expert Appraisal Committee scrutinize the projects and forward its recommendations to the SEIAA for taking a decision on granting Environmental Clearance.

Accordingly, the MoEF & CC, Gol in Notification S.O.No.417(E) dated 03.03.2008, 731 (E) dated 04.04.2012 and in Notification S.O.No.219 dated 12.08.2015 constituted the SEIAAs and SEAC for the period of three years from the date of Notification.

The present SEIAA was constituted vide MoEF & CC, Gol notification dated 05/11/2018 comprising of a three members SEIAA and 12 Members SEAC for Tamil Nadu for a term of three years.

The SEIAA and SEAC have conducted meetings at frequent intervals periodically and issue clearances for the projects under their purview.

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Tamilnadu Pollution Control Board

1.0 INTRODUCTION

Tamil Nadu Prevention and Control of Water Pollution Board was constituted by the Government of Tamil Nadu vide G.O.No.340 Health and Family Welfare Department dated 19.02.1982, issued under Section 4 (1) of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6). The Board came into existence from 27th February 1982 - the date of notification in the Tamil Nadu Government Gazette. After enactment of the Air (Prevention and Control of Pollution) Act, the Board name was changed as **TAMILNADU POLLUTION CONTROL BOARD (TNPCB)**.

Tamil Nadu Pollution Control Board comprises of a full time Chairman, a full time Member Secretary, 5 officials to represent the State Government, 5 persons to represent local authorities, 3 non-officials to represent the interests of agriculture, fishery or industry

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

1.1 Acts and Rules

TNPCB is a regulatory body which enforces the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and the following rules and notifications made there under.

- 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 Fly Ash Utilization Notification ,1999
- The Noise Pollution (Regulation and Control) Rules, 2000
- 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
- The Coastal Regulation Zone Notification, 2019

2.0 ORGANISATIONAL SET UP



The organization structure of TNPCB is a three-tier system, Head Office, Zonal Office and District Offices with staff strength of 607. The Head-office located at Chennai, headed by the Chairman and the Member Secretary and Seven Zonal Offices headed by the Joint Chief Environmental Engineers (Monitoring) and 38 District offices headed by the District Environmental Engineers. Apart from this, there are two Flying squads headed by Environmental Engineers functioning at Erode and Tiruppur. TNPCB has also established 16 Laboratories for monitoring the industries, water bodies, ambient air qualities in the State.

3.0 FUNCTIONS

Under Section 17 of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, the State Board functions are as follows:

- To plan a comprehensive programme for the prevention, control and 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 inspect sewage or trade effluents, works and plants for the treatment of sewage and trade effluents 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 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 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 in investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;
- To establish or recognize laboratory or laboratories to enable the Board to perform its functions efficiently, including the 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.

4.0 CONSENT MANAGEMENT

One of the main functions of TNPCB is to issue consent to the industries under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 and also issue of authorization to industries under various Rules notified under Environment (Protection) Act, 1986.

The consent is issued to the industries in two stages. At 1st stage, 'Consent to Establish' (CTE) is issued after assessing the suitability of the site before the industry takes up the construction activity and at 2nd stage, 'Consent to Operate' (CTO) is issued, after construction of the unit and before commencing the industrial unit, only after the compliance of conditions issued in Consent to Establish.

For efficient and effective implementation of the Acts & Rules and efficient monitoring TNPCB constituted various committees at Head Office, Zonal Offices and District offices level. These committees conduct meeting at their levels and decide issue of consent, renewals and authorisation for waste management.

4.1 Classification of Industries

Based on the pollution potential, industries are categorized as Red, Orange, Green and White for monitoring purpose. The industries have also been classified based on the Gross Fixed Assets (GFA) i.e., more than Rs. 10 crores as Large, more than

Rs. 5 crores and upto Rs. 10 crores as Medium and less than Rs. 5 crore as Small scale.

4.2 Inspection Periodicity and Sample Collection

Inspection is carried out by the Engineers, for the large scale red category units once in three months, the medium scale red category units once in four months and the small scale red category units once in a year. Similarly inspection is carried out for the large and medium scale orange category units once in six months, for the small scale orange category units once in two years and for the less polluting green category units, once in two years.

Sample collection for Sewage/Trade effluent samples are carried out once in a month for red-large industries, once in three months for red-medium industries, once in four months for orange-large industries, once in six months for red-small, orange-medium and orange-small industries. The 17 category highly polluting industries are inspected once in a month and the samples are also collected once in a month.

4.3 ONLINE CONSENT MANAGEMENT

TNPCB has provided the facility of Online Consent Management and Monitoring System (OCMMS) from 19.01.2015 and it is a web based generic software package for automating the work flow associated with consent management and monitoring which is one of the basic functions of the TNPCB. This system brings transparency and promptness in consent management. This system facilitates the industries for online submission of application for Consent to Establish / Consent to Operate / Renewal of Consent, uploading of documents, online payment of consent fees, online submission of clarification and to know the status of application.

TNPCB grants CTE to industries with a validity period of 7 years in case of Environmental Impact Assessment (EIA) projects and 5 years in case of non-EIA projects. CTO is issued with a validity period of 5 years, 10 years and 14 years for Red, Orange and Green category industries respectively. TNPCB is also issuing auto renewal of consent to the units with respect

to Red-Small, all size of Orange and Green category industries without inspection and getting specific undertaking from the units on compliance of previous consent order conditions.

Details of consent issued by TNPCB as follows:

Year	Consent issued for		
	Establishment	Operation	Renewal
01.04.2018 to 31.03.2019	945	3191	8907

5.0 COMMON EFFLUENT TREATMENT PLANTS

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, TNPCB also offers technical scrutiny on the proposal submitted by under then for providing CETP

In Tamil Nadu, 35 CETPs were formulated in the sectors of Tanneries, Textile Bleaching & Dyeing, Electroplating and Hotels. Out of which, 13 CETP schemes were established for tanneries. Of these 13 CETPs, 11 CETPs are now in operation with Zero

Liquid Discharge (ZLD) system and the remaining 2 CETPs in Madavaram and Pallavaram have provided primary and secondary treatment system and opted for dilution of treated effluent with treated municipal sewage to meet the standards prescribed by the Board.

At present, out of 20 Textile CETPs, 19 CETPs (18 Common Effluent Treatment Plants in Tiruppur, 1 CETP in Perundurai) have attained Zero Liquid Discharge.

For modernization / improvement of ZLD system in 18 CETPs in Tiruppur, the Government of Tamilnadu has announced Rs. 203.29 crores as interest free loan. The sanctioned amount is released to the respective CETPs through the Director of Handlooms and Textiles. So far Rs. 199.15 crores was released to 18 CETPs.

The CETP at Ayyampet-Muthyalpet in Kancheepuram district has proposed to provide ZLD plant after getting grant from the State and Central Governments. Apart from textile and tannery sectors, one CETP for Hotels & Lodges is in operation at

Kodaikanal and one CETP for Electroplating units is in operation in D.Karisalkulam of Sivagangai district.

6.0 WASTE MANAGEMENT

6.1 Solid Waste Management

As per the Solid Waste Management Rules, the local bodies are responsible for collection, treatment and disposal of solid wastes. The Board is responsible for granting authorization to local bodies for processing and disposal of solid waste and monitor them regularly.

In Tamil Nadu there are 12 Corporations, 124 Municipalities and 528 Town Panchayats. The total generation of municipal solid waste (2018 data) from the urban local bodies is around 13744 Tonnes per day (TPD) .Of which, solid waste generated from Corporations is 8480 TPD, Municipalities is 3164 TPD and Town Panchayats is 2100 TPD.

As per the said Rules, 12 Corporations, 122 Municipalities and 85 Town Panchayats generating solid waste more than 5 tons per day and require Authorization. So far, the Board has issued

authorization to 9 Corporations, 122 Municipalities and 84 Town Panchayats for setting up of waste processing facility for treatment and disposal of municipal solid waste.

6.2 Construction and Demolition Waste Management

As per the Construction and Demolition Waste Management Rules, 2016, these rules are exclusively introduced 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 that generates construction and demolition waste such as building materials, debris and rubble. Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall submit waste management plan and get appropriate approval from the local authority before starting construction or demolition or remodeling work. According to the rules, the local bodies need to ensure proper management of construction and demolition waste. State Pollution Control Board is to grant

authorization for the waste processing facility and monitor the implementation of these rules. TNPCB has directed all Corporations, Municipalities, Town and Village Panchayats to comply with the Construction and Demolition Waste management Rules, 2016.

6.3 Plastic Waste Management

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. The role of SPCB is to enforce the provisions of these rules relating to registration, manufacture and disposal of plastic wastes. TNPCB has issued Registration under PWM Rules, 2016 to 443 numbers of plastic manufacturing / recycling units, 23 numbers of multilayer plastic units and 7 numbers of compostable plastic units.

In order to make the State as 'Plastic Pollution Free Tamilnadu', the Government of Tamil Nadu, in exercise of the powers conferred under Section 5 of the

Environment (Protection) Act, 1986 notified ban on manufacture, store, supply, transport, sale or distribute of “One time use and throwaway plastics” such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups and plastic tumbler, water pouches and packets, plastic straw, plastic carry bags and plastic flags irrespective of thickness vide G.O. (Ms). No. 84 of Environment and Forests Department, dated 25.06.2018, with effect from 01.01.2019.

An exhibit vehicle was inaugurated by the Hon'ble Chief Minister of Tamil Nadu on 10.12.2018 towards creating awareness among public and school children around all the districts of Tamil Nadu. Regional Conferences for Plastic Pollution Free Tamil Nadu were conducted at Coimbatore, Trichy, Madurai, Tirunelveli, Chennai & Salem under the chairmanship of Hon'ble Minister for Environment.

Similarly, District Collectors along with the local bodies created awareness and also carried out inspections, raids, seizures of banned plastic materials

from various traders, shop owners, retailers, hotels, etc. About 635.64 Tons of single use plastics had been seized since 01.01.2019.

TNPCB issued directions to 170 numbers of banned plastic manufacturing units to stop their production from 01.01.2019. Subsequently, 113 units closed / vacated / not in operation and the remaining 57 units changed their manufacturing products and not engaged in banned items. In view of the above measures, the ban on use and throwaway plastic irrespective of thickness is effectively implemented in the state of Tamil Nadu.

6.4 Hazardous Waste Management

As per the Hazardous and Other Waste (Management and Transboundary) Rules, 2016 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.

In the State, there are 3,632 units identified as hazardous wastes generating units and they were issued authorization by the Board. In Tamil Nadu about 8.02 lakh tons of hazardous waste is annually generated, in which 2.49 lakh tons is landfillable, 3.24 lakh tons is recyclable which includes waste utilized as raw material in cement kiln and 2.29 lakh tons is incinerable which includes waste utilized as alternate fuel in cement kilns. The Board is taking effective steps in handling and management of hazardous wastes, its treatment and disposal in an environmentally safe manner. In Tamil Nadu, two common hazardous waste “Treatment Storage and Disposal Facility” (TSDF) have been established and they are in operation at Gummidipoondi and Virudhunagar. Further TNPCB has taken efforts to utilize the hazardous waste generated from Common Effluent Treatment Plants (CETPs) of textile processing units and tanneries as raw material for co-processing in the cement factories. So far, 62,764 tons of ETP sludge has been disposed to various cement industries for co-processing.

6.4.1 Online Authorization for Hazardous Waste Management

TNPCB has launched online Hazardous waste application receipt and processing module on 1.3.2016. The Industries are now making application for authorization through online for handling their waste. The applications are processed and authorizations are issued through online. This system allows the industries to track the status of their application.

6.5 Biomedical Waste Management

As per the Bio-Medical Waste Management Rules, 2016, the bio-medical waste generator and the operator of the Common Bio-Medical Waste Treatment and Disposal Facility (CBMWTF) are responsible for safe handling and disposal of the bio-medical waste. SPCB shall issue authorization to the health care facilities and CBMWTF. It shall monitor the compliance of various provisions of the rules. The Government has constituted State Level Advisory Committee to oversee the implementation of the rules.

In the State, so far 5627 Private and Government hospitals including bedded and non bedded hospitals, nursing homes, clinics, Dispensaries, Veterinary Institutions, Pathological labs, blood banks and Research Institutions were identified and issued authorization by the Board. 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, there are 11 CBMWTFs, out of which, 8 facilities are in operation. The remaining 3 facilities were issued with closure direction by TNPCB for non-compliance of BMWM Rules, 2016. On an average, 47 Tons/day of bio-medical waste is handled by these facilities. In addition, three common facilities are under establishment in Tiruvallur, Cuddalore and Tiruppur Districts. All the CBMWTFs have provided bar code system for the collection of waste. All the vehicles used for transportation of bio-medical waste have been fitted with GPS tracking system.

6.5.1 Online Authorization for Bio-Medical Waste Management

TNPCB has launched online Bio-Medical Waste application receipt and processing module on 1.3.2016. The Hospitals are now making application for authorization through online for handling their waste. The applications are processed and authorizations are issued through online. This system allows the hospitals to track the status of their application. From 1st April 2018 to 31st March 2019, 840 hospitals were issued with authorization.

6.6 E- Waste Management

As per the E-Waste Management Rules, 2016 the producer of the electrical and electronic equipments shall be responsible for collection and channelization of e-waste generated from the 'end-of-life' of their products under Extended Producers Responsibility. CPCB issues authorization to the producer of electrical or electronic equipments for channelization of e-waste to ensure environmentally sound management of such waste. SPCB shall monitor the compliance of the conditions of the Extended Producer Responsibility

Authorisation. As per these rules, State Pollution Control Board shall grant and renew authorization to the manufacturers, dismantlers, recyclers and refurbishers. SPCB shall conduct random inspection of dismantler or recycler or to the refurbishers. TNPCB has issued authorization to 25 units (23 Dismantlers, 1 Recycler & 1 Refurbisher).

7.0 TNPCB LABORATORIES

In order to ensure close monitoring of industries, more laboratories have been established at the district level. At present 8 Advanced Environmental Laboratories [AELs] are functioning at Chennai, Coimbatore, Cuddalore, Madurai, Salem, Tirunelveli, Trichy and Vellore and 8 District Environmental Laboratories (DELs) are functioning at Ambattur, Dindigul, Hosur, Manali, Maraimalai Nagar, Tiruppur, Tuticorin and Perundurai.

The Board has got NABL (National Accreditation Board for Testing and Calibration Laboratories) Certification to the five Advanced Environmental Laboratories at Chennai, Coimbatore, Cuddalore,

Madurai and Salem for a period upto 2020. Three Advanced Environmental Laboratories at Chennai, Salem and Cuddalore have obtained OSHAS 18001 certification. From 1st April 2018 to 31st March 2019, 26730 samples of water, sewage and trade effluents were collected and analyzed. Similarly, stack monitoring and ambient air quality survey were conducted for 1219 industries.

7.1 Ambient Air Quality Monitoring

Tamil Nadu Pollution Control Board is operating 28 ambient air quality monitoring stations in Tamilnadu under National Air Quality Monitoring Programme (NAMP) funded by Central Pollution Control Board. These stations are located at Chennai (8), Coimbatore (3), Madurai (3), Salem (1), Tiruchirapalli (5), Thoothukudi (3), Mettur (2), and Cuddalore (3). The parameters viz., Particulate Matter (PM₁₀), Particulate Matter (PM_{2.5}), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) and Ammonia (NH₃) are monitored. All the above stations are functioning on 24 hours basis twice a week. The survey results are displayed in the TNPCB website.

7.2 Continuous Ambient Air Quality Monitoring Stations

In order to monitor the ambient air quality on continuous basis, the Board installed Continuous Ambient Air Quality Monitoring (CAAQM) stations in Chennai at Koyambedu, Royapuram, Perungudi, Kodungaiyur and in SIPCOTs at Gummidipoondi, Thoothukudi and Perundurai. The CAAQM stations monitor PM₁₀, PM_{2.5}, SO₂, and NO_x on continuous basis. In addition to the above, the TNPCB in collaboration with CPCB is operating CAAQM stations at Manali and Coimbatore on. Further TNPCB has one mobile monitoring station and it is employed to monitor the air quality in hot spots in Chennai city and complaint areas. Apart from this, TNPCB is in the process of installing Continuous Ambient Air Quality Monitoring (CAAQM) stations at 25 different urban and industrial areas throughout the State. Out of 25 stations, 10 stations were installed and under operation. The remaining stations are under installation.

7.3 Care Air Centre

TNPCB established Care Air Centre at Corporate Office, Chennai. This centre monitors the ambient air quality and source emissions of the industries in the State on 24x7 basis through online. PM₁₀, PM_{2.5}, NO, NO₂, NO_x and other industry specific parameters are monitored on continuous basis. The 17 category highly polluting industries, Red-large industries, Common Effluent Treatment plants, common hazardous waste incinerator facilities, common bio-medical waste treatment facilities are connected to this centre. As on 31st May 2019, 609 industries are connected to this centre for source emission and ambient air quality monitoring.

7.4 Water Quality Monitoring

Tamil Nadu Pollution Control Board is monitoring the inland water quality under two major programmes namely Global Environmental Monitoring System (GEMS) and Monitoring of Indian National Aquatic Resources System (MINARS) along the four major rivers i.e., Cauvery, Tamiraparani, Palar and Vaigai and

eight lakes Udhagamandalam, Kodaikanal, Yercaud, Veeranam, Porur, Poondi, Pulicat and Redhills. At present 55 stations are being monitored by Tamil Nadu Pollution Control Board with the financial assistance of Central Pollution Control Board, Delhi.

7.5 Water Quality Watch Centre

TNPCB has established Water Quality Watch Centre at Corporate Office. In order to monitor the quality of treated effluent at the outlet of the treatment plant on continuous 24x7 basis through online. The parameters monitored are Flow, TDS, pH, BOD, COD, TSS and other industry specific parameters. The 17 category highly polluting industries, Red-large industries and Common Effluent Treatment plants are connected to this centre. Upto 31st March 2019, 343 units are connected.

7.6 Continuous Water Quality Monitoring Stations

TNPCB has installed online real-time continuous water quality monitoring stations in water bodies. Three stations are installed each in River Cauvery, Noyyal and Kalingarayan canal so as to know the quality of the

water bodies in the textile industrial belt of Tiruppur, Erode, Namakkal districts. Similarly, three stations in River Tamirabarani and two stations in River Bhavani are installed. These stations monitor pH, total dissolved solids and dissolved oxygen level in the water.

7.7 Chennai City Water Ways Monitoring Programme

TNPCB is monitoring the water quality of four city water ways in Chennai city (i.e) Adyar River, Buckingham Canal, Cooum River and Otteri Nallah to assess the pollution level by collecting monthly water samples from both in water bodies and sewage outlets into the said water bodies. Totally there are 30 monitoring locations in the water bodies.

7.8 National Ambient Noise Monitoring Network Programme

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Noise Pollution (Regulation and Control) Rules, 2000. TNPCB in association with CPCB has established 10 Real Time Ambient Noise Monitoring Stations in Chennai City

under National Ambient Noise Monitoring Network Programme. These stations are at Egmore, T.Nagar, Perambur, Guindy, Triplicane, Pallikaranai, Velachery, Washermanpet, Anna Nagar and Sowcarpet.

8.0 LEGAL ACTIONS

The Board has been empowered to issue direction for closure industry and stoppage of Power supply against defaulting/erring units under Section 33A of the Water (P&CP) Act, 1974 as amended and under section 31 A of the Air (P&CP) Act, 1981 as amended. If any of the industry is found to be violating and polluting the environment, TNPCB issues show cause notice followed by personal hearing so as to give a chance to rectify the defects. If the industry still continues to violate and pollute, TNPCB issues orders for closure of the industry and stoppage of supply of electricity. From 1st April 2018 to 31st March 2019, 6564 industries were issued show cause notice and 394 industries were issued direction for closure and stoppage of supply of electricity. Once the industry rectifies the defects and approach for revocation,

the Board after verification, issues orders for revocation of closure and restoration of power supply.

Legal action taken by TNPCB as follows:

Year	No. of legal action		
	Show cause issued	Closure issued	Electricity connection resumed
01.04.2018 to 31.03.2019	6608	316	447

However, the Industries of those aggrieved of Board's closure direction/any directions issued under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981, might file Writ Petitions/Appeal before the Hon'ble High Court and Appellate Authority/National Green Tribunal respectively.

8.1 Appellate Authority

Hon'ble Appellate Authority has been constituted under the Chairmanship of a Hon'ble Justice (Retd) with two technical members as per the G.O.Ms.No.66, Environment and Forests Department, dated 7.5.2013.

The Authority examines the appeals preferred by the industries against the orders of the TNPCB issued under Section 25/26 and 27 of the Water (Prevention and Control of Pollution) Act, 1974, as amended in 1988 and any orders issued under the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987.

8.2 National Green Tribunal

For effective and expeditious disposal of cases relating to environmental protection and forest conservation, the National Green Tribunal (NGT) was established at New Delhi on 18.10.2010. Any person aggrieved by the orders of the Appellate Authority and orders passed under Section 28, 29 and 33A of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 5 of the Environmental (Protection) Act, 1986 by the Board and State Government can prefer and appeal before NGT within 30 days of the order issued by the Board / State Government /Appellate Authority.

9.0 ENVIRONMENTAL TRAINING INSTITUTE

Tamilnadu Pollution Control Board established the Environmental Training Institute [ETI] during 1994 with Danish Assistance to impart knowledge and provide trainings to staff of TNPCB, Industrial representatives, Executives of Municipalities and Corporations, Line departments and NGOs on pollution control and environmental protection. During the year 2018-2019, ETI has conducted training programme on Bio-Medical Waste Management, Hazardous Waste Management, E- Waste Management, Plastic Waste Management, Environmental Management in Thermal Power Plant, and Management of Wastewater and Solid Waste from Leather Industries etc.

9.1 Training Programmes

In year 2018, TNPCB has conducted programmes as detailed below:

- One day training programme on 03.05.2018 on the topic Environmental Health and Safety, Air and Noise Pollution, Air Pollution Modelling and Assessment.

- One day training programme on 12.07.2018 on the topic Green Engineering for Sustainable Future.
- Awareness programme on implementation of ban on one time use and throw away plastic irrespective of thickness was given to the all Board Engineers through Central Institute of Plastics Engineering & Technology (CIPET), Guindy, Chennai from 05.12.2018 to 13.12.2018.
- One day training programme on 22.03.2018 to the students of CSI Kalyani College of Nursing, Mylapore, Chennai on the topic of bio-medical waste management.
- One day training programme on 16.08.2018 on the topic of improved operation of ETP, RO and Evaporator to the officers of TNPCB
- One day training programme about TDS under GST to officials of TNPCB on 01.11.2018 and 12.11.2018

10.0 ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

TNPCB conducts various types of environmental awareness programmes every year and the programmes conducted during the year 2018-2019 are as follows,

10.1 World Environment Day

In order to create awareness and to take positive action to protect the environment, World Environment Day is celebrated every year on 5th June with a common theme in world wide. The theme for World Environment Day 2018 is “Beat Plastic Pollution”. TNPCB in coordination with Department of Environment conducted students rally from Birla Planetarium to Children’s Park, Guindy. The field offices celebrated World Environment Day by conducting awareness programmes such as rallies, environmental quiz & competition, planting tree saplings in and around the industry premises, schools by involving employees, teachers and students, etc.,

10.2 Vinayagar Chathurthi

TNPCB creates awareness among the public through the District Collectors to celebrate Vinayagar Chathurthi festival using the idols made of eco-friendly materials like clay. Press releases are issued not to use plaster of paris and synthetic paints to make vinayagar idols. In order to know the impact on the quality of water due to immersion of idols in the identified and earmarked water bodies throughout the State, TNPCB collects water samples before and after immersion.

10.3 Deepavali

As per the orders of the Hon'ble Supreme Court of India, the Government has restricted the time limit for bursting crackers from 6.00 AM to 07.00 AM and 07.00 PM to 08.00 PM. TNPCB has taken all efforts to create awareness to the School and College students and General Public through District Environmental Engineers in co-ordination with the District Administration by issuing press release, FM Radio, public addressing through Auto Rickshaw, distribution of pamphlets to the public, display boards in public

places. Further, noise level and the ambient air quality surveys were conducted during Pre-Deepavali and Deepavali days in Chennai, Trichy, Coimbatore, Madurai, Tirunelveli, Vellore, Salem, Hosur, Tiruppur, Dindigul and Cuddalore. There is substantial improvement in the air quality with respect to particulate matter when compared to the previous year and there will be further improvement due to the continuous and sustained efforts of TNPCB in future. The results are published in the TNPCB website.

10.4 Karthigai Mahadeepam

TNPCB conducted a Plastic Awareness campaign during Karthigai Mahadeepam Festival 2018 in Thiruvannamalai 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 awareness programme is conducted every year.

10.5 Bhogi Festival

To create awareness among public during Bhogi Festival January 2019, regarding not to burn the waste materials such as waste tyres, tubes, plastic materials,

cloths etc in open places, TNPCB has conducted awareness programme through Hello FM Radio and created wide awareness through District Environmental Engineers in all districts in the state of Tamil Nadu. Further ambient air quality survey on pre-bhogi and bhogi days were conducted by TNPCB for which the results are displayed in TNPCB Website. There is substantial improvement in the air quality with respect to particulate matter when compared to the previous year.

10.6 Green Awards

Tamil Nadu Pollution Control Board gives away Green Awards every year to District Collectors, Industries, Educational Institutions and Residential Welfare Association by recognizing their contribution in environment protection and awareness creation. The proposals received are evaluated by the expert committee members. Awards are presented by the Hon'ble Chief Minister of Tamilnadu.

10.7 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) which depends 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 are sent to the MoEF&CC, GoI or SEIAA. From 1st April 2018 to 31st March 2019, TNPCB has conducted public hearing for 34 projects.

11. ONLINE GRIEVANCE REDRESSAL SYSTEM

Due to increased awareness on environmental related issues, several complaints are being received from various individuals / Organization/NGOs etc. regarding water, air and noise pollution. To take appropriate action against these complaints, an active 'Complaint Cell' is functioning in the head office, Chennai. As a part of e-governance, TNPCB has

introduced online grievance petition redressal system from 1st March 2016 onwards. During the period from 1st April 2018 to 31st March 2019, 9236 complaints petitions were disposed.

11.1 CM Cell Petitions

TNPCB established a separate section in Head office to take immediate action to clear CM Cell petitions within 15 days. From 1st April 2018 to 31st March 2019, 442 petitions received disposed.

11.2 Amma Call Centre Petitions

TNPCB established a separate section in Head Office to take immediate action on Amma Call Centre petitions and to dispose the petitions within 7 days. From 1st April 2018 to 31st March 2019, 648 petitions received and 568 petitions were disposed.

11.3 Grievance Redressal Centre

TNPCB has established a Grievance Redressal Centre during February 2018 at the Head office with an objective of guiding Entrepreneurs and Project Proponents for applying consent, latest technology in

pollution prevention and control, cleaner technologies, etc., and also to answer the general public on Environmental related issues.

11.4 Right to Information Act

The Parliament passed the Right to Information Act, 2005 to enable all citizens to use their fundamental right to access information from public bodies. TNPCB is having a separate cell to deal with RTIA applications. In pursuance to the directions of Government of Tamil Nadu, TNPCB designated the Additional Chief Environmental Engineer as Appellate Authority and Joint Chief Environmental Engineer in the Corporate Office as Public Information Officer and 38 District Environmental Engineers are designated as Public Information Officers at district level to provide information to the persons requesting information under the Right to Information Act, 2005. During the year 2018-2019, the Board has furnished information to 1995 applications.

12.0 GOVERNMENT EXHIBITIONS

TNPCB actively participate in the Government Exhibition conducted every year at Island Grounds in Chennai by providing stall and exhibits models on Effluent Treatment Plant, Air Pollution Control Measures, Solid Waste Management and other information on Environmental Protection. The Board also participates in the Government Exhibitions conducted at the District Level.

13.0 OFFICE BUILDING CONSTRUCTIONS

TNPCB is having own buildings for the Head Office and 24 districts offices. The construction of office building at Nagapattinum is completed. Construction work is in progress for the building at Gummidipoondi and Thiruvannamalai. Foundation stone is laid for the building at Salem. Land is purchased for the buildings at Ariyalur, Tiruppur-North, and Dharmapuri. Identification of land/procurement of land are under various stages for the remaining offices at Theni, Ramanathapuram, Tiruppur-South, Ooty, Nagercoil, Karur and Kumarapalayam.

14.0 SCIENTIFIC STUDY THROUGH EXPERT INSTITUTION

- i. In order to find a 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 sodium chloride (NaCl) and sodium sulphate (Na_2SO_4) from the mixed salt so as to reuse the same. Utilization of these salts in Chlor Alkali units is under trial.
- ii. TNPCB has carried out a scientific study through a Committee consisting of experts from CPCB, NEERI and SPCB for the assessment of pollution caused by the Charcoal units in Veeranampalam Village, Kankeyam Taluk, Tiruppur District.
- iii. In order to identify the contaminated area and subsequent remedial measures for the pollution in Kattur Lake, Perundurai, Erode District, a detailed hydrogeological study is in progress in

and around SIPCOT Industrial Complex, Perundurai by National Geophysical Research Institute, Hyderabad.

15.0 FUNDING FOR POLLUTION ABATEMENT PROJECT

15.1 Eco restoration of Periakkulam Eri in Vadmugam Vellodu Village of Perundurai Taluk and Muthampalayam Eri in Erode District:

TNPCB released a fund of Rs.7.65 Crores for the implementation of Eco restoration of Periakkulam Eri in Vadmugam Vellodu Village of Perundurai Taluk at a cost of 4.90 Crores and Muthampalayam Eri in Erode District at a cost of Rs.2.75 Crores as per the 110 Announcement made in the Assembly by the Hon'ble Chief Minister during 2016-17 & G.O.Ms.No.134 E&F (EC.1) Dept dated 21.11.2016.

15.2 Eco Restoration of Ellapalayam Eri in Villarasampatti, Karuvilparaivalasu in Erode Corporation, Erode District:

TNPCB released a fund of Rs.11.00 Crores for the implementation of Eco-restoration of Ellapalayam Eri In Vilarasampatti, Karuvilparaivalasu in Erode

District as per Announcement made in the Assembly during 2016-17 and G.O. (Ms)No.153 E&F (EC.1) Department, dated 28.12.2016.

15.3 Eco Restoration of Paruthipattu Lake

TNPCB released a fund of Rs.28.16 crores for Eco restoration of Paruthipattu Lake in Avadi near Greater Chennai Corporation during 2016-17 as per G.O. (Ms) No. 30, E&F (EC-1) dept. dated: 02.03.2017.

15.4 Eco Restoration of Pallikaranai Marshland

TNPCB released a fund of Rs. 20.30 crores to the Tamilnadu Forest Department for the project of Comprehensive Management plan of Pallikaranai Marshland (PML) – Eco- restoration, Protection and Conservation works in Pallikaranai Marshland as per the G.O.(MS) No.99 E& F Department dated 17.07.2018 and G.O.(MS) No.29 E&F Department dated 04.09.2018.

16.0 SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs) are an inter-governmentally agreed set of targets relating to international development to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. SDGs cover 17 goals and 169 targets resolved in UN Summit held in September 2015. India is a signatory of the 2030 Agenda, committed to achieve SDGs.

Under Target 12.4, TNPCB proposes to increase the ambient air quality monitoring stations from 38 stations to 63 stations by adding 25 New CAAQMS in the year 2019-20, covering the State. Under water quality monitoring programme, TNPCB proposes to increase from 63 stations to 79 stations by adding 16 new stations in the year 2019-20, to monitor the water quality of water bodies in the State.

17.0 HIGHLIGHTS OF PERFORMANCE IN 2018-2019

- i. TNPCB has established Video Conferencing facility between TNPCB Head Office and all

Zonal and District Offices to conduct review meetings at a cost of Rs.3.25 Crores

- ii. TNPCB has provided LCD Projector to 200 Government Higher Secondary Schools at a cost of Rs.80 lakhs to encourage the student to participate in environmental protection by creating awareness.
- iii. Introduced Master Health Check-up scheme for TNPCB employees at a cost of Rs. 15 Lakhs per year.
- iv. Issued Guidelines for establishing M-Sand units.
- v. Presenting Green award to residential welfare Association in Greater Chennai Corporation area at a cost of Rs.5 lakhs
- vi. The Government of Tamil Nadu vide G.O. (Ms). No.84 Environment and Forests (EC.2) Department, Dated 25.06.2018 have imposed a ban on the usage of 14 types of one time use and throwaway plastics irrespective of

thickness in Tamil Nadu with effect from 01.01.2019 towards Plastic Pollution Free Tamil Nadu.

K.C.KARUPPANAN
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