



**ENVIRONMENT, CLIMATE CHANGE AND  
FORESTS DEPARTMENT**

**ENVIRONMENT AND CLIMATE CHANGE**

**POLICY NOTE  
2021-2022**

**DEMAND No.15**

**SIVA. V. MEYYANATHAN**  
**Minister for Environment - Climate Change and  
Youth Welfare and Sports Development**

©  
GOVERNMENT OF TAMIL NADU  
2021

# ENVIRONMENT AND CLIMATE CHANGE DEPARTMENT

“மணிநீரும் மண்ணும் மலையும் அணிநிழற்  
காடும் உடைய தரண்” (குறள் 742)

“Having crystal clear perennial water, pristine  
sand, lofty mountains and dense evergreen  
forests provide natural defence to the State and  
Country”

## VISION

Transform Tamil Nadu to a climate change  
resilient society through sustainable and equitable  
use of natural resources for better health and  
quality of life.

## **STRATEGIES**

1. Create strong policy support for climate change cutting across all sectors of governance.
2. Devise new strategies to reduce greenhouse gas emissions.
3. Develop collaborations and strengthen community engagement to build long term commitment for a Net Zero Carbon future for Tamil Nadu
4. Promote multi stakeholder approach to fast track climate action in a synergised fashion.
5. Use proven climate change science & technologies to create evidence based green models for emulation and adaptation.
6. Educate and empower local communities in management of climate change at ground zero.
7. Promote successful climate change adaptation and mitigation models for replication.

8. Build standards for energy efficient infrastructure to save precious energy and reduce energy consumptions.
9. Create practical models for green mobility to reduce emission.
10. Create State-of-the-Art monitoring mechanism for better compliance of Environmental Standards through transparent and credible systems.
11. Conserve and preserve natural resources and promote their sustainable use.

## **Introduction**

Tamil Nadu Government is committed to conserve and protect its natural environment. The environment is "the critical infrastructure without which neither an economy nor a society can survive". The Environment Protection Act, 1986 clearly defines the inter relationship which exists among and between water, air and land and

human beings, other living creatures, plants, micro-organisms and property.

A healthy environment promotes healthful conditions necessary to sustain living creatures. Therefore, it is important for every individual to save and protect the environment. Environmental protection is one of the basic prerequisites for the overall development of any country in the world. Environmental conservation and preservation are two terms that are often used interchangeably, although they are quite different. Conservation protects the environment through the responsible use of natural resources. Preservation protects the environment from harmful human activities. In view of this, World Environment Day is celebrated on the 5<sup>th</sup> of June every year and is the United Nations principal vehicle for encouraging awareness and action for the protection of our environment.

Environment is an important cross-cutting subject requiring commitment and attention of stakeholders from all the Departments and agencies of Government of Tamil Nadu, industries, academia, civil society and public at large. As the economy continues to grow rapidly, the State will face constraints and limitations of natural resources and the need to use them in a sustainable manner. While Tamil Nadu focuses on industrial development at a pace faster than the National average, it will focus on the need to preserve the environment and its heritage.

The guiding principle of sustainable development economy is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable environment recognizes the interdependence of environmental, social and economic systems and promotes equality and justice through people empowerment and a sense

of global citizenship. Recognizing the importance of the Agenda 21 of Earth Summit of United Nations Conference on Environment & Development, held on June 1992 at Rio de Janeiro, Brazil, the Department of Environment & Forests (EC) Department, dated 13.10.1995.

## **2. Functions of the Department**

- Formulating policies related to Environmental issues for the Government of Tamil Nadu.
- Creating a framework to bring Synergy among the line Departments of the State and thus evolving policy initiatives for the State.
- Integration of knowledge and experiences of National and International agencies through collaboration and partnership.

- Developing framework for capacity building of various stakeholders (Line Departments, Institutions/Universities, Researchers, Experts, Non-Government Organizations (NGOs) on Climate Change Adaptation and Mitigation.
- Implementing the Statutory provisions of Coastal Regulation Zone (CRZ) Notification and Environment Impact Assessment (EIA) Notification.

The Department is dealing with all the environment protection and management efforts except those dealt by the Tamil Nadu Pollution Control Board. The Department is the nodal Agency for formulating the climate change related schemes, plans, programmes and their implementation in the State.



### **3. Constitutional Provision**

The Indian constitution is one of the first in the world to recognize the importance of environmental conservation. The 42<sup>nd</sup> constitutional amendment introduced Article 48A, part of the Directive Principles of State directs, "The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country." Article 51A (g), part of the Fundamental Duties reads, "It shall be the duty of every citizen of India to protect and improve the natural environment". As the Constitution provides the framework for creating a welfare State, it is necessary that the finite natural resources of the country be optimally utilized without adversely affecting either the health of the people or the environment. This is the essence of the term sustainable development. We must make conservation-oriented development choices to

avert pressure on natural resources and life-support systems.

#### **4. Legal Framework**

##### **A. Environmental Protection Act (EPA)**

was enforced in the year 1986 with the aim to protect and improve the environment and matters associated with it.

##### **B. Environment Impact Assessment (EIA) Notification was enacted in 2006**

by the Government of India for imposing certain restrictions and prohibitions on new projects or activities, or on the expansion or modernization of existing projects or activities based on their potential environmental impacts, being undertaken in any part of India.

##### **C. Coastal Regulation Zone (CRZ) Notification** ensures livelihood security

to the fishermen and other local communities. The Ministry of Environment Forests and Climate Change, Government of India issued CRZ Notification, 2011 under the Environmental (Protection) Act, 1986.

## **5. Policy Initiatives**

The Government of Tamil Nadu accords the highest priority to preserve and protect its ecological footprint and environmental resources, considering the responsibility to protect and improve the environment. Towards this direction the following policy initiatives are undertaken by the Department of Environment:

### **5.1. Tamil Nadu State Environment Policy, 2017**

The National Environment Policy announced by Government of India in 2006 (NEP 2006) highlighted the negative impacts of environmental

degradation as a causal factor in perpetuating poverty, adversely affecting human health and social development outcomes. The document also outlines the range of strategies for the conservation of natural resources and inter-sectoral collaboration with emphasis on education, research and capacity building.

In line with NEP, the Tamil Nadu Environmental Policy 2017 was prepared which would be periodically reviewed to align it with updated information, knowledge and development. The Tamil Nadu State Environment Policy will be revised in consonance with current and contemporary issues.

## **5.2. Sustainable Development Goals (SDGs)**

The Sustainable Development Goals (SDGs) were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The objective was to produce a set of universal goals that meet the urgent

environmental, political and economic challenges facing our world.

The State Governments have been entrusted with the mandate of implementing, monitoring and reviewing the Goals in their respective States.

The Department of Environment is the Nodal Department for the Climate Change adaptation and mitigation activities and it is dealing with the Sustainable Development Goal SDG 13: Climate Action and SDG 14: Life Below Water.

### **SDG 13: Climate Action**

- 13.1. Integrate Climate Change measures into national policies, strategies and planning
- 13.2. Improve education, awareness-raising and human and institutional capacity on climate change, adaptation, mitigation, impact reduction and early warning

## **SDG 14: Life below Water**

14.1. Prevent and significantly reduce marine pollution of all kinds

14.2. Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts

14.3. Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

## **6. THRUST AREAS AND STRATEGIES**

Balanced environment is mandatory for overall development of the State. The State Government have identified the following thrust areas which ensure the ecological, environmental and socio-economic security of the State:

**6.1 Climate Change Adaptation and Mitigation**

**6.2 Coastal Zone Management**

**6.3 Eco-restoration of Water bodies**

## **6.4 Technology Intervention**

## **6.5 Creation of Environment awareness and capacity building**

## **6.6 Safeguarding the Environment**

### **6.1. Climate Change Adaptation and Mitigation**

When it comes to tackling climate change to prevent the impact it causes in different systems of the planet, two types of measures are applied mitigation and adaptation.

Mitigation measures are those action points that are taken to reduce and curb greenhouse gas emissions, while adaptation measures are based on reducing vulnerability to the impact of climate change. Mitigation therefore attends to the causes of climate change, while adaptation addresses its impact. The adaptation & mitigation measures include setting up of effective institutions and

governance, innovation and investments in environmentally sound technologies, climate resilient infrastructure, sustainable livelihoods and sustainable behavioral and lifestyle choices.

### **6.1.1. Tamil Nadu State Action Plan on Climate Change (TNSAPCC)**

India's National Action Plan on Climate Change (NAPCC) depicting the existing and future policies and programmes addressing climate mitigation and adaptation was released in the year 2008. In-line with NAPCC, the Tamil Nadu State Action Plan on Climate Change (TNSAPCC) 2015-2020, was prepared and 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 viz.,

1. Sustainable Agriculture
2. Water Resources
3. Forests & Biodiversity
4. Coastal Area Management
5. Enhanced Energy Efficiency & Solar Mission
6. Sustainable Habitat
7. Knowledge Management

TNSAPCC provided the first State-wide and cross-sectoral climate change impacts and vulnerability assessment and formulated adaptation and mitigation strategies to be carried out by the State Government Departments.

In light of India's Nationally Determined Contributions (NDCs) to UNFCCC, Ministry of Environment, Forest and Climate Change (MoEF&CC), GoI has advised to revise the Tamil Nadu State Action Plan on Climate Change.

Accordingly, action has been taken to revise the TNSAPCC.

The TNSAPCC 2.0 is under preparation in accordance with the priorities of the Government of Tamil Nadu. The draft TNSAPCC 2.0 document emphasizes on Disaster Management and Mitigation, Health, Sustainable Development Goals and Composite Vulnerability Index (CVI) for the State.

To build climate resilience in the State, the Department is submitting proposals to MoEF&CC, GoI under the programmes National Mission on Strategic Knowledge Management for Climate Change (NMSKCC), National Adaptation Fund for Climate Change (NAFCC) and Green Climate Fund (GCF)

### **6.1.2. Tamil Nadu Climate Change Mission**

Combating and mitigating the impact of climate change is a major concern for a coastal State like

Tamil Nadu. **During the Budget Speech for the year 2021-2022, this Government has announced a launch of Tamil Nadu Climate Change Mission under the Hon'ble Chief Minister to focus on climate change adaptation and mitigation activities with a total outlay of Rs.500 crores.**

### **6.1.3. National Mission on Strategic Knowledge Management for Climate Change (NMSKCC)**

Under the NMSKCC the Department of Environment along with Centre for Climate Change and Disaster Management (CCCDM), Anna University, is executing the project "Establishment and strengthening of Tamil Nadu State Climate Change Centre". The project aims in dissemination of the climate change information through web portal, technical reports and Newsletters related to climate change.

#### **6.1.4. National Adaptation fund for Climate Change (NAFCC)**

The MoEF&CC, GoI has approved the project, "Climate Proofing of Rainfed Watersheds in Salem and Virudhunagar Districts" implemented by Tamil Nadu Watershed Development Agency (TAWDEVA) at a cost Rs.23.80 crores. Water resources, soil health management activities, crop management activities, livelihood support and micro enterprises activities are in progress under the project.

#### **6.1.5. Management and rehabilitation of coastal habitats and biodiversity for climate change adaptation and sustainable livelihood in Gulf of Mannar, Tamil Nadu, India**

**This is the first NAFCC project in India on Coastal Area Management and in line with TNSAPCC** funded by the MoEF&CC, GoI, at a cost of Rs. 24.74 crores. This project consists of a baseline study to assess vulnerability to climate change of coastal ecosystems (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 Vaan island and eco-development activities.

#### **6.1.6. Green Climate Fund (GCF)**

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

The project “Improved resilience of Urban Ecosystems through targeted restoration of Wetlands” proposed by the Tamil Nadu Forest Department at a cost of Rs.165.69 crores was approved by the State Level Steering Committee in Tamil Nadu and by MoEF&CC, GoI and the

Detailed Project Report is under active consideration of MoEF&CC, GoI.

## **6.1. Coastal Zone Management**

Tamil Nadu has a vast coastline of 1076 kms which constitutes about 15 percent of the total coastal length of India. The State is endowed with varied coastal habitats like mangroves, corals, seaweeds, sea grass beds, salt marshes, mudflats, sand dunes etc.

To promote integrated and sustainable management of the coastal and marine areas, it is essential to follow multi-disciplinary approaches. Main approaches will be improving capabilities related to coastal processes, shoreline management, coastal hazards/vulnerability.

Coastal ecosystem is included under the SDG Goal 14: Life below water which emphasizes on protection and management of marine and coastal ecosystems on sustainable basis

### **6.2.1. Coastal Zone Management Plan (CZMP)**

The Coastal Regulation Zone (CRZ) Notification, 2011 has been issued vide S.O 19 E dated 06.01.2011 under the Environment (Protection) Act, 1986 by MoEF&CC, GoI to conserve and protect the coastal stretches and to promote sustainable development in the coastal areas.

The coastal areas have been categorized as five zones as follows in the CRZ Notification 2011:

- CRZ-I (ecologically sensitive),
- CRZ-II (developed area),
- CRZ-III (rural area)
- 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).
- CRZ- V (Areas requiring special consideration for the purpose of protecting the critical coastal environment).

The preparation of CZMP as per the provisions of the CRZ Notification is mandatory for the State.

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 above said purpose.

The MoEF&CC, GoI have conveyed the approval of the CZMP for Tamil Nadu, based on the recommendations of the National Coastal Zone Management Authority (NCZMA) on 24.10.2018. The approved CZMP in 117 maps have been uploaded in the website of Department of Environment (<http://www.environment.tn.gov.in>) and ENVIS (<http://tnevis.nic.in>). The soft copy of the



approved CZMP has been sent to all the District Coastal Zone Management Authorities and the Stakeholder Departments for necessary action.

The MoEF&CC, GoI has directed all the States to prepare the CZMP as per the guidelines of CRZ notification 2011. For the State of Tamil Nadu, the National Centre for Sustainable Coastal Management (NCSCM), MoEF&CC, GoI is preparing the maps at the scale of 1:25000 as per the Guidelines of CRZ Notification, 2019 at a cost of Rs. 1.82 crores.

The GoI has directed all States to follow the approved CZMP as per the CRZ Notification, 2011, until the approval of CZMP as per the CRZ Notification, 2019.

### **6.2.2. Preparation of Local Level Coastal Zone Management Plan**

The Government of Tamil Nadu has accorded sanction for the mapping of Local Level Integrated Coastal Zone Management Plan mapping at the scale of 1:5000 scale through Institute of Remote Sensing (IRS), Anna University at a cost of Rs.2.99 crores under Coastal Disaster Risk Reduction Project (CDRRP) fund. The local level CZM Maps are useful to the local bodies and other agencies to facilitate implementation of the Coastal Zone Management Plans.

### **6.2.3. Enforcement of Coastal Regulation Zone (CRZ) Notification**

CRZ regulations are implemented under the CRZ Notification, 2011 of the MOEF&CC,GoI. These regulations are implemented with a view to conserve and protect coastal stretches, its unique environment and its marine area to promote development through sustainable manner based

on scientific principles. These regulations also aim to provide livelihood security to fisher communities and other local communities living in coastal areas. Tamil Nadu being a coastal State is implementing these regulations through its coastal zone management bodies at the State and District levels.

#### **6.2.4. Coastal Zone Management Authorities**

To regulate CRZ activities and to check violations in CRZ areas, the MoEF&CC, GoI has constituted a State Coastal Zone Management Authority (SCZMA) at the State level with the Principal Secretary, Environment, Climate Change and Forests Department, Government of Tamil Nadu as the Chairperson and the Director of Environment as its Member Secretary.

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 Coastal Regulation Zone.

#### **6.2.5. Integrated Coastal Zone Management Plan (ICZMP) Phase-II**

The Ministry of Environment, Forest & Climate Change (MoEF&CC), GoI through “Enhancing Coastal and Ocean Resource Efficiency” (ENCORE) programme, aims to strengthen integrated coastal zone management in all coastal States and Union Territories of India by strengthening coastal resources efficiency and resilience with funding from World Bank.

To execute the projects under the ICZMP, Phase II, a State Project Monitoring Unit (SPMU) has been created at the Department of Environment headed by the Project Director.

### **6.2.6. Blue Flag Beach Programme for Tamil Nadu**

To plan sustainable tourism and healthy coastal management, MoEF&CC has conceived an integrated coastal management scheme viz. BEAMS (also referred to as Beach Management Services) to reduce existing pollutants on beaches and to aspire & achieve high International Standards in India.

The Blue Flag Certification for beaches and marines is run by the international, non-governmental, non-profit Foundation for Environmental Education (FEE). FEE's Blue Flag criteria includes standards for quality, safety, environmental education and information, the provision of services and general environmental management criteria. Blue Flag has become a highly respected and recognized eco-label working to bring together the tourism and environmental sectors at local, regional and national levels.

The Blue Flag Beach must comply with 33 Blue Flag Criteria in order to be awarded Blue Flag accreditation including constitution of Beach Management Committee, display on Information about beach and bathing water quality, conducting environmental education activities, cleaning of beach, managing of sensitive areas, public safety control measures, emergency plans to cope with pollution risks, provision of toilets/rest rooms, monitoring of marine and freshwater sensitive habitats, supply of drinking water etc.

Kovalam Beach in Chengalpattu District has been chosen to develop, as per the principles of Blue Flag Beach Programme in Tamil Nadu, as a pilot project as it meets the water quality and safety criteria as per the Blue Flag Standards. The Beach Management Committee (BMC) has been constituted under the Chairmanship of the District Collector, Chengalpattu District to monitor and

supervise the Blue Flag Beach Programme at Kovalam Beach.

**During the Budget Speech for the year 2021-2022, this Government has announced the intent for obtaining the prestigious Blue Flag Certification for 10 Beaches in next 5 years.**

The Blue Flag Certification programme will be implemented at the following 10 beaches in various districts of Tamil Nadu.

1. Marina Beach, Chennai District
2. Manalmelkudi Beach, Pudukottai District
3. Kushi beach, Ramanathapuram District
4. Silver Beach, Cuddalore District
5. Kottaipattinam Beach, Pudukottai District
6. Neelankarai Beach, Chengalpattu District
7. Kameshwaram Beach, Nagapattinam District

8. Naravakkam, Marakkanam Beach, Villupuram District
9. Kayalpattinam Beach, Thoothukudi District
10. Neithal Nagar Beach, Nagapattinam District

#### **6.2.7. Assessment of micro-plastics in coastal areas, estuaries and lakes in Tamil Nadu**

To assess the micro-plastics pollution in the coastal areas, estuaries and lakes in Tamil Nadu, a study is being conducted by the Department of Environment assisted by Suganthi Devadasan Marine Research Institute (SDMRI). This study details the baseline data on the status of micro-plastics in selected coastal areas, estuaries and lakes of Tamil Nadu at a total cost of Rs 81.20 lakhs.



## **6.1. Eco-restoration of water bodies**

Eco-restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. Ecological restoration improves the biological diversity on degraded landscapes, enhances landscape connectivity, increases the availability of environmental goods and services and contributes to the improvement of human well-being.

Eco-restoration aims at the restoration and conservation of water bodies in achieving the desired water quality besides improving the biodiversity conservation and preserving the ecosystem through activities like deweeding, de-silting and deepening, strengthening bund, afforestation, forming Island with trees and shrubs for birds resting, construction of retaining walls etc.

The Department of Environment is undertaking various lake/tank eco-restoration programmes

being implemented through various line Departments like Water Resources, Municipal Administration, Rural Development/ Forest/ Local Body/ Hindu Religious & Charitable Endowments etc.

The Eco-restoration activities are being carried out in Chitlapakkam lake at a total cost of Rs.25.00 crore. Strengthening of tank bund, desilting & deepening of tank bed, removal of garbage & legacy waste, formation of island, construction of flood regulator and fore shore compound wall are some of the activities being carried out under this programme.

The Eco-restoration activities in Adambakkam, Vengaivasal & Perumbakkam water bodies are funded under Environment Protection and Renewable Energy Development Fund (EPRED) at a cost of Rs.12.00 crores and is being implemented through Water Resources Department. Strengthening of the bund, creating foot path,

construction of compound wall, bird nesting island, fixing solar lights etc., are some of the activities being carried out under this programme.

### **6.3.1. Environment Management Agency of Tamil Nadu (EMAT):**

In order to execute and monitor the river cleaning programmes and lake conservation programmes funded by the Ministry of Environment, Forests and Climate Change, (MoEF&CC), Govt. of India, Environment Management Agency of Tamil Nadu (EMAT) was created in the year 2002.

Environmental awareness programmes in schools, coastal zone conservation programmes, eco restoration activities are being conducted in coordination with TWAD Board, Municipalities, Corporations, NGOs and NGC Co-ordinators.

Eco-restoration of water bodies under EMAT has been funded by EPRED Fund, SEIAA Fund, TNPCB Fund, Government Grant etc., and implemented

through the line Departments. As EMAT is an Autonomous agency, it facilitates more effective networking of the Government and Non-governmental agencies.

## **6.4. Technology Intervention**

### **6.4.1. Geographic Information System (GIS)**

The Department of Environment established a GIS Cell as a part of Emergency Tsunami Reconstruction Project (ETRP) funded by the World Bank. GIS Cell monitors 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 pillars 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

assisting the Green Squad in the field for checking violations, mapping and furnishing reports.

## **6.5. Creation of Environment awareness and capacity building**

Since environment is a broad-ranging, multi-disciplinary subject, a comprehensive information system on environment is necessary to involve effective participation of concerned institutions/ organizations in the State that are actively engaged in work relating to different subject areas of environment.

### **6.5.1. Environmental Information System (ENVIS)**

To integrate country-wide efforts in environmental information collection, collation, storage, retrieval and dissemination to all concerned, the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC, GoI) has established a Central Scheme known as Environment Information System (ENVIS) in 1982. In Tamil Nadu the ENVIS Centre sponsored

by the MoEF&CC,GoI is functioning under the Department of Environment from October 2002.

ENVIS 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.tnenvis.nic.in](http://www.tnenvis.nic.in). Preparation of State of Environment Report (SoER), creation of web based database, publication of newsletters, preparation of awareness brochures and conducting the Environmental awareness programmes.

The mandate of ENVIS scheme is to conduct the Green Skill Development Programme (GSDP) certificate course and Grid Based Decision Support System (GRIDSS) maps. On a pilot scale, ENVIS HUB carried out GRIDSS in Thiruvallur,

Chennai and Namakkal districts and prepared fifteen sectoral GRID based maps.

### **6.5.2. National Green Corps (NGC)- Eco clubs**

**During the year 1998, Tamil Nadu Government started the Eco clubs - first of its kind in India. Based on the success of functioning of the Eco clubs in Tamil Nadu, the MoEF&CC, GoI launched NGC Eco clubs in India in the year 2002.**

Around 4.00 lakhs students from the 8000 NGC Eco clubs participate in creating environment awareness implemented by the Department of Environment all over the State. Each Educational District has a Teacher Coordinator to oversee the NGC activities in the concerned educational District. This programme imparts environment awareness to school students through on-campus and community activities like awareness

programmes, tree planting, celebrating Green days, eco competitions, eco camps etc.,

### **6.5.3. Environment Awards**

Every year, Environment Awards in various categories are given to the selected NGOs, institutions, researchers and individuals for their best efforts / contributions in Environment protection, management and awareness. The Awards are distributed during the World Environment Day every year.

### **6.6. Safeguarding the Environment**

It is beyond doubt that the rapid increase in industrial development urbanization and resource exploitation can cause serious adverse impact on environment. To prevent indiscriminate exploitation of natural resources, to promote integration of environmental concerns in developmental projects, in S.O.1533 dated 14<sup>th</sup> September 2006, the Ministry of Environment and



Forests (MoEF), GoI has notified EIA Notification 2006 under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986. EIA imposes certain restrictions and prohibitions on new projects or activities, on the expansion or modernization of existing projects and activities based on their potential environmental impact.

#### **6.6.1. State Environment Impact Assessment Authority (SEIAA) – Tamil Nadu**

Under the EIA Notification, it is mandatory to obtain prior Environmental Clearance for certain new projects, expansion or modernization of existing projects based on their potential environmental impact. Projects falling under Category 'A' in the Schedule of the Notification requires Environmental Clearance from the Ministry of Environment, Forest & Climate Change (MoEF&CC), GoI and for matters falling under Category 'B', depending upon the thresh holds 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 appraises projects and forwards its recommendations to the SEIAA for taking a decision on granting Environmental Clearance, by following the statutory provisions stipulated under EIA Notification 2006. The present SEIAA was constituted vide MoEF&CC, GoI notification dated 05/11/2018 comprising of a three members SEIAA and 12 Members SEAC for Tamil Nadu for a term of three years.

## **7.0. Transparency Initiatives**

Transparency measures are being followed in order to enhance efficiency, ease, transparency

and accountability in the process of Environmental Clearances. The Government of Tamil Nadu is using the single window portal "PARIVESH" enabled by MoEF&CC, GoI, to view and track the status of applications for the ease of doing business.

**TAMIL NADU POLLUTION  
CONTROL BOARD**

## **1.0. Introduction**

Preservation, protection and improvement of the environment, for present and future generations is the solemn duty of every citizen. Considering the above, the Government of Tamil Nadu established Tamil Nadu Prevention and Control of Water Pollution Board, vide G.O.No.340, Health and Family Welfare Department, dated 19.02.1982, under Section 4 (1) of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6). The notification was issued in the Tamil Nadu Government Gazette on 27<sup>th</sup> February 1982 and on the same day the Board came into existence. Subsequently after framing of the Tamil Nadu Water (Prevention and Control of Pollution) Rules, 1983, the Board was renamed as Tamil Nadu Pollution Control Board (TNPCB).

The TNPCB functions under the Environment, Climate Change and Forest Department [Renamed vide G.O.Ms No.55 (Personnel and Administrative

Reforms Department) dated 07.06.2021]. It is the statutory organization responsible for abatement and control of environmental pollution in the State by enforcing the Central Acts. As per the Section 4 of the Water (P&CP) Act, 1974, the Board comprises of the Chairman, the Member Secretary, five officials to represent the State Government, five persons to represent the local authorities, three non-officials to represent the interests of agriculture, fishery or industry or trade and two persons to represent the companies or corporations owned by the State Government.

## **2.0. The Legal Framework**

The 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, besides the following Rules and Notifications made there under.

- The Tamil Nadu Water (Prevention and Control of Pollution) Rules, 1983
- The Tamil Nadu 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
- Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
- 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

### **3.0. Organization set up**

For effective and efficient functioning of the organization, the Board has three-tier system consisting of (i) Head Office in Chennai (ii) Seven Zonal Offices and (iii) Thirty eight District Offices.

The Head Office is located at Chennai under the Chairman. The Zonal offices are headed by the Joint Chief Environmental Engineer (Monitoring) and District offices are headed by the District Environmental Engineer. Apart from this, there are two flying squads headed by the Environmental Engineer functioning at Erode and Tiruppur. The TNPCB has also established sixteen Laboratories (Eight Advanced Environmental Laboratories and Eight District Environmental Laboratories) for efficient effluent sampling and



emission survey of the industries, and the environmental quality survey in the State.

#### **4.0 Functions**

Important functions of the TNPCB, as defined under Section 17 of the Water (P&CP) Act, 1974 and under Section 17 of the Air (P&CP) Act, 1981 are as below:

- To plan a comprehensive programme for the prevention, control and abatement of pollution of streams and wells besides 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 collaborate with the Central Pollution Control Board (CPCB) in organizing the training of personnel engaged or to be engaged in programmes 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 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

entrusted to it by the CPCB or the State Government.

### **5.0. Consent Mechanism for Industries in Tamil Nadu**

The Consent to Establish and the Consent to Operate are being given by TNPCB in order to monitor industries in respect of air and water pollution. Consents are issued to industries in two stages. In the first stage, the '**Consent to Establish**' (**CTE**) is issued after duly assessing among others the siting criteria of one km distance from river margin as per the G.O.(Ms) No.213, Environment and Forests Department, Dated 30.3.1989 and five km as per the G.O.(Ms). No.127, Environment and Forests Department, dated 08.05.1998 with the prime objective of protecting precious water bodies. During the second stage, the '**Consent to Operate**' (**CTO**) is issued to operate industrial units after ensuring the unit's compliance of conditions stipulated in the Consent to Establish.

For efficient and effective implementation of the Acts and Rules and for efficient monitoring, the TNPCB has constituted various committees at Head Office, Zonal and District office levels. These committees conduct meetings at regular intervals at their level and decide on the issue of consent, renewal of consent and authorization for waste management etc.

### **5.1. Transparency in Consent Management through the online portal**

Consent to Establish (CTE) and Consent to Operate (CTO) for Industries are issued by the Board based on the proposals submitted by proponents. As a part of e-governance initiative of the Government of Tamil Nadu and with a view to provide a healthy and proactive interface between the regulatory authority and industries, TNPCB has introduced the facility of **“Online Consent**

## **Management and Monitoring System” (OCMMS) from 19.01.2015 onwards.**

This system brings transparency and promptness in consent management, facilitating the industries for online submission of applications for Consent to Establish / Consent to Operate / Renewal of Consent, uploading of documents, online payment of consent fees, online submission of clarifications, besides knowing the status of applications. TNPCB operates the 'Care Centres' in the Head Office and all other District offices to help project proponents in filing up of applications through OCMMS.

In view of the outbreak of Corona and as per the directions of Govt. of Tamil Nadu, the TNPCB has extended the validity of CTE/CTO for all the units who have valid CTE/CTO upto March, 2021 for a further period of 8 months upto November 2021.

## **6.0. Categorisation of Industries in TamilNadu**

To facilitate the consent mechanism and effective monitoring the CPCB has categorized the industries as Red, Orange, Green and White based on the **Pollution Index Score**. It has directed all State Pollution Control Boards (SPCBs) to adopt the same for grant of consent, inventorisation and other associated activities. Following the above categorization, the Board has classified industries into a matrix of different categories by combining the pollution potential of an industry and the value of its Gross Fixed Assets (GFA) for the purpose of monitoring. Thus, industries are grouped as Red, Orange, Green and White and as Large, Medium and Small. As per the CPCB direction, there shall be no necessity of obtaining consent for White category industries and only an intimation to TNPCB shall suffice.

| Category based on GFA | GFA (Rs in crore) | Category based on polluting potential |                  |                |               |
|-----------------------|-------------------|---------------------------------------|------------------|----------------|---------------|
|                       |                   | Red                                   | Orange           | Green          | White         |
| Large                 | > 10              | Highly Polluting                      | Medium Polluting | Less Polluting | Non Polluting |
| Medium                | 5 - 10            |                                       |                  |                |               |
| Small                 | < 5               |                                       |                  |                |               |

In addition, certain highly polluting industries (177 Nos.) have been brought under 17 category industrial list for intensive monitoring purpose.

Number of industries under the consent mechanism of the Board are as given below.

| Size / Category | Red          | Orange       | Green        | Total        |
|-----------------|--------------|--------------|--------------|--------------|
| Large           | 1875         | 2648         | 1014         | 5537         |
| Medium          | 260          | 919          | 534          | 1713         |
| Small           | 10018        | 22776        | 9480         | 42274        |
| <b>Total</b>    | <b>12153</b> | <b>26343</b> | <b>11028</b> | <b>49524</b> |

## **7.0. Care Air Centre and Water Quality Watch Centre**

The **“Care Air Centre”** is established at the Head Office in Chennai. The purpose of this Centre is to monitor industrial stack emissions and the ambient air quality of surrounding areas on real time basis (24x7). Major air polluting industries such as Cement, Oil Refinery, Petrochemicals, Thermal Power Plants, Fertilizers, Iron & Steel industries etc., are connected to the care air centre. In case standards are exceeded, SMS and e-mail messages are sent immediately to the industry and the concerned District Environmental Engineer to rectify defects. Besides, this system ensures self monitoring by industries. So far 405 units are connected for stack monitoring and 154 units for ambient air quality monitoring to this centre.

Following the success of this Scheme, the Board has expanded its network incorporating the **“Water Quality Watch Centre”** during 2015.



Major water polluting industries such as Tanneries, Distilleries, Sugar factories, Pharmaceuticals, Pesticides, Textile Processing and Common Effluent Treatment plants (CETPs) etc., are connected to this centre. The quality of treated effluents is monitored on real-time basis. 370 units are connected to this centre and real-time monitoring data are displayed in the Board's website.

### **8.0. Flying Squad**

In order to have enhanced vigil and monitoring of industries in vulnerable Textile Industrial belts and to protect water bodies from illegal discharges, the Board has established two flying squads at Erode and at Tiruppur. In case of any unauthorized unit found to be operating and discharging into water bodies, the Flying Squad reports to the District Co-ordination Committee (DCC) functioning under the head of the District Collector. The District Co-ordination Committee

(DCC) will issue orders for sealing of the unit, disconnection of power supply and filing of criminal case against the unit as well as the land owner. The Flying Squad also patrols and identifies unauthorized movement of hazardous and bio-medical waste etc.,

### **9.0. COMMON EFFLUENT TREATMENT PLANTS (CETPs)**

Taking into consideration, the key role played by Micro, Small and Medium Enterprises (MSME) units and the constraints in complying with pollution control norms individually by these units, the MoEF&CC, GoI initiated an innovative technical and financial support scheme to ensure their growth in an environmentally compatible manner. This scheme promotes common facilities for treatment of effluents from MSME units located in clusters through financial assistance. The TNPCB plays a supportive role towards the establishment of Common Effluent Treatment

Plants (CETPs) for clusters of small-scale industries in various parts of the State. The Board assists in the technical scrutiny of proposals for CETPs. In Tamil Nadu, CETPs schemes were formulated in the following sectors:

| <b>S. No.</b> | <b>Industrial Sector</b>         | <b>No. of CETP Schemes</b> |
|---------------|----------------------------------|----------------------------|
| 1.            | Tanneries                        | 13                         |
| 2.            | Textile Bleaching & Dyeing Units | 19                         |
| 3.            | Electroplating Units             | 2                          |
| 4.            | Hotels & Lodges                  | 1                          |
| 5.            | Common Marine Discharge Scheme   | 1                          |
| 6.            | Pharmaceutical Industries        | 1                          |
|               | <b>Total</b>                     | <b>37</b>                  |

Apart from the 19 CETPs for textile bleaching and dyeing units, there are 10 CETPs to be located at Erode and Namakkal Districts funded under Integrated Processing Development Scheme (IPDS), by the Ministry of Textiles (MoT), Government of India.

## **10.0. Waste Management**

### **10.1. Solid Waste Management**

Solid waste consists of biodegradable and non-biodegradable waste generated from domestic, commercial and industrial activities. The Solid Waste Management Rules prescribe responsibilities of local bodies for proper collection, treatment and disposal of municipal solid wastes. In Tamil Nadu, there are 15 Corporations, 121 Municipalities and 528 Town Panchayats. Authorization has been issued to 219 Urban Local Bodies (ULBs) including Corporations, Municipalities and Town Panchayats which are generating solid wastes for more than 5 tons/day.

Solid Waste Management Rules mandate local bodies to carryout Bio-mining of old dumpsites and recover. In this regard, the Board has issued directions under section 5 of the Environment (Protection) Act, 1986 to Urban Local bodies to comply with the said Rules. Accordingly, the Bio-

mining of legacy waste has been initiated by local bodies in 152 dumpsites in the State, of which 23 sites have been completed and in the remaining 129 sites work is in progress. The Municipal Administration & Water Supply Department has reclaimed 23 sites of total land area 404832 sq.mts worth of Rs.19768.67 Lakhs. The Board continues to monitor the environmental qualities in and around the dumpsite periodically.

As per the orders of the Hon'ble National Green Tribunal in O.A. No. 606 of 2018, the Board issues directions under Section 5 of the Environment (Protection) Act, 1986 to Municipal Corporations, Municipalities and Town Panchayats which are not complying with the Rules.

## **10.2. Plastic Waste Management**

Rapid increase in urbanization, population and industrial growth has lead to increase in plastic waste generation. As per the latest Annual Report, the estimated plastic waste generated

from 15 Corporations, 121 Municipalities and 528 Town Panchayats of Tamil Nadu 1136 tons/day plastic waste collected is segregated by the respective urban bodies. The recyclable plastic waste is sold to recyclers and non-recyclable plastic waste is sent for co-incineration in cement plants.

The Board has issued registration to 27 compostable plastic manufacturing units and 230 plastic waste recycling units as per the Plastic Waste Management Rules.

#### **10.2.1. Ban on one time Use and Throwing Plastics**

The Government vide G.O.(Ms) No.84, Environment and Forests (EC.2) Department, dated 25.06.2018 have issued orders to ban fourteen types of 'use and throwaway plastic items irrespective of thickness. The ban is in effect from 01.01.2019.

The Board in co-ordination with line departments took various action for effective implementation of the ban on plastics, which includes awareness programmes through regional conferences, district environmental committee meetings, rallies at district headquarters, messages through social media, display board in national highway toll gates etc.

In order to intensify the plastic ban and in compliance with the orders of the Hon'ble High Court of Madras, the Government vide G.O. (Ms). No. 37, Environment and Forests (EC.2) Department, dated 05.06.2020 has issued orders banning the use of plastic in primary packaging too. As part of action on violators, the Board issued orders for closure of 115 units which manufactured banned plastic items.

Though the Government of Tamil Nadu had brought a complete ban on manufacturing storage, supply, transport, sale and distribution of

14 types of "Use and throwaway plastics" from 01.01.2019. Still the ban has not been effectively implemented and a lot needs to be done to make the "plastic ban" a success.

TNPCB will launch an exclusive campaign a ' people's movement ' in each District to invite stakeholders from various sectors like Traders Associations, Social Clubs, Merchants Association, citizen bodies and leaders from local bodies. This will be followed up by strict enforcement with the support and guidance of District Collectors.

The Ministry of Environment & Forests, Climate Change, Govt. of India vide notification dated 12.08.2021 has issued Plastic Waste Management (Amendment) Rules, 2021 in which certain Single Use Plastic items such as plastic/PVC banners less than 100 microns, cutlery items, ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration, plates, cups, glasses,



etc., are prohibited from 01.07.2022. Also, plastic carry bags less than 75 microns and non-woven plastic carry bags less than 60 Gram per Square Metre (GSM) shall be prohibited from 30.09.2021 and plastic carry bags less than 120 microns shall be prohibited from 31.12.2022.

### **10.3. Construction and Demolition Waste Management**

Construction and Demolition (C&D) waste is generated whenever any construction/demolition activity takes place, such as, building roads, bridges, fly overs, subways, remodeling etc., It consists mostly of inert and non-biodegradable material such as concrete, plaster, metal, wood, plastics etc. which are having the recycling value. The Construction and Demolition Waste Management Rules prescribes that the local bodies shall ensure proper management of construction and demolition waste. The Board has issued directions to all local bodies and line departments to identify sites for establishment of

facilities for collection and processing of C&D wastes. Large Corporations such as Chennai, Madurai, Coimbatore, Tiruchirapalli and Tiruppur have proposed to set up such processing facilities. In Greater Chennai Corporation, two facilities of 400 TPD capacity each are in operation, one at Kodungaiyur and in Perungudi dump site. The Greater Chennai Corporation has established collection centres at 15 zones for receiving Construction and Demolition Waste.

#### **10.4. E-Waste Management**

The producer of the electrical and electronic equipments shall be responsible for collection and channelization of e-wastes generated from the 'end-of-life' of their products under Extended Producers Responsibility (EPR) as per the E-Waste Management Rules, 2016. The CPCB issues EPR authorization to the producer and the TNPCB monitors the compliance of the provisions of the E-Waste Management Rules, 2016. The TNPCB

grants authorization to the manufacturers, dismantlers, recyclers and refurbishers and conducts random inspections. To comply with the E-Waste Management Rules, the work on the e-waste Inventorisation in the State of Tamil Nadu has been granted to the National Productivity Council, Chennai.

### **10.5. Biomedical Waste Management**

Bio-medical waste is the waste generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing in biological labs. The Bio-Medical Waste Management Rules prescribes the responsibility of the waste generators and the operators of the Common Bio-Medical Waste Treatment and Disposal facilities (CBMWTFs) for safe handling and disposal of the bio-medical wastes. In Tamil Nadu, 10 CBMWTFs are in operation. The TNPCB issues authorization to the health care facilities

(HCF) and the CBMWTFs through online and monitors the compliances of the various provisions of the Rules. The Government has constituted the State Level Advisory Committee to oversee the implementation of the Rules.

In the State of Tamil Nadu, so far 25910 Private and Government hospitals, including the bedded and non bedded clinics, veterinary institutions, pathological labs, blood banks and research institutions have been issued with authorizations under BMWM Rules, 2016. All these units have executed agreements with the adjoining CBMWTFs for the collection, transport, treatment and scientific disposal of the biomedical wastes.

#### **10.5.1. COVID-19 Bio Medical Waste Management**

The COVID – 19 Bio Medical Waste generated from all the Health care facilities, Testing Center, Labs & Urban Local Bodies till date are collected, treated scientifically and disposed through 10

CBMWTFs located in Tamil Nadu as per the guidelines issued by the CPCB for COVID-19 waste management. Based on the CPCB revised guidelines for COVID waste management, the TNPCB has issued instructions to all the CBMWTFs to operate for extra hours to the installed capacity so as to treat their increased quantity of COVID19 BMW.

Further, the TNPCB has issued permission to the TSDF, Gummidipoondi to utilize the existing HW incinerator to incinerate the COVID-19 bio medical waste as per the CPCB guidelines.

The details of daily collection and disposal of COVID-19 Bio Medical Waste is being uploaded in the TNPCB website. Average daily generation of COVID-19 waste and non-COVID Bio Medical Waste during the period April 2020 to July 2021 is 14 tonnes and 35 tonnes respectively.

## **10.6. Hazardous Waste Management**

Hazardous waste means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment. The Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016 prescribes that the hazardous waste generators shall follow the steps namely prevention, minimization, reuse, recycling, recovery, utilization including co-processing and safe disposal of the hazardous wastes. The TNPCB grants authorization for handling the hazardous wastes.

In the State of Tamil Nadu, there are 3,961 units identified as hazardous wastes generating units and have obtained authorization from TNPCB through online. Based on the latest Annual Report 9.62 lakh tons of hazardous wastes was generated, out of which 0.78 lakh tons are

landfillable (Spent Carbon, Activated Carbon, Dust from APC measures), 1.2 lakh tons are recyclable (Used Oil, Waste Oil, e-waste), 0.24 lakh tons are incinerable (Waste Residue, Sludge from Wet Scrubber, Spent Carbon) and 7.4 lakhs tons of wastes are utilizable (Spent Solvent, Iron & Steel, ETP sludge). Out of 7.4 lakh tons of utilizable waste 1.5 lakh tons has been utilized in Cement industries for co-processing.

The Board is taking effective steps in handling and management of hazardous wastes, its treatment and disposal in an environmental friendly manner. The two common hazardous waste "Treatment, Storage and Disposal Facilities" (TSDF) established at Gummidipoondi and Virudhunagar are in operation. Further, the Board has taken efforts to utilize the hazardous wastes generated from CETPs of the textile processing units and tanneries as raw material for co-processing in cement factories. There are 123 units issued with

authorization for handling and treatment of utilizable waste and 86 units are issued with authorization for handling and treatment of recyclable waste.

## **11.0. Environmental Quality Monitoring**

Environmental Quality Monitoring and data generation is essential for abatement of pollution and evolve policy for improvement of the environment. As per the mandate given in the Water and Air Acts, the TNPCB monitors the quality of air and water through various programmes out of which some of the programmes are partly funded by the CPCB.

### **11.1. Monitoring of Water Bodies**

#### **11.1.1. National Water Quality Monitoring Programme**

The Board is monitoring the water quality of inland water bodies under the National Water Quality Monitoring Programme (NWQMP) with partial funding support of the CPCB in four major



rivers (i.e) Cauvery, Tamirabarani, Palar and Vaigai and eight lakes located in Udthagamandalam, Kodaikanal, Yercaud, Veeranam, Porur, Poondi, Pulicat and Redhills. At present, the water quality is monitored on monthly basis at 58 stations in Tamil Nadu.

The TNPCB has started monitoring the ground water quality from January 2020 onwards in 18 stations covering Erode, Namakkal, Salem, Karur, Tirunelveli, Thoothukudi, Trichy, and Tiruvallur districts in order to monitor the ground water quality in the vulnerable areas for ground water pollution. The samples are collected monthly / half-yearly basis and data generated is analysed and are uploaded in the TNPCB web site.

#### **11.1.2. National Rivers Conservation Plan (NRCP)**

The CPCB has sanctioned additional 51 stations for monitoring of river water quality in the State under the National River Conservation Plan

(NRCP).The data generated is analysed and are uploaded in the TNPCB web site.

### **11.1.3. Chennai City Waterways Monitoring Programme**

Chennai city comprises of four major waterways (i.e) Adyar River, Cooum River, Buckingham Canal, and Otteri Nallah. The TNPCB monitors the water quality of these water bodies at 30 locations on monthly basis.

### **11.1.4. Real Time Water Quality Monitoring System**

In order to monitor the water quality of water bodies in the Textile Industrial belts of Tiruppur, Erode, Namakkal districts on real-time basis, the TNPCB has installed three online continuous water quality monitors in River Cauvery, Noyyal, Bhavani, and Kalingarayan canal and also in river Tamirabarani in Tirunelveli district. Parameters such as pH, Total dissolved solids (TDS) and Dissolved oxygen (DO) levels are monitored. The monitors are connected to the Water Quality

Watch Centre at the Head Office and the data is displayed regularly in the TNPCB website.

#### **11.1.5. Polluted River Stretches**

Based on the **National Water Quality Monitoring Programme (NWQMP)** monitoring data, the CPCB has declared 302 river stretches in the country as polluted river stretches, out of which, six river stretches fall in Tamil Nadu.

In all these river courses, the main cause of pollution is due to discharge of untreated domestic sewage / sullage and dumping of municipal solid wastes from the urban local bodies. As per the guidelines issued by the CPCB, action plan for restoration of above river stretches was prepared and approved by the CPCB. The action plan includes construction of Underground Drainage Sewerage System (UGDSS), Sewage Treatment Plants (STPs), Solid Waste Management facilities, CETPs for industrial effluent treatment and eviction of encroachments.

The Action plan is being implemented through the respective line departments.

**During the Budget Speech for the year 2021-2022, this Government has announced that TNPCB shall establish permanent water quality monitoring stations** along the major rivers up and down stream of major cities and industrial clusters, in phased manner over the next three years. All sewage treatment plants will be monitored online on a real time basis to ensure that they achieve the desired quality parameters and do not pollute water bodies.

## **11.2. Monitoring of Ambient Air Quality**

### **11.2.1. National Air Quality Monitoring Programme**

Under the CPCB funded National Air Quality Monitoring Programme (NAMP), the TNPCB monitors ambient air quality in major cities and industrial clusters, at 28 stations in the State.

These stations are located at Chennai (8), Coimbatore (3), Madurai (3), Salem (1), Tiruchirapalli (5), Thoothukudi (3), Mettur (2) and Cuddalore (3). Parameters like Particulate matter  $PM_{10}$  and  $PM_{2.5}$ , Sulphur- di - Oxide ( $SO_2$ ) and Nitrogen-di-Oxides ( $NO_2$ ) are monitored with a frequency of twice a week to have 104 observations in a year as per the CPCB protocol. Air Quality Index (AQI) are arrived and uploaded in the TNPCB website regularly.

In order to cover all the districts under the NAMP, the Board is in the process of establishing additional 24 stations (i.e) three stations each in eight districts viz. Dharmapuri, Kanyakumari, Perambalur, Sivagangai, Thiruvarur, Theni, Villupuram and Thiruvannamalai. These will come into operation during 2021-22.

### **11.2.2. Continuous Ambient Air Quality Monitoring Stations**

Urbanization and industrialization have a direct impact on air quality. Therefore to strengthen the AAQ monitoring network in the State and to arrive AQI on real-time basis, the TNPCB initially installed 34 Continuous Ambient Air Quality Monitoring Stations (CAAQMS). The core parameters including PM<sub>10</sub>, PM<sub>2.5</sub>, Sulphur-di-Oxide, Nitrogen-di-Oxide, Ammonia, Ozone, Carbon monoxide, Benzene, Toluene and Xylene are monitored.

The data and the AQI are displayed in the display board installed in respective station besides the Board's website. Apart from this, the Board is also operating one mobile CAAQMS to monitor the air quality at different places in cities during the festival season like Deepavali, Bhogi and also to carry out the survey based on public complaints, court directions etc. The Board has proposed to

procure one more mobile unit during 2021-2022.

### **11.2.3. Non-Attainment Cities**

Based on the NAMP data, the CPCB have identified 124 cities in the country as non-attainment cities, where the PM<sub>10</sub> level exceeded the annual average standard. The reasons for high particulate matter is due to movement of vehicles, re-suspension of road dust, burning of solid waste, use of fuels in domestic and commercial establishments, industrial emissions etc. In Tamil Nadu, Thoothukudi, Trichy and Madurai are listed as non-attainment cities. Action plan to improve the air quality in Thoothukudi is approved by the CPCB and is under implementation through line departments. The action plan for Trichy and Madurai are submitted to the CPCB. Under **National Clean Air Programme (NCAP)**, the Government of India provides funding for

improvement of air quality in the non-attainment cities and in the million plus cities of the country.

**During the Budget Speech for the year 2021-2022, this Government has announced that TNPCB shall establish continuous ambient air quality monitoring stations in all District headquarters and in towns with the population of more than one lakh, India's first integrated environment monitoring studio will be established for forecasting air quality on a real time basis with an early warning system.**

### **11.3. National Ambient Noise Monitoring Network Programme**

Under the National Ambient Noise Monitoring Network Programme, CPCB has established Real Time Ambient Noise Monitoring Stations at ten locations in Chennai City covering silence zone, residential, commercial and industrial areas. The stations are at Egmore, T.Nagar, Perambur,



Guindy, Triplicane, Pallikaranai, Velachery, Washermanpet, Anna Nagar and Sowcarpet. The data is uploaded in CPCB website.

## **12.0. Enforcement Mechanism**

TNPCB enforces pollution control legislations effectively and ensures the compliance of environmental standards by industries. If any industry is found to violate and pollute the environment, the Board issues show cause notice followed by personal hearing so as to give a chance to rectify defects. If the unit still continues to violate and pollute, the Board issues orders for closure and stoppage of power supply as empowered under Section 33A of the Water (P&CP) Act, 1974 and under Section 31A of the Air (P&CP) Act, 1981. Only when industries rectify the defects and approach for revocation, the Board after necessary inspection and verification, issue order for revocation of closure and restoration of power supply. Aggrieved industries

can appeal to the Hon'ble Appellate Authority and the Hon'ble National Green Tribunal.

### **12.1. Appellate Authority**

Appellate Authority at Chennai was constituted and functioning from the year 2000 under the Chairmanship of a Hon'ble Justice with two technical members. The Authority examines appeals preferred by industries against the orders of the TNPCB, issued under Section 25/26 and 27 of the Water (P&CP) Act, 1974, as amended 1988 and orders issued under section 21 of Air (P&CP) Act, 1981 as amended in 1987.

### **12.2. National Green Tribunal**

The Southern Zone of the National Green Tribunal is functioning at Chennai from the year 2012. Any person aggrieved by the orders of the Appellate Authority and by the order passed by TNPCB / State Government, under Section 28, 29 and 33A of the Water (P&CP) Act, 1974 and under Section

5 of the Environmental (Protection) Act, 1986 can prefer an appeal before the NGT within 30 days of the order passed by the Board / State Government / Appellate Authority. The Board has developed a software module to track the legal cases.

### **13.0. Grievance Redressal System**

In order to redress the environmental pollution related public complaints, the Board has established a separate section in Head Office. The Board also has the facility for filing complaints through an online Grievance Petition Redressal Mechanism.

### **14.0. Right to Information Act**

The Right to Information Act, 2005 enables all citizens to use their fundamental rights to access information from public bodies. In pursuance to the directions of Government of Tamil Nadu, the TNPCB has designated Joint Chief Environmental

Engineer (JCEE) in head office, all the JCEEs (M) in the zonal offices, all DEEs in the district offices and head of laboratories as public information officers (PIOs) to provide information to public under the RTI Act, 2005. The Chief Environmental Engineer at Head office has been designated as the Appellate Authority.

### **15.0. Environmental Training Institute**

The Environmental Training Institute (ETI) of TNPCB provides training to the Board staff, industrial representatives, executives of Municipalities, Corporations, line departments and NGOs on pollution control and environmental protection. The Institute has so far trained 327 people in various programmes.

### **16.0. Environmental Awareness Programme**

To create awareness among public and to take positive action to protect the environment, the Board conducts various environmental awareness

programmes every year during important days and on festival days including bhogi, world environment day, vinayagar chaturthi, deepavali and tiruvannamalai-karthigai mahadeepam through rallies, environmental quiz competitions, planting tree saplings, campaign through auto rickshaws, distribution of pamphlets, displaying boards in public places, broadcasting in FM Radio and screening of short films through visual media etc. Besides, during deepavali and bhogi festival season, the Board conducts special air quality survey. The Board also monitors the water quality of the water bodies before and after the immersion of vinayagar idols.

### **17.0. Sustainable Development Goal**

The **Sustainable Development Goals (SDGs)** are an inter-governmental agreed set of targets relating to International development to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. India is a

signatory of the 2030 Agenda, committed to achieve SDGs. The Goals, Targets and Indicators related to TNPCB and the present status are as follows:

**Goal – 6** '*Clean Water and Sanitation*' Under this Goal will work to improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials. Efforts shall also be taken to substantially increase recycle and reuse. In this regard, percentage of industries complying with waste water treatment is set as one of the Indicators. TNPCB mandates highly polluting industries to achieve ZLD system for trade effluents with an aim to recycle treated waste water

**Goal – 9** '*Industries Innovation and Infrastructure*' to promote inclusive and

sustainable industrialization by 2030, the Goal mandates to significantly increase industries share of employment and gross domestic product in line with national circumstances and double its share in least developed countries. Towards this, the target is measured with an important indicator relating to measurement of ambient air quality parameters. TNPCB is continuously making efforts to achieve this indicator effectively.

**Goal-12**      *'Responsible Consumption and Production'* under this Goal, it is mandated to achieve significant reduction in the release of harmful chemicals and wastes by 2020. The target is measured by an indicator relating to environmental quality monitoring through monitoring stations.

At present, the Board monitors water quality of inland water bodies at 139 stations, ground water quality at 18 stations, and ambient air quality at 62 stations.

**Goal – 13** '*Climate Action*' the Goal is to improve education, raise awareness and human and build institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. The Board conducts training programme through the **Environmental Training Institute (ETI)** and awareness programme through the District Environmental Engineers on regular basis. Nearly 60 training programmes, 190 awareness programmes and 1689 people have been trained till date.



## **18.0. Ease of Business and Transparency Initiatives**

Granting of consent and authorization to industries and local bodies is one of the important functions of TNPCB. To make the consent/authorization management process more transparent and hassle free, TNPCB has introduced a web based online consent management and monitoring system with modules for issue of CTE, CTO and Renewal Consent order. **TNPCB has introduced five new online services. Authorization under Solid Waste Management Rules, 2016, Construction and Demolition Waste Management Rules, 2016, one time Authorization under the Hazardous Waste Management Rules, Lead Acid Battery Whole saler registration and Annual compliance Report under Batteries Rules, 2001.** This system allows the applicant to file application, provide clarification, payment of consent fee,

receiving of consent orders through online. The system also provides SMS alert at the important stages of process. The applicant can also view the real time status of the application and where and with whom the application is pending.

Similarly TNPCB has also provided an **Online Grievance Redressal System** for the public to make complaints online. People can also view the real time status of their complaint online.

## **Conclusion**

Department of Environment and Climate Change will develop a comprehensive strategy to chart a safer and more sustainable future for the state.

**Siva. V. Meyyanathan**  
**Minister for Environment - Climate Change**  
**and Youth Welfare and Sports Development**



**Hon'ble Chief Minister Thiru M.K. Stalin reviewed activities of the Environment, Climate Change and Forests Department with Hon'ble Ministers and Senior Officials**



**Hon'ble Chief Minister Thiru M.K. Stalin reviewed activities of the Environment, Climate Change and Forests Department with Hon'ble Ministers and Senior Officials**



**TNPCB's Contribution of Rs. 20 crores towards the  
Hon'ble Chief Minister's Public Relief Fund for COVID -19 Mitigation Measures**



**Hon'ble Minister for Environment - Climate Change and Youth Welfare and Sports Development planted 100 numbers of Tree Sapling at Govt.Hr.Sec. School, Nallipalayam, Namakkal Dist.**





**Hon'ble Minister for Environment - Climate Change and Youth Welfare and Sports Development visits SIGMA Municipal Solid Waste Management Facility at Erode Corporation**



**CETP - Textile Unit**





**Effluent Treatment Tanks**



**RO - Plant System**



**Tannery CETP**



**Segregation of Bio Medical Waste for COVID - 19**





**Bio Medical Waste Autoclaving Process**