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Municipal Administration and Water Supply (MA.IV) Department, Secretariat, Chennai – 600 009.

Letter No.18583/MA.IV/2018-44, Dated :30.01.2020

**From**  
Thiru Harmander Singh, I.A.S.,  
Additional Chief Secretary to Government,

**To**  
The Registrar,  
National Green Tribunal,  
Faridkot House, Copernicus Marg,  
New Delhi- 110001. (w.e)

The Member Secretary,  
Central Pollution Control Board,  
Parivesh Bhawan,  
East Arjun Nagar, Delhi -110032(w.e)

Sir,

**Sub:** National Green Tribunal - Solid Waste Management Rules, 2016 – Orders of National Green Tribunal in O.A.No.606 of 2017 dated: 12.09.2019 and 07.01.2020 –quarterly report for the month of January'2020 and report on the thematic areas - Submitted - reg

**Ref :** Orders of the National Green Tribunal, dated:20.08.2019, 16.01.2019, 23.04.2019, 12.09.2019 and 07.01.2020 in OA.No.606/2018.

I am to invite attention to the reference cited, the quarterly report to be filed by the Chief Secretary to Government on behalf of the State of Tamil Nadu as per the orders of the Hon'ble National Green Tribunal dated: 16.01.2019, including the report on the 14 thematic areas as per the National Green Tribunal order dated: 12.09.2019 and 07.01.2020 is enclosed herewith for filing before the Hon'ble National Green Tribunal.

Yours faithfully,

*Harmander Singh*

for Additional Chief Secretary to Government.

*248/24/07/2018*  
*12/2/2020*

*200/DA/5/2020*  
*31/1/2020*

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**STATUS REPORT ON THE COMPLIANCE BY THE STATE OF TAMILNADU WITH THE DIRECTIONS OF  
THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

**IN**

**ORIGINAL APPLICATION NO. 606 / 2018**

**&**

**CONNECTED MATTERS**

**Submitted by**

**Chief Secretary, State of Tamil Nadu**

**30<sup>th</sup> January 2020**

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## Introduction

Tamil Nadu is a fast growing and the most urbanised State in India. The link between economic development and urbanisation is well established. According to the 2011 Census, Tamil Nadu ranks third in the level of urbanisation (48.45%) in the country among the larger States. The urban population of Tamil Nadu is 34.95 million (Census of India, 2011) out of a total state population of 72.14 million and constitutes 48.45% of the population. While the percentage of urban population in the country increased from 10.85% to 31.16% during 1901-2011, Tamil Nadu registered a much higher percentage increase i.e., from 14.15% to 48.45% during the above period. Extended areas of Urban Agglomerations (UAs) in Tamil Nadu have also been witnessing rapid growth, with nearly 58% of the urban population living in the top 25 UAs.

In Tamil Nadu, Municipal Administration and Water Supply Department has the administrative control over Greater Chennai Corporation, Commissionerate of Municipal Administration and Directorate of Town Panchayat. The Commissioner of Greater Chennai Corporation administers the Greater Chennai Corporation with a population of 6867184. The Commissioner of Municipal Administration manages 14 Corporations (Madurai, Coimbatore, Tiruchirappalli, Salem, Tirunelveli, Thoothukudi, Erode, Tiruppur, Vellore, Dindigul Thanjavur, Hosur, Nagercoil and Avadi) and 121 Municipalities with a Population of 1,87,27,049. Similarly 528 Town Panchayat with a Population of 98,76,996 are managed by the Director of Town Panchayat.

### Administration Division and Urban population Details of State of Tamil Nadu

Total Population in Tamil Nadu (As per year 2018)	Urban Population			Total Urban Population	Percentage
	Corporations (15)	Municipalities (121) ULBs)	Town Panchayats (528 TPs)		
80885600	17270010	8324223	9876996	35471229	48.45%

(Source: Census of India & Population Projections for 2018)

(\*) Based on the orders of the Hon'ble National Green Tribunal, dated: 16.01.2019, the quarterly report to be filed by the Chief Secretary to Government, on behalf of the State of Tamil Nadu including the report on the 14 thematic areas, as per the order dated: 12.09.2019 and 7.1.2020 is submitted to Hon'ble National Green Tribunal.

**Compliance status of thematic areas as listed in the Hon'ble NGT order dated 12.09.2019 and 07.01.2020 in O.A.No.606 of 2018**

**Thematic Area: 1. Compliance of Solid Waste Management Rules, 2016 including Legacy Waste**

<b>SWM Rule 12</b>	Duties of District Magistrate or District Collector or Deputy Commissioner to review performance of local bodies
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
The District Collectors are conducting regular meetings and the copies of minutes of meeting and the action taken report with respect to Compliance of Solid Waste Management Rules 2016 are being submitted to the Commissionerate of Municipal Administration. The Chief Secretary to the Government of Tamil Nadu has also conducted a meeting through video conference on 15.10.2019 and 05.12.2019 to review the action taken by District Collectors with respect to Compliance of Solid Waste Management Rules 2016.	-	-	<b>Complied</b>

<b>SWM Rules 15(a), (e), (ze), (f), (zf), (y), (z) &amp; 16</b>	Notification of Solid Waste Management Policy and Strategy Building Bye law enforcement Frame Bye Laws for Rules, user fee for waste generators, Levy of fines etc. Authorization of Pollution Control Board Duties of State Pollution Control Board or Committee
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<b>Current Compliance Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<ul style="list-style-type: none"> <li>• State Policy on Solid Waste Management notified on 24.08.18.</li> <li>• Provision made in section 35 (17) of Tamil Nadu Combined Development &amp; Building Rules 2019.</li> <li>• All ULBs framed &amp; notified the Bye law with provisions for user fee &amp; spot fines</li> <li>• ULB wise Solid Waste Management policy and Action plan prepared for 219 ULBs. Gazette Notification has been done for all the ULBs.</li> <li>• TNPCB has issued authorization under SWM Rules 2016 to all 219 ULBs</li> </ul>	Achieved	Nil	Nil

<b>SWM Rules 15</b> <b>(c), (d), (h), (i),</b> <b>(t), (v), (zd)</b>	Inclusion of Organisation of Waste pickers and informal Facilitate SHG Formation, Provide ID Cards & Integrate in SWM Material Recovery Facilities to be established Domestic hazardous wastes to be collected and disposed safely Ensuring personal safety of waste handlers Self Help Group Activities
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<b>Current Compliance status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<ul style="list-style-type: none"> <li>• Waste pickers operating organizations have been integrated into the SWM system by engaging them through outsourcing agencies.</li> <li>• Day to day functioning of MCCs entrusted mostly with SHGs.</li> <li>• ID cards issued and biometric attendance maintained.</li> <li>• Dry waste is collected on a designated day of the week (every Wednesday) &amp; transported to Resource Recovery Centres (RRCs/MRFs )</li> <li>• Workers are educated to collect the waste in a segregated manner.</li> <li>• Waste generators are encouraged to deposit the domestic Hazardous waste directly at MRFs or RRCs</li> <li>• Domestic hazardous waste such as Napkins, Diapers and Paramedical wastes collected separately on a daily basis and are being incinerated in the MCCs.</li> <li>• Citizens are encouraged to hand over domestic hazardous waste such as Paint drums,</li> </ul>	Achieved	Nil	Complied

99.5

<p>Thermometers, expired medicines, Tube lights separately on a weekly basis. The waste is transported to the Domestic hazardous waste deposition centre/MRFs and periodically disposed to the facilitator authorized by TNPCB.</p> <ul style="list-style-type: none"> <li>• Safety equipments and uniform provided to sanitary workers.</li> <li>• Workers are encouraged to use protection equipments during their routine collection works and processing activities</li> </ul>			
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<p><b>SWM Rules 15</b>  <b>(b), (v), (r),</b>  <b>(m), (p), (q),</b>  <b>(u)</b></p>	<p>Door to Door Collection &amp; Segregation  Preference to Construct, Operate &amp; Maintain Solid Waste Processing Facilities  Setting up of Bio Methanation Plants  Onsite Composting Centre in Parks and gardens  Transportation of non-biodegradable waste  Material Recovery Facilities to be established</p>
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Current Status	Desirable Level	Gap	Proposal for attending gap
✓ Door to Door collection - 96 %	100 %	4 %	Through IEC activities, Door to Door collection & source segregation will be achieved by 30.06.2020
✓ Source Segregation - 83 %	100 %	17 %	

89.5

<p><b>Processing facilities for wet waste</b></p> <ul style="list-style-type: none"> <li>✓ Total wet waste generation is 6851 TPD (51%)</li> <li>✓ <b>Waste to Compost Processing facilities (Micro Compost Centres)</b></li> <li>✓ <b>1000 MCC sanctioned to process 5165 TPD of wet waste</b> in 15 Corporations and 121 Municipalities and 42 Town panchayats. So far, 739 MCCs with handling capacity of 2683 TPD have been established. In GCC, 743 Mulch Pits, 262 Sintex Tank, 56 Earthen Pit and 3394 units of Well ring with handling capacity of 637 TPD are functioning to process overall capacity of 3320 TPD (w1) of wet waste in 15 Corporation, 121 Municipalities and 42 Town Panchayat.</li> <li>✓ 876 OCCs are functioning in Corporations &amp; Municipalities with a handling capacity of 416 TPD (w2) as waste to compost processing facilities.</li> </ul> <p>106 <b>Biomethanation plants</b> are established to process 258 TPD of Wet Waste (w3.) 526 Windrows and 263 Vermi Composting plants are functioning with capacity of 1171 TPD (w4) <b>Processing percentage is <math>\{[w1 + w2 + w3 + w4] / (WW)\} \times 100 = 75\%</math></b></p>	<p><b>100 %</b></p>	<p><b>25 %</b></p>	<p>In GCC, Construction of 1 no of Bio- CNG plant of 50 TPD capacity and 3 nos of Bio-CNG plant of 100 TPD capacities is in progress and also construction of 2 nos of Windrow Composting Center capacities of 50 TPD each is in progress.</p> <p>The construction activities of processing facilities are being reviewed and a target date of 31.03.2020 has been fixed for its completion.</p>
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✓ From June 2016 to January 2020, 65095 MT of compost is generated in 664 ULBs are sold at marginal cost /given at free of cost to farmers/is used in the parks & gardens maintained by ULBs.

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<ul style="list-style-type: none"> <li>✓ <b>26,631 Tonnes of non-saleable, non-recyclable wastes</b> disposed up to 06.01.2020</li> <li>✓ 4,820 Tonnes of Non-saleable plastic waste are baled and kept in Resource Recovery Centres.</li> <li>✓ 3,33,201 MT of recyclable waste were sold and Rs. 77.18 Crore distributed to sanitary workers for the period from August 2017 to 06.01.2020</li> <li>✓ 28 ULBs having more than 1 lakh population have been sanctioned with 387 nos of Material Recovery Facilities, of which 358 Nos are completed and put in use. Remaining ULBs are established the RRCs in near by MCCs.</li> <li>✓ 26,631 Tonnes Non-recyclable wastes generated are sent to cement plants/ sugar mills/ power plants for usage as fuel.</li> <li>✓ 4,375 MT of non saleable and non recyclable plastic waste have been used for laying 3646 Kms of plastic roads in the last 4 years.</li> </ul>	<p>100% Processing</p>	<p>85 %</p>	<ul style="list-style-type: none"> <li>✓ 10 nos of 100 TPD, 4 Nos of 10 TPD, 1 no. of 50 TPD and 10 nos of 5 TPD Incineration plant are sanctioned to process Non recyclable combustible waste and the works are in the various stages.</li> <li>✓ 1 no of 10 TPD Incineration plant is functioning to process Non recyclable combustible waste.</li> <li>✓ Proposed to construct processing of combustible waste as a fuel in cement factory of 300 TPD – tender in process.</li> <li>✓ 10 nos of 100 kg, 2 nos of 20 TPD Pyrolysis plant are sanctioned to process non decomposable and non recyclable waste</li> <li>✓ Construction of 5 nos of Garden waste &amp; tender coconut shells processing plant at a total capacity of 400 TPD is in progress.</li> <li>✓ Further the Incineration Plants are proposed to be established in Corporations wherever feasible to process Non recyclable combustible waste to attain the gap.</li> </ul>
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<b>SWM Rules 15</b>	Scientific Land fill
<b>(w), (zh), (zi)</b>	Desired Objective of Zero Waste Concept

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p>✓ All the wet waste are processed and converted as Compost and Bio Gas. Hence there may not be end residue to take to land fill. So present 60 % of wet wastes are scientifically disposed without using land fill. Further 20 % of dry waste which is saleable and recyclables are disposed to the vendors periodically.</p> <p>✓ Marching towards <b>“Zero Residue Concept”</b>.</p>	100%	20 %	<p>✓ 10 nos of 100 TPD, 5 Nos of 10 TPD, 1 no. of 50 TPD and 10 nos of 5 TPD Incineration plant are sanctioned to process Non recyclable combustible waste and the works are in the various stages.</p> <p>✓ 1 no of 10 TPD Incineration plant is functioning to process Non recyclable combustible waste.</p> <p>✓ Proposed to construct processing of combustible waste as a fuel in cement factory of 300 TPD – tender in process.</p> <p>✓ 10 nos of 100 kg, 2 nos of 20 TPD Pyrolysis plant are sanctioned to process non decomposable and non recyclable waste</p> <p>✓ Construction of 5 nos of Garden waste &amp; tender coconut shells processing plant at a total capacity of 400 TPD is in progress.</p>

<b>SWM Rules 15 (zi), (zk)</b>	<b>Removal of Legacy waste</b> Bio Mining, Bio Remediation or Bio capping of legacy waste in dumpsite
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<ul style="list-style-type: none"> <li>✓ Reclamation of dump yard filled with legacy waste through bio mining process is proposed. The total legacy waste in the 218 ULBs is 224 lakh cu.m and in balance 446 ULBs there is no legacy waste dumped.</li> <li>✓ Bio remediation of old and abandoned dump sites have been taken up in 10 Corporations, 86 Municipalities and 44 Town Panchayats to remove the 120 Lakhs Cu.m of Legacy waste through bio mining process at a total estimated cost of Rs. 867.82 Crores. After completion of the biomining works, about <b>892</b> acres of land valuable to Rs.600 Crore will be reclaimed.</li> <li>✓ Bio Mining works has been completed in Kumbakonam, Pammal, Sembakkam, &amp; Poonammaalle Municipalities. Similarlily in Perunthurai, Madhukur and Marakanam Town Panchayats also cleared 3,47,068 Cu.m of legacy waste so far and 25 acres of land has been reclaimed. Works in 133 ULBs are in various stages.</li> <li>✓ Centre for Environmental Studies, Guindy Campus, Anna University, Chennai has been engaged as Third Party Inspection Agency for all 140 ULBs for technical guidance in Bio-mining works</li> </ul>	100%	(Completed 5%) Fund Sanctioned & under progress – 46%	<ul style="list-style-type: none"> <li>✓ 63 ULBs having &lt;40,000 cu.m of legacy waste will be completed before March 2020.</li> <li>✓ Bio mining works in remaining ULBs will be completed before 31.12.2021.</li> <li>✓ Regarding the remaining 78 ULBs, the estimated quantity of 104 lakhs cu.m of legacy waste is proposed to be removed in phased by mobilizing required fund from</li> </ul>

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			various sources. The time frame is fixed considering the limitation of availability of service providing operators for removal of legacy waste.
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<b>SWM Rules 15 (x)</b>	Budgetary Provision
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
✓ Adequate fund provision by SBM through State Government and GoI. <ul style="list-style-type: none"> <li>• GoTN &amp; GoI - Rs. 1151.67 Cr (2019-20)</li> </ul> ✓ Operation and Maintenance by the ULBs from General Fund	-	-	-

<b>SWM Rules 15 (za), (zb)</b>	<b>Submission of Annual Report by the local bodies</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<ul style="list-style-type: none"> <li>✓ Annual Report for the year 2018-19 as per Form IV submitted to TNPCB in the month of May 2019.</li> <li>✓ Will be followed in subsequent years also.</li> </ul>	-	-	<b>Submitted</b>

<b>SWM Rules 15(zc), 15(l), 15(g), 15(zg)</b>	<b>Information, Education, Communication Special Task Force</b>			
<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>	
<ul style="list-style-type: none"> <li>✓ Periodical and regular training programmes organized.</li> <li>✓ Capacity building programmes organized in 35 Locations to train 33,000 Sanitary Workers in the year 2018-19.</li> <li>✓ Thus far, 9200 sanitary officers/workers have undergone training programme and the remaining batch will be completed by March 2020.</li> <li>✓ Periodical RWA meetings are conducted to enlighten the waste generators.</li> <li>✓ 2846 Animators, 230 Supervisors &amp; 11 Coordinators are engaged exclusively for IEC under SBM and are working from October 2017 to till date.</li> <li>✓ Vide G.O (Ms) No.58, Municipal Administration and Water Supply (MAIV) Department. dated 20.4.2019 Government has issued order for the</li> </ul>	Nil	Nil	Complied	

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<p>formulation of Special Task Force in all the Districts for SWM - IEC activities.</p> <p>✓ Special Task Force have been constituted in all the Districts. District Collectors are conducting the Special Task Force meetings to review the SWM activities in ULBs and MoM are issued.</p>			
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<b>SWM Rules 20 (a), (b), (c), (d), (e), (f)</b>	<b>Solid Waste Management in hilly areas;</b> Avoiding Construction of Landfills on Hills Awareness on non-littering Awareness on Provisions of Bye-Law through Hoardings Levy of SWM Charge from Tourists Identification of land for SWM Processing facilities in hilly areas
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Current Status	Desirable Level	Gap	Proposal for attending gap
<ul style="list-style-type: none"> <li>✓ All the ULBs disposing waste with a concept of Zero Residue and the Landfills are not established so far.</li> <li>✓ Hoardings on awareness of non-littering are displayed in all the Hilly areas which are under ULBs jurisdiction.</li> <li>✓ Bye laws have been framed and notified with provisions for user fee &amp; spot fines from Tourists.</li> <li>✓ Decentralized Micro Composting Centre (MCC) established in hilly areas of Nilgiris, Dindigul and Theni Districts</li> <li>✓ Nilgiris District (5 ULBs) - 10 MCC with a handling capacity of 32 TPD and 14 Onsite Composting Centre (OCCs) with a handling capacity of 5 TPD and windrows composting to handle 10 TPD have been established.</li> </ul>	100%	87%	<p>Alternative methods to process wet waste in accelerated manner is being analysed to suit the hilly climate conditions.</p> <p>Meanwhile, currently hot air is passed into the wet waste through blower to minimize the moisture content and to accelerate the culture to convert as</p>

<p>✓ 11 TPs in Nilgiris District are handling their waste (44.33TPD) through windrow composting.</p> <p>✓ In Kodaikanal Municipality, 4 MCCs with a handling capacity of 8 TPD and 4 Onsite Composting Centre (OCCs) with a handling capacity of 2 TPD have been established.</p> <p>✓ 12 TPS of Dindigul, Theni and Tirunelveli districts process their waste (46.155 TPD) through Windrow composting.</p> <p>✓ Recyclables are sold to recyclers and Non-recyclables are sent to Ultra tech &amp; ACC cements.</p>			Bio manure.
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<p><b>SWM Rules</b> <b>16(1)(a),(5),(6)</b></p>	<p>Enforcement of Rules in the State through local bodies</p> <p>Directions to local bodies for safe handling and disposal of domestic hazardous wastes</p> <p>Regulate inter-State movement of waste</p>
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Current Status	Desirable Level	Gap	Proposal for attending gap
<ul style="list-style-type: none"> <li>DO letters dated 25.04.2016 &amp; 14.06.2016 and letters dated 04.10.2016, 26.11.2016 &amp; 19.01.2017 addressed to Commissionerate of Municipal Administration, Directorate of Town Panchayat, RDPR Dept to comply with the provisions of the Solid Waste Management Rules, 2016</li> </ul>	As indicated in SWM Rule 2016	Nil	Complied

<ul style="list-style-type: none"> <li>• Meeting convened on 11.01.2017 with the officials of Corporation of Chennai, Commissionerate of Municipal Administration &amp; Directorate of Town panchayat to comply with the provisions of the Solid Waste Management Rules, 2016</li> <li>• One day Sensitization Program on “Implementation of Solid Waste Management Rules, 2016” conducted by the TNPCB on 30th January 2017</li> </ul>			
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<b>SWM Rules</b>	Monitor environmental standards
<b>16(b),(4), 19(4)</b>	(Air Quality Monitoring, Water Quality Monitoring (ground water) as per Schedule II of SWM Rules, 2016)

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<ul style="list-style-type: none"> <li>• TNPCB conducted Ground Water Quality monitoring at the vicinity of solid waste dumpsites pertaining to 12 Corporations and at 97 Municipalities and 17 Town Panchayats.</li> <li>• TNPCB conducted Ambient Air Quality monitoring at the vicinity of solid waste dumpsites pertaining to 8 Corporations namely, Chennai, Coimbatore, Madurai, Trichy, Salem, Erode, Thoothukudi, Vellore, 3 Municipalities (Palani, Ooty, Kovilpatti) and 2 Town Panchayats.</li> </ul>	<p>To carry out Ground Water Quality Monitoring (ground water), Air Quality Monitoring for all Corporations, Municipalities and Town</p>	<p>Ground water quality monitoring to be carried out for remaining Corporations (3 nos.), Municipalities (22 nos.) and Town Panchayats (68 nos.)</p> <p>Ambient Air Quality</p>	<p>TNPCB will carry out Air Quality Monitoring and Water Quality Monitoring (ground water) of dumpsites for</p> <ul style="list-style-type: none"> <li>• All Corporations &amp; 25% Municipalities Municipalities (50%) and Town Panchayats (10%) - 31st Mar 2020</li> <li>• Municipalities (75%) and Town Panchayats (25%) – 30<sup>th</sup> June 2020</li> <li>• Municipalities (100%) and Town Panchayats (50%) – 30<sup>th</sup> Sep 2020</li> </ul>

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<ul style="list-style-type: none"> <li>Continuous Ambient Air Quality Monitoring stations installed at the vicinity of Kodungaiyur and Perungudi dumpsites.</li> </ul>	Panchayats which have obtained Authorisation	monitoring to be carried out for remaining Corporations (7 nos.) and Municipalities (116 nos.) and Town Panchayats (83 nos.)	<ul style="list-style-type: none"> <li>Town Panchayats (100%) - 31<sup>st</sup> Dec 2020</li> </ul>
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<b>SWM Rules</b> <b>16(c),(d),(e),(f),</b> <b>(g),(h),(2), 19(3) 24(3)</b>	Issue of Authorisation to local bodies generating solid waste greater than 5 tons/day Submission of Annual Report
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Current Status	Desirable Level	Gap	Proposal for attending gap
<ul style="list-style-type: none"> <li>In Tamil Nadu, 15 Corporations, 119 Municipalities and 85 Town Panchayats generate solid waste greater than 5 tons/day and require Authorisation.</li> <li>As of now, TNPCB had issued Authorisation to 15 Corporations, 119 Municipalities and 85 Town Panchayats.</li> </ul>	To issue Authorisation to all urban local bodies generating solid waste greater than 5 tons/day	Nil	Achieved

<ul style="list-style-type: none"> <li>• As per Rule 24 of SWM Rules, 2016, State Pollution Control Board shall submit Annual Report to the Central Pollution Control Board before 30th July every year.</li> <li>• TNPCB submitted Annual Report for the year 2018-19 to the Central Pollution Control Board on 16.07.2019.</li> </ul>	To submit Annual Report to the CPCB before 31 <sup>st</sup> July every year	Nil	Submitted
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**Thematic Area: 2. Compliance to Bio-medical Waste Rules**

<b>BWM</b>	<b>Duties of Occupier of HCF</b>
<b>Rule 4 (d)</b>	<b>Phase out use of chlorinated plastic bags</b>

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
Health care Facilities are being supplied with Non-chlorinated plastic bags by the Common Biomedical Waste Treatment Facilities.	-	Nil	-

<b>BWM</b>	<b>Duties of Occupier of HCF</b>
<b>Rule 4 (i)</b>	<b>Bar- Code System for bags</b>

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
There are totally 11 CBMWTFs of which the following 3 namely (1). M/s. Society for Biomedical Waste Management, Nilgiris (2). M/s. Neat & Clean Service Squad, Ramnad and (3).M/s. Kovai Bio Medical Waste	Implementation of Bar coding by all the H CFs in co-ordination with the CBMWTFs.	To ensure that all the HCFs implement Bar coding system.	All the CBMWTFs have been issued with Directions under Section 5 of Environmental (Protection) Act, 1986 vide Proc. dated 27.12.2019 to

<p>Management have been issued with closure direction and disconnection of power supply for non compliance of BMWWM rules.</p> <p>Bar coding system has been implemented in some of the HCFs and for the remaining HCFs Bar coding system is under implementation.</p>			<p>implement Bar coding system in the HCFs attached with them.</p> <p>Further instructions have been issued to all the HCFs through the District Environmental Engineers.</p>
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<b>BWM Rule 4 (p)</b>		<b>Duties of Occupier of HCF Annual report on its web-site</b>		
<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>	
All the HCFs have been instructed to upload the Annual report in their website.	For the HCFs, time has been extended until <u>15th March, 2020</u> to upload the Annual report in Form – IV in their websites as per the Biomedical Waste Management Rules, 2016 as amended in 2018.	To ensure that all the HCFs upload the Annual report in their website by 15 <sup>th</sup> March 2020 as per BMWWM Rules, 2016 as amended in 2018.	Conditions have been imposed in the Consent orders issued to the HCFs to upload the Annual report in their website by 15 <sup>th</sup> March 2020. Further instructions have been issued to all the HCFs through the District Environmental Engineer.	

<b>BWM Rule 4 (t)</b>	<b>Duties of Occupier of HCF Existing incinerators to achieve retention time in secondary chamber</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
In Tamil Nadu, no individual biomedical waste treatment and disposal facilities are available. The entire biomedical waste generated from the HCFs is disposed through 11 Common Biomedical Waste Treatment and Disposal Facilities located in Tamil Nadu and achieving incinerators retention time in secondary chamber except M/s. Medicare Enviro Systems, Thanjavur	--	NIL	--

<b>BWM Rule 5 (c)</b>	<b>Duties of Occupier of CBMWTFs Bar coding and global positioning system</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
Bar coding system and GPS Tracking system : There are totally 11 CBMWTFs of which the	100 % Implementation of Bar coding by all the HCFs	To ensure that all the HCFs implement Bar coding	All the CBMWTFs have been issued with Directions

<p>following 3 namely (1). M/s. Society for Biomedical Waste Management, Nilgiris (2). M/s. Neat &amp; Clean Service Squad, Ramnad and (3).M/s. Kovai Bio Medical Waste Management have been issued with closure direction and disconnection of power supply for non compliance of BMWWM rules.</p> <p>Bar coding system has been implemented in some of the HCFs and for the remaining HCFs, Bar coding system is under implementation.</p> <p>All the vehicles of the CBMWTFs have been fitted with GPS Tracking system.</p>	<p>in co-ordination with the CBMWTFs.</p>	<p>system.</p>	<p>under Section 5 of Environmental (Protection) Act, 1986 vide Proc. dated 27.12.2019 to implement Bar coding system in the HCFs attached with them.</p> <p>Further instructions have been issued to all the HCFs through the District Environmental Engineers.</p>
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<p><b>BWM</b> <b>Rule 5 (l)</b></p>	<p><b>Duties of Occupier of CBMWTFs</b> <b>Display details of authorisation, treatment, annual report etc., on its web-site</b></p>
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<p><b>Current Status</b></p>	<p><b>Desirable Level</b></p>	<p><b>Gap</b></p>	<p><b>Proposal for attending gap</b></p>
<p>All the CBMWTFs are uploading the daily report on the waste collected and treated in their website except one facility M/s. Neat &amp; Clean Service Squad, Ramnad</p>	<p>--</p>	<p>Nil</p>	<p>Nil</p>

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<p>which is under closure.</p> <p>M/s. Neat &amp; Clean Service Squad, Ramnad was issued with closure direction and disconnection of power supply vide Proc. dated 06.05.2019, as the unit was practising deep burial of biomedical waste and no requisite treatment equipments were available.</p>			
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<b>BWM</b>	<b>Duties of Occupier of CBMWTFs</b>
<b>Rule 5 (q)</b>	<b>Upgrade existing incinerators to achieve the standards for retention time in secondary chamber</b>

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p>upgrade existing incinerators to achieve the standards for retention time in secondary chamber by 27th March, 2018.</p>	<p>All the CBMWTFs to achieve the standards for retention time in secondary chamber.</p>	<p>M/s. Medicare Enviro Systems, Thanjavur has to achieve the standards for retention time in secondary chamber.</p>	<p>M/s. Medicare Enviro Systems, Thanjavur have been issued with Directions under Section 5 of Environmental (Protection) Act, 1986 vide Proc. dated 27.12.2019 to ensure that retention time of 2 seconds is maintained in the secondary chamber of the Incinerator.</p>

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Out of 11 CBMWTFs, 9 CBMWTFs have incinerators and the remaining 2 CBMWTFs namely (1) M/s. Society for Biomedical Waste Management, Nilgiris & (2) M/s. Neat & Clean Service Squad, Ramnad, have only deep burial system. Hence, these two CBMWTFs have been issued with closure direction.

Out of 9 CBMWTFs having incinerators, 8 CBMWTFs are achieving the standards for retention time in secondary chamber.

BMWM Rules	Duties of Occupier of CBMWTFs Online connectivity of CBMWTFs		
Current Status	Desirable Level	Gap	Proposal for attending gap
<p>Out of 11 CBMWTFs, 8 facilities have installed online monitoring system for the parameters PM, NO<sub>x</sub>, HCl, CO, CO<sub>2</sub> &amp; O<sub>2</sub>. Remaining three facilities namely (1) M/s. Society for Biomedical Waste Management, Nilgiris (2) M/s. Neat &amp; Clean Service Squad, Ramnad and (3) M/s. Kovai Bio Medical Waste Management have been issued with closure direction and disconnection of power supply for non compliance of BMWM rules.</p>	-	--	Achieved

<b>BMW (Schedule III) 6 (i)</b>	<b>Rule</b>	<b>Duties of State Pollution Control Board Inventorization Issue of Authorisation</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
Tamil Nadu Pollution Control Board has inventorised 18372 Health Care Facilities (Private and Government hospitals) as on 31.12.2019 and issued with Authorisation under BMWM Rules, 2016 including one time Authorization for non-bedded HCFs like clinics, laboratories, research institutes, Veterinary hospitals, etc.,	-	-	-

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<b>BMW (Schedule III) 6 (ii)</b>	<b>Rule</b>	<b>Duties of State Pollution Control Board Annual Report</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
As per Rule 13 (2), SPCB has to submit the Annual report to CPCB on or before the 31st July of every year. TNPCB has submitted Annual report to CPCB for the year 2018 vide TNPCB letter dated 17.04.2019.	-	-	-

<b>BMW (Schedule III) 6 (v)</b>	<b>Rule</b>	<b>Duties of State Pollution Control Board Action against health care facilities or common biomedical waste treatment facilities for violation Monitoring of compliance conditions of authorisation</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
Out of 11 Common Biomedical Waste Treatment and Disposal Facilities, 3 facilities namely, M/s. Kovai Biowaste Management Ltd, Coimbatore, M/s Society for Biomedical Waste Management,	--	--	-

Nilgris & M/s. Neat & Clean Service Squad, Ramnad have been issued with closure direction and disconnection of power supply for non-compliance of BMWM Rules.

Further, 63 HCFs have been issued with closure direction and disconnection of power supply for operating the unit without consent under the Water (P & CP) Act 1974 and the Air (P & CP) Act 1981 as amended and Authorization under BMWM Rules 2016. Subsequently, out of the said 63 HCFs, 33 HCFs have been issued with revocation of closure direction and restoration of power supply, as the HCFs have complied with the conditions stipulated in closure directions.

Directions were issued to 24 Nos. of HCFs including Government Hospitals for violation of consent order conditions and for operating without consent of the Board under the Water and the Air Acts. Also, five of the HCFs including Government Hospitals were levied with Environmental Compensation for non-compliance of Directions issued to the HCF, out of which three HCFs have remitted the compensation.

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<b>MW Rule (Schedule III) 6 (vi)</b>	<b>Duties of State Pollution Control Board Undertake Inventory of Bio- Medical Waste</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
TNPCB has inventorized Health care Facilities generating biomedical waste, as per the Biomedical Waste Management Rules, 2016 through the District Environmental Engineers.	-	-	-

<b>BMW Rule (Schedule III) 6 (viii)</b>	<b>Duties of State Pollution Control Board Third party audits of the common bio-medical waste treatment facilities</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
TNPCB is under the process of conducting Third Party Audit of the common bio-medical waste treatment facilities through reputed institutions/ organizations as per the BMWM Rules, 2016. Willingness was called for from 6 Institutions, out of	Undertake and support third party audits of the common bio-medical waste treatment facilities in their State.	Identification of external agency/ organization is under process.	Third party audit of the CBMWTFs will be carried out by March 2020.

<p>which 5 Institutions have given their willingness.</p> <p>Further M/s. Teknotherm Industries, Coimbatore has conducted third party audit through Anna University, Chennai and M/s. Tamilnadu Waste Management Ltd, Kancheepuram through IIT, Chennai.</p>			
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<b>BMW</b>	<b>Rule</b>	<b>Duties of State Pollution Control Board</b>
<b>(Schedule III) 6 (x)</b>		<b>Advisory Committee</b>

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p>The Health, Family &amp; Welfare (H1) Department vide G.O.(Ms). No. 277 dated 29.11.2016 had constituted the State Level Advisory Committee under the chairmanship of Principal Secretary of Health &amp; Family Welfare Department.</p> <p>First State Level Advisory Committee meeting was held on 10.05.2017 and Second State Level Advisory Committee meeting on 10.01.2018.</p> <p>Further, Third, Fourth &amp; Fifth State Level Advisory Committee meetings were held on 25.09.2018, 10.04.2019 &amp; 26.11.2019.</p> <p>Also, the Health, Family &amp; Welfare (H1) Department vide G.O.(Ms). No. 179 dated 06.07.2016 and G.O. (Ms) No. 192 Dated 19.05.2017 had issued orders to</p>	—	Nil	-

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constitute the District Level Monitoring Committee under the chairmanship of respective District Collectors. In this regard, District Level Monitoring Committees had been formed in all 32 Districts and regular meetings are being held.			
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<b>BMW Rule</b> (Schedule III) 6 (x)	<b>Duties of State Pollution Control Board</b> <b>List of Registered or Authorised (or give consent) Recyclers</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
The list of the Registered/ consented Recyclers has been published in the TNPCB website.	—	NIL	Achieved
<b>BMW Rule</b> <b>Others</b>	<b>Duties of State Pollution Control Board</b> <b>Formation of District Planning Committee as per the Hon'ble NGT order dated 15.07.2019 in O.A. No.710-713/2017</b>		

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
As per the Hon'ble NGT order dated 15.07.2019 in O.A. No.710/2017, the District Collectors/ District Magistrates have been addressed through DO letter dated 26.07.2019 from the Principal Secretary, E&F Dept / Chairman (FAC), TNPCB to prepare District	—	-	-

Environmental Plan by constituting District Committee with members to be chaired and monitored twice every month and to host the same in websites for a period of one year beginning from 01.08.2019. Accordingly, District Planning Committees has been formed in 31 Districts and functioning. District Environmental Plans have been uploaded in the District Administration website.

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**Thematic Area: 3. Compliance to Construction & Demolition Waste**

<p><b>SWM Rules 15 (s) &amp; C&amp;D WASTE RULES: 4, 7</b></p>	<p><b>Duties of State Government &amp; Local Authorities</b>  <b>Facility for Processing/Recycling facility</b>  <b>provide suitable sites for setting up of the storage, processing and recycling facilities for construction and demolition waste</b></p>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p>✓ All ULBs have earmarked the C&amp;D waste deposition facility.</p> <p>✓ 5 ULBs have proposed to set up processing facilities for C&amp;D waste (Greater Chennai Corporation, Coimbatore, Tiruchirapalli, Madurai and Tiruppur)</p>	<p>100%</p>	<p>100%</p>	<p>Proper mechanism for inflow and outflow of C&amp;D waste is being planned by 31.12.2020 and will be fully established.</p> <p>Currently C&amp; D Waste is being used for laying base course for formation of roads and filling up of low lying areas</p>

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**Thematic Area: 4. Compliance to Hazardous Waste Rules**

<b>HWOM Rules 6 (1-8)</b>	<b>Grant of authorization for managing hazardous and other wastes.</b>		
<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
TNPCB has identified 3455 units generating hazardous wastes as on 31.8.2019 & Authorization issued to 3455 units.	-	Nil	-

<b>HWOM Rules 7</b>	<p><b>7. Power to suspend or cancel an authorization.-</b></p> <p><b>(1) The State Pollution Control Board, may, if in its opinion the holder of the authorization has failed to comply with any of the conditions of the authorization or with any provisions of the Act or these rules and after giving him a reasonable opportunity of being heard and after recording reasons thereof in writing cancel or suspend the authorization issued under rule 6 for such period as it considers necessary in the public interest.</b></p>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
Board has issued Closure order to 2 units for non compliance conditions stipulated in Hazardous Waste Authorization issued to the unit.	-	Nil	-

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HWOM Rules 8	8. Storage of hazardous and other wastes.- (1) The occupiers of facilities may store the hazardous and other wastes for a period not exceeding ninety days and shall maintain a record of sale, transfer, storage, recycling, recovery, pre-processing, co-processing and utilization of such wastes and make these records available for inspection:
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Current Status	Desirable Level	Gap	Proposal for attending gap
TNPCB is monitoring the units during inspection to ensure that the unit is not stored the Hazardous Waste more than 90 days.	-	Nil	-

HWOM Rules 9	<b>Utilisation of hazardous and other wastes</b>		
Current Status	Desirable Level	Gap	Proposal for attending gap
List of Recycling units for recycling of Hazardous Waste under Schedule i, III & IV for which authorization issued under HOWM Rules 2016. <ol style="list-style-type: none"> <li>1. Recycling units such as Used Oil /Spent Oil- 24 No,</li> <li>2. Waste oil – 12 Nos,</li> <li>3. Lead Scrap – 14 Nos,</li> <li>4. Solvent Recovery – 8 Nos,</li> <li>5. Zinc &amp; Zinc Ash – 8 Nos</li> <li>6. Copper Scrap – 2 Nos</li> </ol>	-	Nil	-

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1. The Board has authorized 11 cement plants for co processing of 5.7 Lakhs tonnes per annum of utilizable wastes in cement kilns. During the year 2018-19 , about 2.69 lakhs Tonnes of ETP sludge have been disposed to various Cement industries for co-processing through the following Authorized pre processing facilities & from other industries

1.M/s GEPIL- Vellore – Authorized capacity – 2500TPA

2.M/s Sandhiya Enviro Tech System – Villupuram- 5023 T/A

Recyclable/Utilizable Waste Disposal for the period 2018-19	
Recyclable/utilizable Hazardous Waste generation (T/A)	Recyclable/utilizable Hazardous Waste Disposal (T/A)
408464 Tons	408464 Tons
Disposal of Hazardous waste Through Recyclers - 24Nos ( Total capacity - 205369 T/A)	Disposal of Hazardous waste Through Utilizres, pre processer &Co procesing to cement plant (11 nos)- 576872T/A
171006 Tons	237457 Tons
Total – 408464 Tons	

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<b>HWOM</b>  <b>Rules 16</b>	<b>Treatment, storage and disposal facility for Hazardous and Other Wastes.</b> <b>(1) The State Government, occupier, operator of a facility or any association of occupiers shall individually or jointly or severally be responsible for identification of sites for establishing the facility for treatment, storage and disposal of the hazardous and other waste in the State.</b>								
<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>						
<p>There are 2 Nos of TSDF facilities located in Tamilnadu.</p> <ol style="list-style-type: none"> <li>1. M/s Tamilnadu Waste management Limited, Export Promotion Industrial Park (EPIP), SIPCOT Gummidipoondi , Tiruvallur District ( Capacity Land fillable – 100000 T/A &amp; Incineration – 1.5 T/hr)</li> <li>2. M/s Tamilnadu Waste management Limited Undurumikidakulam, A Mukkulam Village, Thiruchuli Taluk, Virudhunagar District ( Capacity Land fillable – 240000 T/A)</li> </ol> <p>Land fillable Hazardous Waste Disposal for the period 2018-19</p> <table border="1" data-bbox="682 1073 1473 1235"> <tr> <td>land fillable HW generated (T)</td> <td>Hazardous Waste Disposal (T)</td> </tr> <tr> <td>207382 Tons</td> <td>207382 Tons</td> </tr> <tr> <td></td> <td></td> </tr> </table>	land fillable HW generated (T)	Hazardous Waste Disposal (T)	207382 Tons	207382 Tons			-	Nil	-
land fillable HW generated (T)	Hazardous Waste Disposal (T)								
207382 Tons	207382 Tons								

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<p><b>HWOM</b></p> <p><b>Rules 17, 18,19</b></p>	<p><b>17. Packaging and Labelling.-</b></p> <p><b>18. Transportation of hazardous and other wastes</b></p> <p><b>19. Manifest system (Movement Document) for hazardous and other waste to be used within the country only.-</b></p>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p>1. Packaging , labeling &amp; manifeast system is followed by Hazardous waste generators/TSDF/Recyclers/ pre procrssor</p> <p>2. TSDF vechicles are fitted with GPS arrangement</p> <p>3. TNPCB issued Authorization to 11 transporters to transport Hazardous Waste to the Authorized dispsol facility for scientific land fill/recycling/ co processing facilities.</p>	-	Nil	-

HWOM Rules 20	Records and returns			
Current Status		Desirable Level	Gap	Proposal for attending gap
TNPCB has identified 3455 hazardous wastes generating units and the units are maintained in Form – III & IV as per the Rules & annual returns are submitted to CPCB within the stipulated time.		-	Nil	-
HWOM Rules 23	Liability of occupier, importer or exporter and operator of a disposal facility (1) The occupier, importer or exporter and operator of the disposal facility shall be liable for all damages caused to the environment or third party due to improper handling and management of the hazardous and other waste. (2) The occupier and the operator of the disposal facility shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the State Pollution Control Board with the prior approval of the Central Pollution Control Board.			
Current Status		Desirable Level	Gap	Proposal for attending gap
Board has issued Closure order to 2 units for non compliance conditions stipulated in Hazardous Waste Authorization issued to the unit. The calculation of Liability & Environmental Compensation is being being followed as per CPCB guidelines.		-	Nil	-

**Thematic Area: 5. Compliance to E-Waste Rules**

Thematic Area :3(V)	Compliance of E-Waste Rules,2016
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Current Status	Desirable Level	Gap	Proposal for attending gap
<ul style="list-style-type: none"> <li>The Board vide B.P. No. 28, dated 6.8.2019 has approved to award work order to the National Productivity Council to conduct E-waste inventORIZATION in the entire state of Tamil Nadu at cost of Rs.47.08 lakhs. The Project duration is 6 months. InventORIZATION will be completed by May 2020.</li> <li>As per the Annual Report 2018-19, E-waste collected and channelized to the authorized dismantlers / recycler is</li> </ul>	<ul style="list-style-type: none"> <li>As per the E-Waste Management Rules, 2016, all the e-waste generated shall be channelized to authorized dismantler or recycler.</li> <li>All the Producers shall get EPR Authorization from CPCB and implement EPR plan.</li> <li>All the local bodies shall segregate the e-waste mixed with solid waste and channelize</li> </ul>	<ul style="list-style-type: none"> <li>Since the generation of the e-waste in the entire State has not been arrived, the gap between the current status and desired levels is yet to be assessed.</li> </ul>	<ul style="list-style-type: none"> <li>InventORIZATION of E-waste generation in the entire State will be completed on submission of National Productivity Council study report .</li> <li>TNPCB to verify the EPR Authorized producers, collection centres, dismantlers, recyclers on quarterly basis and submit report to CPCB periodically. Last report was submitted in October 2019. Next Quarterly report for the period Oct'19 – Dec'19 has been submitted on 29.01.2020.</li> </ul>

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<p>32282.60 Tonnes.</p> <ul style="list-style-type: none"> <li>• TNPCB has authorized 22 Dismantlers, 1 Refurbisher and 1 Recycler.</li> <li>• 68 Producers in the State have obtained EPR Authorization from CPCB.</li> <li>• In October, 2018 Awareness Programme on Environmental Hazards of Electronic Waste was conducted at TNPCB Head Office in association with MAIT, New Delhi to the trainer of trainers. 20 persons have attended the programme.</li> <li>• TNPCB issued a Public Notice in the News Papers Tamil &amp; English on 21.08.2019 appealing all the stake holders to comply with E-Waste Management Rules and the</li> </ul>	<p>to the authorized dismantler or recycler.</p>		
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<p>orders issued by the Hon'ble NGT. Press release was also issued in all the Districts in this regard.</p> <ul style="list-style-type: none"><li>• TNPCB vide letter dated 22.08.2019 has issued guidelines to all the District Collectors to prepare and include E-Waste Management subject in the District Environmental Plan and upload the same in District Administration web site and also to send fortnight status report to the Government.</li><li>• In order to identify producers who have not obtained EPR Authorization, TNPCB vide letter dated 04.09.2019 has addressed GST Council to furnish the list of Producers.</li></ul>			
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<p>This is a continuous process.</p> <ul style="list-style-type: none"><li>• TNPCB has conducted a brainstorm meeting to all the EPR Authorized Producers, Dismantlers, and Recyclers on 6.9.2019. 72 persons attended the meeting.</li><li>• On 20.9.2019, a brainstorm meeting was conducted at TNPCB Head Office to the District Co-ordinators of National Green Crops, Eco Clubs and Scouts. 105 persons attended the meeting. They will conduct awareness programme to the students in the schools.</li><li>• TNPCB vide proceeding dated 26.09.2019 has issued direction under Section 5 of</li></ul>			
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<p>Environment (Protection) Act, 1986 to all the Local Bodies in the State to segregate e-waste and channelize the same to the authorized dismantlers / recyclers.</p> <ul style="list-style-type: none"><li>• TNPCB vide proceeding dated 26.09.2019 has nominated nodal officers to monitor the compliance of the said Directions<ul style="list-style-type: none"><li>➤ Member Secretary, TNPCB - State Level</li><li>➤ District Environmental Engineer- Dist. Level</li><li>➤ Commissioner/Executive Officer:</li><li>➤ Corporation/Municipality/ Town Panchayat</li></ul></li><li>• TNPCB vide letter dated 09.10.2019 has addressed the</li></ul>			
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<p>Director of School Education,  Director of Collegiate  Education, Director of  Technical Education to issue  circulars to all schools,  colleges to create awareness to  the students.</p> <ul style="list-style-type: none"> <li>• Letter have been addressed to  the Bulk Consumers such as  Nationalised Banks in Tamil  Nadu, State Universities,  Central Universities and  Deemed Universities in Tamil  Nadu to send the e-waste to  authorized facilities and to  comply with the provisions of  the E Waste Rules, 2016.s.</li> <li>• TNPCB has granted Rs.  38,00,000/- (Rupees Thirty  Eight Lakhs only) Rs.  1,00,000/- (Rupees one lakhs</li> </ul>			
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only) per District office for conducting the awareness programme to the School Teachers and other stake holders on E-Waste management vide BP.No. 76 dated 29.11.2019.

- TNPCB has addressed the Industries Department vide letter dated 05.11.2019, Tamil Nadu to encourage the establishment of recyclers / dismantlers for e-waste in the State of Tamil Nadu and to allocate land in the notified industrial area / park so as to ensure environmentally sound management of E-waste in the entire State.
- TNPCB vide letter dated 22.08.2019 has issued

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<p>guidelines to all the District Collectors to prepare and include E-Waste Management subject in the District Environmental Plan and upload the same in District Administration web site as per the orders of Hon'ble NGT(PB) in OA.No. 713/2017, New Delhi dated 15.07.2019. Accordingly, District Environmental Plans have been uploaded in the District Administration website.</p>			
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**Thematic Area: 6. 351 Polluted River Stretches in the Country (6 rivers in Tamil Nadu)**

<b>Thematic Area</b>	<b>Polluted River Stretches in the Country</b>
<b>:3 (VI)</b>	<b>Hon'ble NGT (PB) order in O.A No. 673/2018 dated 20.09.2018, 19.12.2018 &amp; 08.04.2019</b>

<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p>In Tamil Nadu, CPCB has identified 6 Nos. of Polluted River Stretches based on the Bio-Chemical Oxygen Demand (BOD) values and categorized as five priorities. (CPCB <b>Desired Levels:</b> BOD &lt; 3.0mg/l, DO &gt; 5.0mg/l, Faecal Coliform &lt; 500MPN/100ml).</p> <p>1. River Sarabanga – Thathayampatti to T.Konagapadi Stretch-(15Kms)-<b>Priority-I</b> (BOD &gt; 30 mg/l), CPCB data as on Sep-2018 BOD – 78.0 mg/l, Current status as on Jan to July-2019 - BOD - 9.6 to 24.0, DO – 1.0 to 9.5, FC – 17000 to 220000.</p> <p>2. River Thirumanimutharu–Salem to Papparapatti Stretch-(15Kms) – <b>Priority-I</b> (BOD &gt; 30 mg/l), CPCB data as on Sep-2018 BOD – 190.0 mg/l, Current status as on Jan to</p>	<p>To bring the river water fit for bathing standards (Class-B standard) – <b>Bio-chemical Oxygen Demand (BOD) less than 3.0 mg/l, Dissolved Oxygen more than 5.0 mg/l and Faecal Coliform to be less than 500 MPN/100ml.</b></p>		<p>➤ The timeline (upper limit) for execution of action plans for the polluted river stretches will be <b>two years from 01.04.2019</b> as per the Hon'ble NGT (PB) order dated 08.04.2019 in O.A No. 673/2018.</p> <p>➤ Based on the Hon'ble NGT (PB) directions, River Rejuvenation Committee (RRC) was constituted in Tamil Nadu vide G.O. (D) No. 372</p>

<p>July-2019 - BOD – 10 to 75, DO – Nil, FC – 70000 to 3300000.</p> <p>3. River Cauvery – Mettur to Mayiladuthurai Stretch-(200Kms) - <b>Priority-I</b>(BOD &gt; 30 mg/l), CPCB data as on Sep-2018 BOD – 3.3 to 32.0 mg/l, Current status as on Jan to July-2019 - BOD – 0.1 to 6.2, DO – 2.5 to 9.0, FC – 17 to 790.</p> <p>4. River Bhavani – Sirumugai to Kalingarayan Stretch-(60Kms) - <b>Priority-IV</b> (BOD 6.0 to 10 mg/l), CPCB data as on Sep-2018 BOD – 3.3 to 6.6 mg/l, Current status as on Jan to July-2019 - BOD – 0.3 to 3.6, DO – 4.7 to 8.6, FC – 21 to 330.</p> <p>5. River Thamirabarani – Pappankulam to Arumuganeri Stretch-(80Kms) - <b>Priority-V</b> (BOD 3.0 to 6.0 mg/l), CPCB data as on Sep-2018 BOD – 3.1 to 4.0 mg/l, Current status as on Jan to July-2019 - BOD – 1.3 to 7.3, DO – 1.2 to 8.5, FC – 4 to 50.</p> <p>6. River Vasista – Manivilundhan to Thiyaganur Stretch-(10Kms) – <b>Priority-I</b> (BOD &gt; 30 mg/l), CPCB data as on Sep-2018 BOD – 675.0 mg/l, Current status as on Jan to July-2019 - BOD – 3.6 to 342, DO – 1.04 to 5.7, FC – 3500</p>			<p>dated: 26.12.2018 to prepare the action plan and to monitor the execution of action plan for the polluted river stretches in Tamilnadu. The Engineer in Chief WRD, PWD is also to be included in the RRC as a special invitee as directed by the Chief Secretary, Government of Tamilnadu. Accordingly, Government issued orders vide G.O No. G.O.(D).No.11 dated 20/01/2020.</p> <p>➤ RRC meeting was convened on 15.07.2019 with the concerned line departments and requested</p>
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<p>to 1700000.</p> <ul style="list-style-type: none"> <li>➤ Action plans for six polluted river stretches (Priority I: 4Nos, Priority-IV: 1 No. Priority-V: 1 No.) submitted to CPCB.</li> <li>➤ As per the Hon'ble NGT (PB) order the action plans for six Polluted River Stretches hosted in the TNPCB website after the approval of RRC members vide web link <a href="http://www.tnpcb.gov.in/polluted-riverstretches.php">http://www.tnpcb.gov.in/polluted-riverstretches.php</a> and the same communicated to CPCB.</li> <li>➤ Action Taken Report on action plans for the six polluted river stretches for the period upto August-2019 received from the concerned line departments are compiled and copy circulated to RRC members and also furnished to CPCB vide T.O letter dated 17.09.2019.</li> <li>➤ As per the Hon'ble NGT (PB) order the water quality data for the six polluted river stretches are being hosted in the TNPCB website on regular basis from 23.04.2019 onwards vide web link <a href="http://www.tnpcb.gov.in/polluted-riverstretches.php">http://www.tnpcb.gov.in/polluted-riverstretches.php</a> and the same communicated to CPCB.</li> <li>➤ Executive summary for the approved action plans under priority-I polluted river stretches (River Sarabanga,</li> </ul>			<p>to follow up the implementation of action plan proposed and also to furnish the action taken report.</p> <ul style="list-style-type: none"> <li>➤ The District Level Committee is also formed to monitor and review the action plans proposed by the concerned line departments at District level for the Hon'ble NGT Order in O.A. No. 606/2018 dated 23.04.2019. The same District level committee will also monitor and review the action plans proposed by the concerned line departments at District level for the</li> </ul>
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<p>Vasista, Thirumanimutharu and Cauvery) have been submitted to CPCB vide TNPCB letter no. TNPCB/DD(L)/F.No.6849/PRS-ES/2016 dated: 27/12/2019 and mail dated 02/01/2020.</p> <ul style="list-style-type: none"> <li>➤ Government of Tamil Nadu has directed TNPCB to furnish the performance guarantee of Rs. 10 crores for the six polluted river stretches and also compensation of Rs. 4 crores paid to CPCB (as per Hon'ble NGT order) on behalf of State of Tamil Nadu.</li> <li>➤ Accordingly Board approved vide B.P. No. 80 dated: 04/12/2019 for furnishing of performance guarantee of Rs. 10.00 Crores and to remit the compensation/penalty of Rs. 4.00 Crores to CPCB by utilizing Board's fund after getting the Government Order (G.O).</li> <li>➤ Hon'ble NGT (PB), New Delhi has issued direction vide order dated 06/12/2019 in O.A. No. 673/2018 regarding the time limit specified for the execution and completion of Rejuvenation of Polluted River Stretches in the States and also the monitoring mechanism for the Rejuvenation of Polluted River Stretches.</li> </ul>			<p>Hon'ble NGT order in O.A. No. 673/2018 dated 20.09.2018, 19.12.2018, 08.04.2019 &amp; 06.12.2019 and submit their progress report to the Government on fortnight basis and the minutes of the meeting shall be uploaded in the website periodically.</p> <ul style="list-style-type: none"> <li>➤ Government of Tamilnadu has proposed a project in the name of "Nadanthai Vaazhi Cauvery" in Tamilnadu which is a Massive Rejuvenation programme for Cauvery and its Tributaries including River Sarabanga, Thirumanimutharu and</li> </ul>
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			<p>Bhavani and entrusted the work to WAPCOS Limited for the preparation of Detailed Project Report (DPR). For the above project, PWD is the co-ordinating agency. The DPR for the River Vasista (left-out) will be prepared by the TNPCB and submitted to the PWD for further action.</p> <p>➤ Hon'ble Chief Minister of Tamil Nadu has also announced in the assembly for the rejuvenation of River Thamirabarani similar to River Cauvery Rejuvenation program. Further, Hon'ble Minister for MA&amp;WS Department</p>
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<p>➤ Quantity of sewage generated and treated in the state, gap in the sewage treatment and timelines to bridge the gap including strategy for use of treated water for secondary purpose with respect to six polluted river stretches in Tamilnadu. Further, the States need to furnish information about the compliance of directions including in-situ and ex-situ remediation by way of phyto remediation/artificial wetlands, bio-diversity parks or any other appropriate measures to supplement load reduction on recipient River systems.</p>		<p>➤ To identify the gap for the generation and treatment of sewage in the six polluted river stretches and to furnish information about the compliance of directions</p>	<p>has also announced in the assembly for the rejuvenation of the Rivers Cauvery, Vasista, Sarabanga, Bhavani and Tamirabarani by constructing STPs in the near by Town panchayat along the River stretches.</p>
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		<p>including in-situ and ex-situ remediation by way of phyto remediation/artificial wetlands, bio-diversity parks or any other appropriate measures to supplement load reduction on recipient River systems.</p>	
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**Thematic Area: 7. 122 Non-attainment Cities**

Thematic Area :3(VIII)		Status of Non –attainment cities ( Thoothukudi)	
Current Status (PM <sub>10</sub> -133 mg/m <sup>3</sup> )	Desirable level (<PM <sub>10</sub> -60 mg/m <sup>3</sup> )	Gap	Proposal for attending gap
As per the directions of the Hon'ble National Green Tribunal, Action plan for non attainment city-Thoothukudi was approved by CPCB on 16.5.2019. The short term action points up to November-2019 were completed and actions are being taken to implement the action plan with the coordination with other stake holders. The action plan for the reduction of PM <sub>10</sub> for the newly declared Trichy town was prepared and submitted to CPCB after getting the approval from Air Quality Monitoring Committee.	Reduction of PM <sub>10</sub> in Thoothukudi city and Trichy city.	The current status of PM <sub>10</sub> monthly average values are considerably lower when compared to the previous period but still above the monthly and annual average values.	The District administration of Thoothukudi is taking necessary steps in coordination with the other stake holder departments for the reduction in PM pollution. The Ministry of Environment, Forests and Climatic Change, Government of India for the sanction of funds for the Non attainment city of Thoothukudi for the purchase of mechanical sweepers,water sprinklers and for the establishment of air quality monitoring stations.

**Thematic Area: 8. 100 Industrial Clusters**

Thematic Area :4(IV)	Status of Comprehensive Environmental Pollution Index
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Current Status			Desirable Level	Gap			Proposal for attending gap
CEPI Index evolved by CPCB in 2018:			Industrial areas having CEPI score > 80 considered as Critically Polluted Industrial Area and if CEPI score is > 70 and < 80 considered as Severely Polluted Industrial Area.  The CEPI Index shall be reduced below 60 .	Name of Polluted Industrial Area (PIAs) in Tamilnadu	CEPI Score	Desirable Limits	Based on the CEPI score of 2018 assessed by CPCB, continuous efforts were taken by TNPCB during 2018-2019 and 2019 -2020 for reducing the CEPI score with regard to Land, Air & Water Environment.  In collaboration with A.C Tech,Guindy, Chennai (third party assessment) the CEPI score was evaluated for the post monsoon of 2019 and found that the CEPI scores were below 50 and detailed below,
Sl. No	Name of Polluted Industrial Area (PIAs) in Tamilnadu	*CEPI Score					
10	Manali	84.15					
21	Vellore	79.38					
32	Tiruppur	72.39					
34	Mettur	71.82					
50	Tuticorin	66.34					
60	Coimbatore	63.64					
62	Cuddalore	62.56					
67	Erode	60.33					
Based on the Hon'ble NGT order, MoEF,CC has evolved a mechanism for new activities/expansion of Red & Orange category industries in Critically /Severely Polluted							

Industrial Areas. TNPCB has followed the mechanism for new activities/expansion of Red & Orange category Industries in the above said Polluted industrial Areas.

Sl. No	Name of Polluted Industrial Area (PIAs) in Tamilnadu	CEPI Score
1	Manali	26.26
2	Vellore	28.13
3	Tiruppur	24.32
4	Mettur	20.77
5	Tuticorin	44.25
6	Coimbatore	8.60
7	Cuddalore	26.38
8	Erode	25.02

Action plans to further reduce the CEPI scores has been prepared and **submitted to CPCB by 24.01.2020.**

**Thematic Area: 9. Status of STPs and re-use of treated water**

Current Status	Desirable Level	Gap	Proposal for attending gap
<p>The sewage system of the core Chennai city is divided into 5 zones with independent zonal collection, conveyance, treatment and disposal facilities. The collected sewage from pumping stations is treated at 12 Sewage Treatment Plants.</p> <p>In Chennai city, CMWSSB is providing sewerage services including wastewater treatment, reuse of treated water and power generation from Sewage Treatment Plants. Sewage Treatment Plants at Chennai have an installed capacity of 727 MLD.</p> <ul style="list-style-type: none"> <li>✓ CMWSSB has been promoting the reuse of wastewater in Chennai from the 1980s. Farm forestry was developed around sewage treatment plants at Kodungaiyur and Nesapakkam.</li> <li>✓ The present inflow of sewage received, treated and discharged in Chennai city is 525 MLD, out of which 36 MLD is supplied for industrial purposes at the rate of Rs.18.40/KL is supplied from the year 1993.</li> <li>✓ 0.23 MLD is supplied to GCC &amp; TNRDC for landscaping and gardening purposes at the rate of Rs.8.35/KL.</li> <li>✓ The remaining treated waste water is being discharged into the Chennai city water ways as per TNPCB norms.</li> </ul>	100%		<p>CMWSSB has set itself an ambitious target for complete recycle and reuse by 2030</p> <p>At Present - 6.5%</p> <p>2025 - 50%</p> <p>2030 - 100%</p>

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<ul style="list-style-type: none"> <li>✓ The former Hon'ble Chief Minister of Tamil Nadu J.Jayalalitha earlier announced in 2015 that a TTRO Plant will be constructed in Kodungaiyur to supply TTRO water to the industries in North Chennai funded by World Bank.</li> <li>✓ Accordingly, the work of Design, Build and Operate (DBO) of 45 MLD Capacity each Tertiary Treatment Reverse Osmosis (TTRO) Plants at Kodungaiyur and Koyambedu including Supply and laying DI Transmission mains for conveyance of Product water to various industries in Manali and industries at Sriperumbudur, Irungattukottai and Oragadam for a value of Rs.235 and Rs.396 Crore respectively.</li> <li>✓ Further the Hon'ble Minister for Local Administration has recently announced in the floor of Assembly that the capacity of the TTRO plants will be increased to 60 mld each.</li> <li>✓ The two TTRO Plant of each 45 MLD capacity, for which the works commenced on 25.11.2016 completed and is commissioned recently by the Hon'ble Chief Minister of Tamil Nadu.</li> <li>✓ CMWSSB in continuing its efforts to augment supply of water through sustainable sources made a detailed study with IIT Chennai and presented use of tertiary treated recycle water for lakes recharging to the special water group constituted by GoTN.</li> </ul>			
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- ✓ Government of Tamil Nadu issued in principle approval in G.O.(MS) No.131 Municipal Administration and Water Supply Department, Dt.10.12.2018 for two proposals of each 10 mld capacity for recycle and recharge of tertiary treated water from Nesapakkam STP and Perungudi STP to Porur and Perungudi lakes. The works costing Rs. 83.78 Crore have been administratively sanctioned by GoTN and have been commenced on 13.05.2019.
- ✓ The tertiary treated recycled wastewater employs technologies for nutrient removal, membrane filtration for removal of physical and biological impurities and ozone disinfection.
- ✓ The Hon'ble Chief Minister of Tamil Nadu Thiru Edapadi K. Palaniswamy has announced in the floor of the Assembly on 12.07.2019 that a detailed project report will be prepared by CMWSSB for using 260 mld of recycled and reuse wastewater for recharging of Lakes in and around Chennai.

In this regard, the work for preparation of DPR has been taken up in association with IIT and DoST, GoI, the following works done,

- ✓ Lake – Location and areal extend – Google map
- ✓ Volume and health of the lake – actual field survey, google map
- ✓ Existing lake water quality – sample collection and analysis
- ✓ Topo map of the entire Chennai. This information is necessary to identify the possibilities of interconnections of lakes.

- ✓ Layered Map of existing/proposed STPs, available government land, locations of lakes/ponds, human habitats, existing distribution lines, storage reservoirs etc.
- ✓ Hydro-geological condition of existing lake area. Necessary to estimates the recharge potential of the area
- ✓ Identifying other storage locations – abandoned quarries, underground storage, aquafers and low-lying area
- ✓ Draft DPR has been submitted to IIT Chennai and members of SUTRAM under DoS&T GoI

Review on the draft DPR was held in IIT Chennai on 09.01.2020

**Enhancement of Sewage Treatment Capacity**

- ✓ Existing sewage treatment capacity increased from 727 MLD to 745 MLD as on 30.01.2020 (Sholinganallur STP with a capacity of 18 MLD commissioned).
- ✓ Capacity will increase to 776 MLD on 31.03.2020 (Thiruvottiyur STP with a capacity of 31 MLD)
- ✓ Capacity will be increased through ongoing works to 951 MLD by Rehabilitation of existing sewage treatment plants and construction of new sewage treatment plants at a cost of Rs. 636 crores by 31.12.2021.

**Upto Tertiary Treatment**

- ✓ Two TTRO plants with a total capacity of 90 MLD each for industrial supply were completed, the plants were commissioned in October and November 2019 by the Hon'ble Chief Minister of Tamil Nadu for a value of Rs. 235 and Rs. 396 crores each.
- ✓ Two TTUF pilot plants for refilling of urbanised lakes for ground water recharging are under construction at a cost of Rs. 83.78 crores.
- ✓ The Hon'ble Chief Minister of Tamil Nadu announced in the floor of Assembly that a detailed project report will be prepared by CMWSSB for using 260 MLD of recycled and reuse wastewater for recharging of lakes in and around Chennai. The DPR has been taken up in association with IIT and DoST, GoI and total estimated cost of 260 MLD is Rs 1800 crore.

**Sewage Collection**

GoTN has issued GO (Ms) No.107 and has sanctioned Rs. 2371 crore for plugging of sewage outfalls in all the Chennai city waterways viz., Adyar river, Buckingham Canal and Cooum river and the works are taken up in a phased manner.

<p>➤ Out of the 135 ULBs, Under Ground Sewerage Schemes have been taken up for implementation in 58 ULBs and completed in 35ULBs and others in various stage of implementation.</p> <p>➤ In UGSS completed towns, 41 no. of STPs completed &amp; functioning.</p> <p>➤ 32 no. of STPs work are under progress in 19 ULBs.</p> <p><b>MOU signed for the sale of Secondary Treated Effluent Water (STEW) in the following ULBs:</b></p> <p>➤ Nagapattinam - 2.00MLD - M/s KVK Power for cooling purpose</p> <p>➤ Dindugul - 5.00MLD - to maintain the TDS level of Tanners as well for Agro- forestry.</p> <p>➤ Tirunelveli - 24.00MLD - Nanguneri SEZ for Industries</p> <p>➤ Perambalur - Negotiation is under progress with MRF Industries for the sale of STEW of 3.00 MLD.</p> <p>➤ Ramanathapuram - 3.00MLD - NTC Infra</p> <p><b>MoU in pipeline ULBs</b></p> <p>➤ Pollachi - 11.50MLD - Agricultural use</p> <p>➤ Chinnamannur - 3.00MLD - Agricultural use</p> <p>➤ Karur - 7.00MLD - Agricultural use</p> <p>➤ Arakkonam - 7.00MLD - MRF Industrial use</p>	100%	<p>CMA has set itself an ambitious target for complete recycle and reuse by 2030.</p> <ul style="list-style-type: none"> <li>• At Present – 2.5%</li> <li>• 2020 - 25%</li> <li>• 2025 - 80%</li> <li>• 2030 – 100%</li> </ul> <p>State Government is coming out with a policy on reuse of treated wastewater, wherein wastewater grids are proposed to be established to promote treated water for industrial, agriculture or non drinking purpose domestic use. DPR will be prepared and projects will be grounded in phases.</p>
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**Thematic Area: 10. Status of CETPs/ETPs including performance**

Thematic Area :3(X)	Status of CETPs/ETPs including performance:
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Current Status -Dec-2019	Desirable Level	Gap																					
<p><u>Compliance status of ETPs:</u></p> <table border="1"> <tr> <td>No. of industries which require ETP</td> <td>10907</td> </tr> <tr> <td>No. of industries having functional ETP</td> <td>10898</td> </tr> <tr> <td>No. of industries complying</td> <td>10859</td> </tr> <tr> <td>No. of industries non-complying</td> <td>39</td> </tr> <tr> <td>Show cause notice issued</td> <td>39</td> </tr> <tr> <td>Closure directions issued</td> <td>29</td> </tr> <tr> <td>No of Industries against which action is under process/any other (prescribed)</td> <td>10</td> </tr> <tr> <td>No. of industries operating without ETP</td> <td>9</td> </tr> <tr> <td>Show cause notice issued</td> <td>9</td> </tr> <tr> <td>Closure Direction issued</td> <td>9</td> </tr> </table>	No. of industries which require ETP	10907	No. of industries having functional ETP	10898	No. of industries complying	10859	No. of industries non-complying	39	Show cause notice issued	39	Closure directions issued	29	No of Industries against which action is under process/any other (prescribed)	10	No. of industries operating without ETP	9	Show cause notice issued	9	Closure Direction issued	9	All ETPs to achieve the standards prescribed by the Board.	10 IETPs	Report is awaited from concerned District Environmental Engineers after the issuance of Show cause notice.
No. of industries which require ETP	10907																						
No. of industries having functional ETP	10898																						
No. of industries complying	10859																						
No. of industries non-complying	39																						
Show cause notice issued	39																						
Closure directions issued	29																						
No of Industries against which action is under process/any other (prescribed)	10																						
No. of industries operating without ETP	9																						
Show cause notice issued	9																						
Closure Direction issued	9																						

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Compliance status of CETPs: (Dec-2019)

No. of CETPs	36
No. of CETPs complying	32
No. of CETPs non-complying	4
Show cause notice issued	4
Closure directions issued	1

All the CETPs to achieve the standards prescribed by the Board.

3  
CETPs

Report is awaited from concerned District Environmental Engineers after the issuance of Show cause notice.

**Thematic Area: 11 Ground water extraction/contamination and recharge**

<b>Thematic Area :3(XI)</b>	<b>Ground water extraction/contamination and recharge</b>
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<b>Current Status</b>	<b>Desirable Level</b>	<b>Gap</b>	<b>Proposal for attending gap</b>
<p><b>Groundwater Extraction</b></p> <p>Tamil Nadu State is underlain by diverse hydrogeological formations. Nearly 73% of the State is occupied by hard rocks, semi-consolidated and consolidated formations which are mainly confined to the eastern part including the coastal tract. In the hard rock areas, groundwater is developed through dug wells tapping the weathered zone and dug cum bore wells and bore wells tap the deeper fractures down to a depth of 300 m. In semi consolidated and unconsolidated formation, shallow zones are tapped by filter points and shallow tube wells and deeper zones through deeper tube wells. The yields of open wells vary from 1 to 3 lps, whereas in dug wells tapping soft rocks including sedimentary formations, the yield is up to 10lps. The yield from unconsolidated and semi consolidated formations are in general 10 to 20 lps and also as high as 40 lps are also noticed at select places. The Ground water resources for the State have been assessed firka wise. Total Annual Groundwater recharge of the</p>	<p>To contain the GW exploitation and replenish Groundwater Level in Over exploited and Critical Areas with Artificial Recharge of Groundwater.</p>		<p>A comprehensive Groundwater Regulation Act to regulate and manage the abstraction of Groundwater is currently under the active consideration of the Government.</p>

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State has been assessed as 20.22 bcm and Annual extractable Ground Water resources as 18.20 bcm. The Annual Ground Water extraction is 14.73 bcm and Stage of Ground Water Extraction as 81%.

As per Ground Water Resources Estimation Committee (GEC 2015) methodology, State Ground and Surface Water Resources Data Centre (SG & SWRDC), Tharamani, Chennai has re-estimated the Ground Water Resources of Tamil Nadu State for 2017 with the Coordination of the Regional Director, Central Ground Water Board, South Eastern Coastal Region, Chennai.

The categorization as per the Re – Estimation of Dynamic Ground Water Resources of Tamil Nadu State -2017 reads as follows:

S.No	Categorisation based on extraction	No of Firkas
1	Over Exploited (More than 100%)	462
2	Critical (90% to 100%)	79
3	Semi Critical (70% to 90%)	163
4	Safe (Less than 70%)	427
5	Saline	35
<b>TOTAL</b>		<b>1166</b>

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<p><b>Ground Water Contamination</b></p> <p>The State Ground and Surface Water Resources Data Centre (SG &amp; SWRDC), WRD is collecting ground water samples from 2258 locations (Two samples per Firka) biannually i.e during pre (July) and Post (January) monsoon period of every year and a total of 4516 samples are being collected and analysed in our Geochemical Laboratories for various physico chemical parameters . From the analytical data for the year 2018 it is inferred that districts, such as, Dharmapuri, Dindigul, Madurai, Ramanathapuram, Namakkal, Villupuram and Viruthunagar are found to have excess nitrate ion concentration. Similarly Districts like Dharmapuri, Erode, Karur, Salem Krishnagiri, Madurai, Namakkal, Trichy, Thiruvannamalai, Tirunelveli, Tiruppur and Vellore, are having fluoride ion concentration beyond the desirable limit for drinking purpose. In the same way districts like Dindigul, Madurai, Pudukottai, Ramanathapuram, Sivagangai, Trichy, Thoothukudi, Tirunelveli and viruthunagar are having Total Dissolved Solids (TDS) values beyond the prescribed value for potable purpose.</p> <p><b>Groundwater Recharge</b></p> <p>Artificial Recharge Measures like Check dams across rivers, installing recharge shafts in tanks and the river beds were carried out under the various projects under WRD like Master Plan for Artificial Recharge Structures (MPARS) (153 Structures), NABARD schemes (11 Check Dams), WB Aided Irrigated</p>	<p>WQ parameters limits for potable purpose</p> <p>Nitrate: &lt;50mg/l</p> <p>Fluoride: &lt;1.5mg/l</p> <p>TDS: &lt;2000mg/l</p>	<p>Water quality monitoring is a continuous process.</p> <p>Every year “Water Quality Year Book” stating the year wise water quality are being prepared by SG &amp; SWRDC, WRD and the same is communicated to all the district Collectors and line Departments Like TWAD Board, TNPCB, CGWB, for further action.</p> <p>Artificial Recharge Structures are now sanctioned under TNIAMP- II(15.26 crore - 37</p>
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<p>Agriculture Modernisation and Water-Bodies Restoration and Management Project, (IAMWARM) (56 Recharge Wells) TN IAM (Irrigated Agriculture Modernisation) Project (TNIAMP- I) (45 Recharge wells).</p>		<p>Recharge Wells-) vide GoMs No.194Public Works(WR1) dept,12.11.2019, CM Announcement Schemes (60.20 crore - 125 Recharge Wells and 760 Recharge Shafts) vide GoMs No.15 Public Works(R2) dept,06.01.2020 , Comprehensive Flood Mitigation Project in coastal Districts of TamilNadu ( 35.47 Cr-136 Recharge Wells) mainly focusing on Over exploited /Critical Areas and major aquifers has been proposed.</p>
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**Thematic Area: 12. Air Pollution including Noise Pollution**

Thematic Area :3(X)	Air Pollution including Noise Pollution
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Current Status	Desirable Level	Gap	Proposal for attending gap
<p>(1). As per the directions of the Hon'ble National green Tribunal (NGT) Noise mapping for the cities of Chennai, Coimbatore and Madurai are under preparation.</p> <p><b>(2). The procurement of Noise monitoring instruments and its usage by the police department to address noise related complaints (To be informed to the Police Department)</b></p>	<p>Identification of hot spots and preparation of mitigation plan for control of noise pollution by carrying out the Noise mapping in cities of Chennai, Madurai and Coimbatore. The Noise mapping for 3 cities to be completed.</p>	<p>Hot spots of noise pollution has to be identified based on the noise monitoring survey</p>	<p>The noise level study at the Chennai, Coimbatore and Madurai cities were completed and the noise mapping is under progress. The TNPCB has also given guidance to the Police Department on the procurement of Noise monitoring instruments.</p> <p>As per the NGT directions a Committee has been constituted with the members comprising from Police Department and TNPCB. On 9.1.2020, reputed firms were asked to demo their</p>

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		<p>noise monitoring equipments. After ascertaining the requirement from field units, a proposal will be sent to Government requesting necessary administrative and financial sanction for procurement of noise monitoring devices.</p>
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### Thematic Area: 13. Illegal Sand Mining

#### **I. Department of Geology and Mining**

- Sand mining is completely banned in major river beds namely Thamirabarani in Tirunelveli and Thoothukudi Districts and Palaru and Cheyyar in Kancheepuram Districts in view of protecting the ecology and environment of the river system.
- Sand mining operations are entrusted to Public Works Department vide G.O. (Ms).No.95 industries (MMC.1) dated 01.10.2003.
- In order to prevent illegal quarrying and transportation of minerals the Government have ordered to constitute Taluk Level and District Level Task Force Committees vide G.O.Ms. No.135, Industries (MM1) Department, dated 13.01.2009. The District Level Task Force Committee shall review the progress of Taluk Level Task Force Committee and send periodical report to High Level Committee through the Director of Geology and Mining.
- Police authorities not below the rank of Police Inspectors are vested with power for seizure of vehicles indulged in illicit quarrying and transportation of minerals vide G.O.Ms.No.114, Industries (MMC1) Department, dated 18.09.2006.
- The Government constituted a High Level Monitoring Committee to monitor the quarrying and sale of sand by Public Works Department under the Chairmanship of Secretary to Government, Industries Department vide G.O.140 Industries (MMC1) Department dated 11.07.2008.
- The Inter State transport of sand has been banned vide G.O.Ms.No.158, Industries (MMC1) Department, dated 25.08.2008 by the introduction of Rule 38-B in the Tamilnadu Minor Mineral Concession Rules 1959.
- Powers have been delegated to Police Personnel not below the rank of Inspector of Police and District Forest Officers for filing Criminal cases against the offenders indulging in illicit quarrying and transpiration of minerals under section 22 of the Mines and Minerals (Development and Regulation) Act 1957, vide G.O.Ms.No.12 Industries (MMC1) Department, dated 02.02.2009.

- In order to meet the growing imbalance between demand and supply in the state import of sand for construction purposes is permitted vide G.O (Ms) No.41, Industries (MMC.1) dated 10.04.2018 and such right shall vest only with the Public Works Department of the State Government.
- The details in respect of illegal quarrying / transportation of sand detected and penalty collected for the past five years are as furnished below:

Sl. No.	Year	Number of sand vehicle seized	Penalty levied and collected (Rs. in crore)	Number of FIR filed	Number of person detained under Goonda's Act
1	2013-2014	6728	16.32	4268	14
2	2014-2015	6623	17.45	4798	7
3	2015-2016	5146	15.60	3949	6
4	2016-2017	4409	11.98	3142	11
5	2017-2018	12659	28.53	8365	38
6	2018-2019	9557	18.17	11597	20
	<b>Total</b>	<b>45122</b>	<b>108.05</b>	<b>36119</b>	<b>96</b>

## **Special Initiatives taken for Prevention of illegal Mining**

### **a) Drone Technology UAV (Unmanned Aerial Vehicle)**

The Hon'ble High Court of Madras in the order dated: 04.03.2019 in W.P.No.2984/2017 directed the respondents to implement the drone technology alone in order to determine the exact quantum of minerals quarried from the lease hold sites. Government of Tamil Nadu vide G.O. Ms No. 219/Industries (MMD1) Department, dated 5.12.2019 decided to implement drone technology alone for determining the exact quantum of minerals quarried from the quarried areas.

### **b) 24x7 surveillance of river beds :**

River beds of Tamil Nadu are being monitored on 24x7 basis by strengthening the Taluk Level and District Level Task Force Committee by way of forming special squads with special armed police officials. The District Level Task Force committee are reviewing the progress of Taluk Level committees and send periodical report to High Level Committee constituted for curbing illicit mining of sand in river beds through Director of Geology and Mining.

### **c) Mining Surveillance System (MSS):**

The Mining Surveillance System has been developed by Ministry of Mines through Indian Bureau of Mines (Indian Bureau of Mines) in collaboration with Bhaskaracharya Institute of Space Applications and Geo-informatics (BISAF), Gandhinagar and Ministry of Electronics and Information Technology (MEITY) under digital India Programme with a vision to establish a responsive mineral administration by curbing illegal mining activity through automatic remote sensing detection technology. The system has been launched mainly for Major Mineral leases. However, the State Government in the process of implementing the same for minor minerals also.

Now the Mining Surveillance System (MSS) is being used for monitoring 500 meter radius of the mining / quarrying leases granted for major and minor minerals to determine the extent of illegal mining. In respect of sand mining, the Government have suggested to explore the possibilities of using Mining Surveillance System (MSS) for most vulnerable points where sand deposit are available.

## II. Public Works Department

- Tamil Nadu Government, in public interest issued amendment to the Tamil Nadu Minor Mineral Concession Rules, 1959, in G.O.(Ms).No.95, dated 01.10.2003 by introduction of Rule 38-A of the Tamil Nadu Minor Mineral Concession Rules, 1959. From 02.10.2003, Public Works Department sells sand from river beds to Public and consumers.
- In the G.O. Ms.No.451, Public Works (W.Spl.1) Department, Dated 03.10.2003, the Government ordered that the Water Resources Department of the Public Works Department is operating sand quarries in all the river systems of Tamil Nadu since 03.10.2003.

### REFORMS IN OPERATION OF SAND QUARRYING

- A paradigm shift in the mode of sand quarrying operations happened during April-May 2017, when several revolutionary and reformatory measures were infused into this sector complying with the “Sustainable Sand Mining Management Guidelines, 2016”.
- A specialized mobile and web application, ‘TN Sand’ came into existence where the public and lorry owners made an online booking for their load of sand from 01.07.2017. From 18.07.2017 online payment facilities are made available. This mode of sale accounted for each unit of sand which ensures controlled mining without exceeding the approved quantity.
- The introduction of online sales accounted for each unit of sand and thus the quantity to be mined from each quarry was monitored online. The waiting time outside the quarries have been done away with, and all scheduled lorries pick up sand on the date specified. SMS/email is sent to the customer 30 hours before the scheduled time of pick-up to prevent unnecessary waiting outside the quarries.

- In order to weed out the vehicles with fake permits and registration numbers, a State wide **Sand Transport Vehicle Registration Drive** was conducted in five phases wherein the Insurance, Permit and FC of the sand transport vehicles were checked by the officials from RTO and counter checked with the VAHAAN web site of the Transport Department.
- Based on the order of booking, schedule is prepared and communicated to the concerned field officers for loading the sand to the registered vehicle. The schedule contains the Lorry Chasis Number, Registration Number and Engine Number by which the field officers are able to check and seize the vehicle/lorries containing fictitious number plates. Such seized vehicles are blacklisted from TNsand and their registration are cancelled preventing them from further loading of sand from the Government Depots.
- The four boundaries of the quarries are now being demarcated with stone pillars at 50m intervals using GPS and Total Stations giving no room for any doubt in the calculation of the depth and area of quarry.
- The depot system of sand sale is now being implemented which prevents the movement of private vehicles inside the river bed and to safeguard the eco system of river.
- The quarries and depots are monitored through the CCTVs installed at these places by the Control Room established at Chennai in the Project Directorate. A robust Customer Care system is also in operation in the Control Room to redress the grievances of the public.
- Sand will be loaded in the quarries in the PWD tendered GPS fitted vehicles and online transmit permit will be issued to the transporting vehicles to transport sand from the quarry to depots. The movement of the PWD tendered vehicles will be monitored using GPS equipment fitted on to the vehicle.
- A 'shunting mobile application' has also been developed for the purpose of accounting for the quantum of sand lifted from the quarries and transported to the depots, with an online authentication at the depots also.
- The Government have constituted a District Level Task Force Committee under the Chairmanship of District Collector in the G.O.(Ms).No. 135 Industries (MMA.1) Department, dated 13.11.2009 to collect /review the information/cases relating to the illegal mining/quarrying within their jurisdictions and review the work of Taluk Level Task Forces.

- The Taluk Level Task Force, convened by the Tahsildar, the District Level Task Force, chaired by the District Collector and the State Appellate Forum act on the complaints received, if any, on illegal sand quarrying and take strict remedial measures to rectify the same in a time bound manner. In addition, as per the directions of the Hon'ble Madurai Bench of Madras High Court, a Monitoring Committee comprising experts from IIT, Anna University and Hydro Geologist have been formed to efficiently monitor the sand quarry activities and ensure that it operates in an ecologically and environmentally sustainable manner.
- The Public Works Department prepares the mining plan by Recognised Qualified Person (RQP) for getting Environmental Clearance from State Level Environmental Impact Assessment Authority(SEIAA)
- A law enforcement team comprising officials from Revenue, Police etc., is working round the clock to curb illegal mining The PWD has also developed a mobile application, 'TN Sand Investigator App' for the use of enforcement officials from revenue, police and transport department to authenticate the online permits and also to identify fake or manipulated permits.
- In the G.O(Ms)No.62, Home, Prohibition and Excise (XVI) Department, dated 10.10.2018, the Government have issues orders keen to prevent "sand theft" and "sand smuggling" with the effective and prompt action by the Government Officials and many instructions have been issued to the concerned by the Government in this regard from time to time. The need of the hour is to maintain the vast fertile eco system of this State in the stable form by curtailing all types of sand smuggling with the services of the Government Officials. In view of the position set out above the Government officials and police officials concerned are bound to prevent such offences.
- Overall, due to the continuous efforts and effective measures taken by the Government, it is ensured that sand quarrying operations are operated in an ecologically and environmentally sustainable manner complying with the existing rules and guidelines.

## Thematic Area: 14. Rejuvenation of Water bodies

(Prepared as per the direction of NGT in M.P.26/2019 of O.A 325/2015 dated 10.05.2019)

### **1. Preamble**

Tamil Nadu is the most urbanized state in India with 48.5% of its population living in urban areas. The projected percentage of the urban population for Tamil Nadu for the year 2030 has been estimated at 67% which will be the highest in the country. Even with such rapid urbanisation, the state is at the forefront in providing urban amenities to its citizens. In order to sustain this status, attention needs to be focused in providing water supply to the present generation and to preserve the water source to the future generation.

In this scenario, there can be no dispute that the water bodies play significant role in recharge of ground water, prevention of soil erosion and harvesting rain water. Most of the gains registered by the State were due to their restoration of surface water bodies, watershed development activities and rural water supply provision.

Lakes and ponds are an intrinsic part of the eco system. A lake or pond is the Water Body which holds certain volume of water generally in all seasons of the year. Lakes and ponds have traditionally served the function of meeting water requirements of the people for drinking, household uses like washing, for agriculture, fishing and also for religious and cultural purposes. Apart from these functions, which involve direct use of the lake water, lakes, ponds are also known to recharge groundwater, channelize water flow to prevent water logging and flooding. Lakes are also host to a wide variety of flora and fauna. Urban Water Bodies are a very important feature in the landscape. They are vital in easing out the hydrological severe conditions like drought and floods; they influence the micro-climate as well as enhance the aesthetic beauty of the landscape and offer various recreational opportunities. The Water Bodies in urban areas provide a diversity of values and uses ranging from ecological goods and services to direct production values. These are essentially relevant social benefits. Therefore, the need to initiate efforts to restore, conserve, manage and maintain the lakes and ponds as an inseparable part of the whole ecosystem cannot be undermined.

### **1.1 Overview on Water Resources in Tamilnadu**

Tamil Nadu constitutes 4 percent of India's land area and is inhabited by 6 percent of India's population, but has only 2.5 percent of India's water resources. The demand for water in Tamil Nadu is increasing at a fast rate both due to increasing population and also due to larger per capita needs triggered by economic growth. The per capita availability of water resources however, is just 900 cubic meters when compared to the national average of 2,200 cubic meters. Agriculture is the largest consumer of water in the State using 75 per cent of the State's water resources.

The State is heavily dependent on monsoon rains. The annual average rainfall is around 930 mm (47 percent during the north east monsoon, 35 percent during the south west monsoon, 14 percent in the summer and 4 percent in the winter).

There are 17 major river basins in the State with 61 reservoirs and about 41,948 tanks. The utilizable groundwater recharge is 22,423 MCM. The current level of utilisation expressed as net ground water draft of 13.558 MCM is about 60 per cent of the available recharge, while 8875 MCM (40 per cent) is the balance available for use.

### **1.2 Rain Water Harvesting scheme**

Tamil Nadu stands as an Pioneer State in strictly implementing the Rain water harvesting scheme. Due to the successful implementation of the scheme during the years 2001-2006, the ground water table had considerably increased in all corporation and Municipal areas.

To begin with, the implementation of the scheme was initiated as per G.O.138, MAWS department dated 11.2.2002. Further, to implement the scheme in a effective manner, a legal perspective was added vide Tami Nadu Government Law 4/2003 and it was notified in Government gazette dated 19.7.2003 as Part IV- section 2.

Intensive and widespread public awareness campaigns through rallies, dramas and advertisements are organised for people to emphasise and ensure that all the buildings are compulsorily provided with Rain water harvesting structures. Provisions have also made to disconnect water supply connection to the buildings without Rain water harvesting structures.

For the new buildings that are under construction, planning permission is given only to those buildings which have made provisions of Rain water harvesting structure and this is being enforced strictly. Also, caution deposit amount is collected to ensure the provision of Rain water harvesting structures in new buildings.

As per rule 63 of the Tamil Nadu Combined Development and Common Building Rules 2019 published vide G.O.18, MAWS Department dated 6.2.2019, provisions have been made to ensure that Rain water harvesting structure is provided in all the buildings. Besides this, illustrations for developing the Rain water harvesting infrastructures have been enclosed as Annexure-XXII in the Tamil Nadu Combined Development and Common Building Rules 2019.

Of the total no.of 46.10 lakh buildings existing in 14 Corporations (Excluding GCC) and 121 Municipalities, RWH structure has been provided in 39.40 lakh buildings(39.10 Private buildings and 30331 Government Buildings). All possible efforts are being taken to implement water harvesting techniques in all the water bodies. Under **Jal Shakti Abhiyan** by the Government of India major thrust is being given to creation and maintenance of Rain Water Harvesting structures before the onset of North east Monsoon.

## **2. Comprehensive Action Plan on Restoration of Water Bodies**

The Government of Tamil Nadu is taking continuous effort to protect the water bodies to sustain the ground water resource to fulfill the water requirement of present generation and future generation. The Honorable National Green Tribunal Court, Delhi also emphasizes the need of restoration of water bodies in view of the depletion of ground water sources in all over India and directed all the State and UT to submit Action Plan on Restoration of Water Bodies (vide NGT Order dated 10.05.2019 in M.A.No. 26/2019 in OA.No. 325 of 2015) to CPCB within the period of three month. In compliance to the NGT order the Central Pollution Control Board published the indicative Guidelines for Restoration of Water Bodies in June 2019.

The Government of Tamil Nadu has already taken initiatives to conduct survey to map all the minor irrigation tanks with the support of Government of India and the survey for mapping is in progress. It is planned to use the survey results for mapping the minor irrigation water bodies, and planned to designate the best use of water bodies by conducting water sample test and by conducting the reconnaissance survey to

overcome the influence of Sewage disposal, Industrial effluent disposal, Solid Waste, Plastic Waste and Construction Debris disposal. Accordingly a comprehensive Action Plan is proposed for the effective and earlier completion of Restoration of Water bodies in Tamil Nadu.

### 3. Status report on Action taken to preserve the water bodies

As a progressive State, The Government of Tamilnadu takes effort to rejuvenate the water bodies periodically, as well as amend the required acts in time to Time. Total available 900 048 Numbers of water bodies are being maintained by the Public works department(PWD), Rural Development(RD) , Hindu Religious and Charitable Endowment department (HR & CE), Municipal Administration department (CMA) Greater Chennai Corporation (GCC) and Directorate of Town panchayats (DTP).The details are tabulated :

Department / Owners	Number of water bodies	Total Numbers of water bodies Rejuvenated		Total Number water bodies under rejuvenation	Total Number water bodies to be taken for rejuvenation
		status as on 20.10.2019	Present status upto 21.01.2020	Status as on 21.01.2020	
Greater Chennai Corporation	210	66	66	70	74
Commissioner of Municipal Administration	585	214	214	40	331
Directorate of Town Panchayats	2186	836	836	51	1299

Rural Development and Panchayat raj Department	70367	16882	21032	8968	40367
Public Works Department	14341	3281	5340	995	8006
Hindu Religious and Charitable Endowment Department	2359	2140 (849 +1291 good condition)	2148 (857+1291 good condition)	12	199
<b>Total</b>	<b>90048</b>	<b>23419</b>	<b>29636</b>	<b>10136</b>	<b>50276</b>

The actions taken by various Departments to restore, rejuvenate and maintain on sustainable manner are highlighted.

### 3.1 Greater Chennai Corporation

Greater Chennai Corporation has identified 210 water bodies in its jurisdiction which are under its own control. Out of these, restoration of 66 water bodies have been completed at an amount of Rs.37.14 crore .The restoration works carried out, includes widening of the tank and deepening of the tank, bund formation, inlet and outlet arrangements, walkway.

The Restoration and Rejuvenation of 70 water bodies are being carried out under Chennai smart city fund and CSR fund and the works are in progress. During execution of the work the illegal sewer connection let into the tank are plugged and the works are in progress. Restoration of Villivakkam tank is being carried out in 25 acres. The storage capacity of the tank will be increased five times.

Further restoration of 47 water bodies are to be taken up under CMCDM fund at an estimate amount of Rs.109.88 Crore. Commissioner, Greater Chennai Corporation has conducted a meeting with major corporate companies and welfare organizations on 30.07.2019 for fund tie up for restoration of 27 water bodies through CSR fund. So far totally 4061 families have been identified as encroachers in the

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ponds/lakes. Action is being taken for resettlement and rehabilitation of these families Enumeration and biometric survey of these families is in progress. With this all 210 ponds will get restored maximum over a period of 9 months.

### **3.2 Chennai Rivers Restoration Trust**

Chennai Rivers Restoration Trust has undertaken both wetland and water body restoration projects.

#### **ECOLOGICAL RESTORATION OF ADYAR CREEK – PHASE-I**

A pioneering urban wetland conservation initiative was taken up by the Government of Tamil Nadu in the degraded 358 acres of Adyar Creek and Estuary. The restoration activities in Phase-I were undertaken in the 58 acres of Adyar Creek, which was once a place for disposal of sewage, municipal solid waste and construction debris and which had completely led to the severe degradation of surface and ground water quality and destruction of habitats of avian fauna, reptiles and fishes. The major restoration activities undertaken are: (i) increasing the water spread and tidal interaction area; (ii) plantation of native plants such as Tropical Dry Evergreen Forest species, mangroves and its associates, reeds, etc., (iii) landscaping for interactive environmental programmes.

In Adyar Eco-Park, a total of 1,43,818 saplings from 173 species of Coromandel coastal vegetation including Mangroves and Mangrove associated plants were systematically planted in order to restore the wetland ecosystem.

The vegetation planted in the wetlands has successfully survived and third and fourth generation trees are growing. A recent floral and faunal survey reported around 465 species of trees, shrubs, herbs and grasses and 368 species of animals such as molluscs, crabs, dragonflies, butterflies, fishes, amphibian, reptiles, birds and mammals. This figure stood at 141 before the restoration activity.

Adyar Eco-Park is now functioning as a centre for Environmental Education and Research. Students from various schools and colleges across the city regularly attend the environmental awareness programmes which impart knowledge on the coastal wetland ecosystem.

## **ECO-RESTORATION OF ADYAR CREEK AND ESTUARY – PHASE-II**

In continuation of the restoration of Adyar Creek in 58 acres, an extent of 300 acres of Adyar creek, estuary, islets, mudflats and surrounding areas was taken up for restoration under Phase-II. This creek and estuary area was infested with exotic species like *Prosopis juliflora*, with indiscriminate disposal of sewage, solid waste and debris, all of which had contributed to the severe degradation of the estuarine ecosystem and which subsequently resulted in the shrinking of the water spread area, reduced tidal interaction and degradation of biodiversity.

Bund stabilization, removal of debris and plastics and other restoration activities enhanced the tidal interaction and increased the water spread in the degraded Creek and Estuary. Around 57000 mangroves and 35000 terrestrial saplings have been planted. All this has increased the bio-diversity of the Adyar Creek and Estuary ecosystem.

## **INTEGRATED COOUM RIVER ECO-RESTORATION PROJECT.**

The Government of Tamil Nadu had granted Administrative Sanction of Rs.604.77 crores for implementation of the activities in the first phase of restoration of the Cooum river and works commenced in September, 2015.

All the line departments have commenced the execution of the sub-projects entrusted with them, viz., Desilting and river widening by Public Works Department; Solid waste removal, fencing, boom deployment and developing parks by the Greater Chennai Corporation; Removal of solid waste and fencing along the banks by Commissionerate of Municipal Administration, Directorate of Town Panchayats and Directorate of Rural Development and Panchayat Raj in their respective areas; Laying of interceptor pipelines & installing modular sewage treatment plants by Chennai Metropolitan Water Supply and Sewerage Board; Resettlement & Rehabilitation of Project Affected Families (PAFs) by the Tamil Nadu Slum Clearance Board and are under various stages of progress and the status of the progress as on December 2019 is detailed below:

### **Public Works Department (PWD)**

The Chief Engineer, PWD presented the progress of work on the various sub-projects:

- In Reach -I, from Chetpet Bridge to Padikuppam Causeway (Ch.9677 m - 15940 m), desilting work and baby canal work has been fully completed for the entire stretch of 6263 m.
- In Reach - II, from Padikuppam Causeway to Vanagaram bridge (Ch.15940 m – 22337 m), desilting has been completed for 5650 m out of 6397 m and baby canal has been completed for 5234 m out of 6397 m. The desilting and formation of baby canal in the remaining stretches has been dropped due to water logging and lower bed level.
- In Reach-III, the stretch from Vanagaram Bridge to Paruthipattu (Ch.22337m - 27336 m), out of a total length of 4999 m, desilting has been completed for 4000 m and execution of baby canal for 3205 m has been completed. The desilting and formation of baby canal in the remaining stretches has been dropped due to water logging and lower bed level.
- Under this project, within the CRZ stretch i.e., from Cooum river mouth to Napier bridge (ch.0 m to 700 m), for the continuous opening of river mouth and desilting of the river, the NIOT has submitted the final report and recommended for capital dredging and curved training wall at an estimated cost of Rs.70 crs. The Proposal has been submitted to Government for seeking Administrative Sanction and the approval is awaited.
- With regard to the improvements in the CRZ stretch i.e. between Napier Bridge and Chetpet Railway Bridge (Ch.700m to 9677m), the desilting work has been completed for 8400 m out of 8977 m and for a balance length of 577 m, desilting work is in progress in the recently evicted stretch (Navalar Nedunchezian Nagar). All the proposed works in these stretches will be fully completed by December, 2019.
- In the Northern arm (Ch.0 m to 2040 m), desilting has been completed for 1200 m out of 2040 m. Desilting for the remaining length will be carried out after the relocation of Sathiyavani Muthu Nagar slum habitation for a length of 840 m.

### **Greater Chennai Corporation (GCC):**

The Commissioner, GCC presented the progress of various sub-projects entrusted with GCC as follows:

- Trash boom systems have been deployed across the river at 8 locations viz., near C-in-C bridge, Periyar bridge, Choolaimedu, Metha Nagar, near Central Buckingham Canal, behind Madras Medical College, Quaid-e-Millath bridge and near Napier Bridge and a total quantity of 35,926 MT of floating waste has thus far been removed from these booms.
- The removal of accumulated solid waste from the banks of the Cooum River has been fully completed.
- Under this project, fencing work has been fully completed for a length of 9.90 km and work is under progress in remaining stretches, out of a total length of 23.92 km. Fencing has been taken up in the stretches where work front is available and work could not be commenced in the stretches which are under encroachment and pendency of court cases.
- Regarding 9 parks & walkways envisaged under this project, The Member Secretary, CRRT has informed that the proposal for developing parks may be modified with riverine vegetation with cart track in tune with the work done in Adyar Eco-Park and CRRT has been requested to take up the work for developing riverine vegetation along the river banks i.e. Terrestrial, Mangroves and its associates and also bio-engineering to stabilise the bunds.
- A total of 14,257 Project Affected Families (PAFs) had been identified along the Cooum River under this project. Thus far, 10,193 PAFs have been resettled at 4 TNSCB Scheme Areas, viz., Gudappakkam, Navalur, AIR Land & Perumbakkam.
- The Commissioner, GCC has informed that, in pursuant to the Chief Secretary's instructions, Sathyasai Nagar Slum Habitation & leftout PAFs from Navalur Nedunchezhiyan Nagar & Amma Nagar have been completely relocated. In the recent relocation drive in December, 2019, a total of 402 PAFs from the banks of the Cooum River have been resettled at Perumbakkam TNSCB Scheme.
- Further, the Commissioner, GCC informed that the Allotment Orders from TNSCB have been obtained to resettle 2092 PAFs of Sathiyavani Muthu (SM) Nagar slum habitation, a only slum habitation in the Northern arm of the Cooum River for a length of around 840 m. Relocation of these PAFs to be taken shortly.

### **Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB):**

The Managing Director, CMWSSB presented the progress of works entrusted with CMWSSB as follows:

#### **Interceptor and Diversion Pipelines:**

- Package V (Anna Nagar) – 100% works have been completed and the system has been commissioned.
- Package X (Anna Nagar) – 100% works have been completed and the system has been commissioned.
- Package II (Chetpet) – 100% of works have been completed. Electrical & Mechanical works are under progress and the scheduled date of completion is 31.12.2019.
- Package III (Nungambakkam) – 76% of works have been completed. Orders are placed for the procurement of EMI items. Remaining works are under progress. Probable date of completion is 28.02.2020.
- Package IV (Metha Nagar) – 26% of work completed. Due to slow progress the contract was terminated and retender was invited. Work order issued on 26.12.2019.
- Package VI (Langs Garden Road) - 28% of work completed. Work is under progress. Probable date of completion is 31.12.2020.
- Package VII (South Cooum River Road) – 21% of work has been completed. Suction well 4th lift wall completed and sinking work is under progress. Collection well 6th lift wall completed and sinking is under progress. Erection of 19 number of Manholes completed. Scheduled date of completion is 30.09.2020.
- Package VIII (Aminjikarai) – 96% of work has been completed thus far and work will be completed before 31.03.2020. Scheduled date of completion is 10.06.2020.
- Package IX (NSK Nagar) – work will be commenced after the removal of encroachments.
- Package I (Chintadripet) - An alternate proposal has been devised eliminating the need for construction of sewage pumping station on MRTS land, at a revised cost estimate of Rs.2.37 crs as against the original cost estimate of Rs.3.63 crs. Tender has been finalized and work order issued on 26.12.2019.

#### **Modular Sewage Treatment Plants (STPs):**

- Regarding Modular STP (1.0 MLD) near College Road, Chetpet, civil work is under progress and so far, 27% of work has been completed. The work will be completed by 26.09.2020.

- Regarding Modular STP (1.2 MLD) at Nungambakkam, civil work is under progress and so far, 15% of work has been completed. The work will be completed by 24.05.2020.
- For Modular STP (0.6 MLD) at Maduravoyal, site clearance and soil investigation works have been completed. So far, 1% of work has been completed and will be completed by 18.12.2020.
- For the 10 MLD STP, the work order was issued on 18.06.2018. Thus far 3% of work has been completed and the scheduled date of completion is 31.05.2021.

#### **Under Ground Sewerage System (UGSS):**

- For UGSS Nerkundram, thus far 12% of work has been completed and the remaining work is under progress. The work is proposed to be completed by 23.12.2021.

#### **Tamil Nadu Slum Clearance Board (TNSCB)**

TNSCB officials presented the following details under ICRERP:

- A total of 14257 Project Affected Families (PAFs) identified within the Cooum River boundary and 458 commercial establishments under Auto Nagar Scheme. Thus far, 12240 tenements have been allotted by TNSCB. To resettle the remaining 2017 PAFs, 276 tenements are ready for allotment now, another 784 tenements will be ready by March, 2020 and remaining 957 tenements will be ready by August, 2020.

#### **Commissionerate of Municipal Administration (CMA)**

The Commissioner of Municipal Administration presented the following with regard to work progress:

- Within Thiruverkadu Municipality limits, accumulated solid waste along the banks of the river has been fully removed.
- Under fencing component within CMA limits, out of the total proposed length of 10.78 km on both sides of the river banks, thus far 6.59 km has been fully completed.
- In Phase I, fencing has been fully completed for a length of 1.65 km and the work is expected to be fully completed by January, 2020.

- In Phase II, fencing has been fully completed for a length of 1.74 km and the work is expected to be fully completed by March, 2020.
- In Phase III, fencing works are under progress for a length of 3.31 km and are at various stages of completion; slum encroachments (Perumal Koil Street and Shanmuga Nagar) have to be evicted for a length of 1.06 km. The work is expected to be fully completed by June, 2020.

#### **Directorate of Rural Development & Panchayat Raj (DRD)**

The Director, Rural Development presented the status of the entrusted works as follows:

- The accumulated solid waste for a quantity of 4582 cu.m has been fully removed from the banks of the Cooum river within the DRD areas viz., Senneerkuppam, Adayalampattu and Vanagaram Village Panchayats.
- Fencing works have been fully completed in 2 Village Panchayats viz., Vanagaram and Adayalampattu.
- In Senneerkuppam, out of the total length of 1000 m, fencing has been completed for 783 m length and fencing could not be taken up in the confluence point of Parivakkam odai for a length of 30 m and for another 187 m where the existing compound wall is in good condition. The work is expected to be completed by March, 2020.
- With regard to the vegetation along the Cooum River banks within Vanagaram Village Panchayat, the Member Secretary, CRRT has suggested that the vegetation planting works may be transferred to CRRT as they have expertise in riverine plantation (Phase I & II of Adyar Creek & Estuary.)

#### **Chennai Rivers Restoration Trust**

Regular and periodic community awareness programmes are being conducted on the Integrated Cooum River Eco-Restoration Project for various stakeholders such as Residents Welfare Associations, National Green Corps of educational institutions, eco-clubs of schools and other community based organisations. In December, 2019, 1234 school children & teachers have been sensitized and 650 families residing at Tamil

Nadu Slum Clearance Board (TNSCB) Navalur Nedunchezhiyan Nagar, Chintadripet along the banks of the Cooum River have been sensitized through the awareness programmes. Thus far, 5777 stakeholders have been sensitized under this Community Education Programme.

### **ADYAR RIVER RESTORATION PROJECT FROM ORIGIN TO MOUTH**

#### **Public Works Department (PWD)**

The Chief Engineer, PWD presented the progress of works entrusted with PWD as follows:

- For the package 1, i.e., from River mouth to Thiru. Vi. Ka Bridge, PWD has to get CRZ Clearance. REIA report is under preparation. The study will be completed by the end of January, 2020 and it will be submitted to DCZMA by February, 2020.
- For package 2 i.e., from Thiru. Vi. Ka. bridge to Kotturpuram bridge, desilting works are under progress for a length of 1.3 km. The work is expected to be completed by February, 2020.
- For package 3, i.e., from Kotturpuram bridge to Saidapet road bridge, desilting works are under progress for a length of 0.85 km. The work is expected to be completed by February, 2020.
- For package 4, i.e., from Saidapet road bridge to Jafferkhanpet road bridge, regarding construction of flood protection wall, 5th lift of concrete completed for a length of 350 m flood protection wall. Desilting work is in progress for a length of 50 m. The expected date of completion is December, 2020.
- For package 5, i.e., from Jafferkhanpet road bridge to Manapakkam Check dam, construction of flood protection wall for a length of 415 m and desilting for a length of 500 m is in progress. The expected date of completion is December, 2020.
- For package 6, i.e., from Thiruneermalai to Outer Ring Road, regarding construction of flood protection wall, 5th lift is completed for a length of 406 m and desilting work for a length of 500m is under progress. The expected date of completion is December, 2020.
- For package 7 (maintenance of river mouth for 4 consecutive years), CRZ Clearance has been denied by MOEF&CC. NIOT has been approached to take up the multi seasonal study.

### **Greater Chennai Corporation (GCC)**

The Commissioner, GCC presented the progress of various subprojects as follows:

- Under this project, out of a total 24.67 km, fencing work has been fully completed for 2.65 km and for 7.13 km length works are in various stages of completion like piling, pile caps, grade beams, columns & RRM. The expected date of completion is December, 2020.
- Under Solid waste removal works, so far, 6155 MT out of a total 50664 MT of debris and 2507 MT out of a total 16826 MT of garbage have been cleared from the banks of the Adyar River.
- For the trash boom systems which are to be installed at 3 suitable locations across the Adyar River, tender has been finalised and LoA issued. The booms will be deployed by January, 2020.
- Regarding the work on beautification of bridges being maintained by GCC, work has been completed on all the three bridges (South Buckingham Canal Bridge near Kotturpuram Railway Station, Thiru. Vi. Ka Bridge and Alandur Bridge) and on one bridge being maintained by State Highways Department i.e., Maraimalai Adigalar Bridge (Saidapet Bridge). All the bridge beautification works have been fully completed as envisaged.
- Regarding the Proposal for developing Maintenance walkways to be dropped and CRRT may take up the work for developing riverine vegetation along the river banks and also bioengineering to stabilise the bunds. The proposed modifications and transfer of subprojects to CRRT will be placed before the CRRT Board for approval.
- For the Park near Kotturpuram, revised estimate being prepared as per the present site condition and tender will be floated shortly.
- The Park / Lorry Parking proposed at Guindy Industrial area has been jointly inspected by the Member Secretary, CRRT along with line department officials. During the inspection it is observed that, the proposed site belongs to SIDCO and located beyond the river boundary, which is not conducive for creating a public space for urban recreation, the proposed lorry parking at

Jafferkhanpet and cycle tracks envisaged under the riverfront development component shall be dropped and the same may be placed before the CRRT Board for dropping and the available savings can be used for riverine vegetation.

- Regarding parking lots proposed at 5 locations, the proposals for developing parking lot may be dropped and CRRT can take up development of green belt with native species supporting the biodiversity of Adyar riverine system.
- For the construction of community toilet at 5 locations, re-tender called far with due date on 16.12.2019. The expected date of completion is 9 months from the date of award of contract.
- Plantation of Trees, shrubs, creepers, reeds, mangrove and grass all along the river can be executed by CRRT as they have expertise in riverine plantation works under Phase-I & II of Adyar Creek & Estuary Restoration Projects.

#### **Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB)**

The detailed progress of work components entrusted with CMWSSB was presented as follows:

- Package I - Thus far 2% of work has been completed. Soil investigation work is completed at Modular STP site and along the alignment of pipeline in bund portion. Works will be commenced on completion of de-silting work on the bund portion by PWD. The work is expected to be completed by 24.03.2021.
- Package II - Kotturpuram Slum Board tenements are to be demolished and reconstructed by TNSCB with new sewerage system and hence the proposal is dropped.
- Package III – Thus far 2% of work has been completed. Soil investigation work is completed for pumping station site at Radhakrishnapuram. Manholes under construction and earth work excavation for collection cum suction well for SPS site is under progress. The work is expected to be completed by 24.03.2021.
- Package IV - Land has been identified at Todd Hunter Nagar during the joint inspection conducted along with PWD. Proposed

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Equalization tank and 8 MLD STP which has to be constructed in Todd Hunter Nagar comes in the alignment of CMRL Tunnel. Joint Inspection with CMRL officials proposed to finalize the proposed site.

- Package V - 7% works completed thus far. Collection System for 400 metres laid so far and Manholes being constructed. Work to be completed before the scheduled date of completion of 24.03.2021.
- Package VI –Alternate proposals identified for I&D works in view of site conditions and redesign for plugging of 9 outfalls under progress.
- Package VII – During recent joint inspection of the Member Secretary, CRRT along with line department officials, it was decided that the proposed I&D works of Package VII may be dropped. Out of 5 outfalls, flow of 3 outfalls will be arrested in the Manapakkam UGSS which is under execution. The other 2 outfalls will be tackled in Nandambakkam UGSS for which DPR is ready.
- For packages VIII to XI, tender has been opened and Technical evaluation completed Price Bid under evaluation.
- For Package XII, the proposal has been dropped as an alternative proposal has been approved for linking the outfalls to the pumping station proposed under Nandambakkam UGSS.
- For Package XIII and XIV, proposals has been as an alternate proposal has been included in the Adyar drains project to intercept Nandambakkam drain and construct SPS on the bank of the drain and pump it to Bharathi Salai SPS in Ramapuram UGSS.

#### **Commissionerate of Municipal Administration (CMA)**

The Commissioner of Municipal Administration presented the following with regard to work progress:

- In Anakaputhur Municipality, fencing work is proposed for a total length of 3 km, of which 1.3 km is under encroachment and relocation of 676 PAFs is to be taken up. For the remaining stretch of 1.70 km, work has been commenced in which fencing work has been fully completed for a length of 0.3 km and works are in progress at various stages of works for a length of 1.4 km.

- The construction of community toilet in Anakaputhur Municipality has been fully completed.
- Under solid waste removal, thus far 287 MT out of 522 MT of garbage has been removed. The remaining work will be taken up after the removal of encroachments.
- Regarding UGSS, DPR has been completed for the implementation of UGSS at a cost of Rs.132.35 crore in Pammal Municipality and Rs.78.80 crore in Anakaputhur Municipality. The proposal has been submitted to Government for seeking Administrative Sanction.

#### **Directorate of Town Panchayats (DTP)**

The Director, Town Panchayats presented the following with regard to work progress:

- In Kundrathur Town Panchayat, fencing has been completed for a length of 1.17 km and work is in progress for the remaining length. In Thiruneermalai Town Panchayat, fencing works are in various stage of completion for a length of 2.037 km and in Perungalathur Town Panchayat, fencing works are in various stage of completion for a length of 5.178 km.
- For solid waste removal, 2250 cu.m of legacy waste has been removed out of 8600 cu.m through bio-mining. The work is expected to be completed by December, 2020.

#### **Directorate of Rural Development & Panchayat Raj (DRD)**

The Director, Rural Development presented the status of the entrusted works as follows:

- Fencing work is proposed for a total length of 35.17 km within DRD limits, of which works are in various stages for a length of 20.81 km. The entire work is expected to be completed by December, 2020.
- Under solid waste removal, out of 8275 MT, thus far 5200 MT of accumulated solid waste has been removed and the remaining waste will be removed after the completion of fencing.
- Plantation work will be carried out after the completion of fencing works.

### **Tamil Nadu Slum Clearance Board (TNSCB)**

- Tamil Nadu Slum Clearance Board officials presented the following:
- Out of a total 9539 Project Affected Families (PAFs) identified on the banks of the Adyar River. Thus far, 4398 PAFs have been resettled and remaining 5141 PAFs have to be resettled.
- In order to resettle these PAFs, 1831 tenements will be ready by June, 2020, and another 3360 tenements will be completed by December, 2020.

### **3.3 Municipal Administration Department**

There are 14 Corporations (except Chennai Corporation) and 121 Municipalities being administered with 585 municipal owned water bodies across 32 districts. There are 1746 water bodies located within the Municipal/ corporations limit and are being maintained by the concerned Departments. Of the 585 numbers of Municipal owned water bodies, 214 water bodies have been restored by the concerned urban local bodies at a total estimated cost of Rs. 58 crore with restoration activities such as De-silting, De-weeding and strengthening of bunds etc., to receive the water during rainy season and to preserve it for recharging the ground water storage as Rain Water Harvesting Structures. Under Smart City funds 8 lakes in Coimbatore Corporation have been taken for rejuvenation at an estimated cost of Rs. 320 crore and the works are in progress. In this connection about 12500 encroachments have been identified of which 10000 encroachment have been cleared and their families have been rehabilitated in the 14 slum clearance housing colonies. Further in Thanjavur Corporation two ponds have been taken for restoration at an estimated cost of Rs. 10.25 crore under Smart City fund and the works are in progress.

Under the Kfw fund, 42 water bodies have been taken up for rejuvenation in 5 (Pattukottai ,Pudhukotai, Nagapattinam, Ariyalur and sathu)r urban local bodies at the cost of Rs.38 crore and in Erode Corporation water bodies rejunevation is taken under Kfw at an estimated cost of Rs.5.95 cr. All the works are in progress.

Under Tamilnadu Sustainable Urban Development Programme, 2 water bodies in Pallavapram Municipality has been taken for rejuvenation at an estimated cost of Rs. 14.98 crore and the works are in progress.

### **3.4 Directorate of Town Panchayats**

Special initiatives are being taken up to rejuvenate all water bodies in Town Panchayats. Out of 2186 water bodies owned by Town Panchayats, it is found that 251 water bodies are in good condition. 836 water bodies have been restored under various schemes by the concerned Town Panchayats at an estimated cost of Rs.85.76 crore in the last five years. 50 water bodies rejuvenation works are taken up under CGF and O&M Fund 2019-20 at an estimated cost of Rs.24.50 crore and one work under EMAT at an estimated cost of Rs.3.50 crore is in progress. The remaining water bodies will be rejuvenated in a phased manner.

### **3.5 Rural Development and Panchayat raj Department**

The Rural Development department is having 21609 numbers of Minor irrigation tank and 48758 numbers of water bodies across 31 districts. Of the 70367 numbers of water bodies 1200 water bodies have been restored at an estimated cost of Rs. 300 crore under Tamil Nadu Village Habitations Improvement (THAI)-II Scheme in the year 2016-17 and only partial restoration has been done using unskilled manual labour for the 50,796 MI Tanks, Ponds and Ooranies at a total expenditure of Rs.6339.49 crore was paid as wages to the MGNREGS workers in the past 5 years.

Under Kudimaramathu Scheme for the year 2019-2020, Rural Development Department has sanctioned to restore/renovate 5,000 Minor Irrigation tanks and 25,000 ponds/Ooranies under State funds to the tune of Rs.500 Crores, in convergence with MGNREGS wherein de-silting and deepening of the water bodies and strengthening of bunds will be done by engaging machineries and the reconstruction of appurtenances like Inlets, outlets, sluices, surplus weirs etc., will be done under MGNREGS, to the tune of Rs.750 Crores.

Under above Kudimaramathu Scheme, so far 21,032 water bodies consisting of 3751 Minor Irrigation tanks and 17,281 Ponds and Ooranies has been rejuvenated. The remaining 8,968 works are under progress and the remaining water bodies will be restored in a phased manner in 3 years.

The Detailed Field Survey to assess the condition of the MI tanks and Ponds/Ooranies in conjunction with the revenue records and to assess the nature and extent of encroachment is currently under progress.

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### **3.6 Public Works Department**

The Public Works Department is having 14341 numbers of irrigation tanks across 31 districts. Out of 14341 tanks, during last 4 years, 5340 tanks have been rehabilitated at an estimated cost of Rs.779.06.43 Crores under Kudimaramathu, Repair, Renovation and Restoration (RRR Phase I-III), Tamil Nadu Irrigated Agriculture Modernisation Project (TNIAMP Phase – I), Desilting of tanks for Chennai City Water Supply.

Rehabilitation of 906 Tanks under Phase – II of Tamil Nadu Irrigated Agriculture Modernisation Project (TNIAMP), Rehabilitation of 89 Tanks under Repair, Renovation and Restoration (RRR Phase IV & V) are to be taken up shortly.

In these 14341 tanks, 37605 No. of encroachment were identified and 20850 No. of Encroachment were evicted.

### **3.7 Hindu Religious and Charitable Endowment Department**

Temple tanks have been an integral part of ancient Tamil settlements. There are 2,359 tanks maintained by the temples under the control of the HR&CE Department. The temple tanks are being protected by clearing the encroachments in and around the temple tanks, constructing compound wall, de-silting the tanks, relaying the steps of the tanks and by providing facility for the inflow of rainwater and overflow channels for surplus water.

Out of these 2,359 tanks, 1068 tanks were identified for renovation while remaining 1,291 tanks are in good conditions. During the past 8 years this department has repaired, renovated and rejuvenated 849 temple tanks at a cost of Rs.4.69 crores. The Encroachment on temple tanks dumping of garbage and debris, illegal settlement on temple tanks bunds, blockage of inflow of water, mixing of sewage water are some of the hurdles that need to be overcome while taking up restoration and renovation of temple tanks, Further 8 water bodies completed in the past six months. At present 12 water bodies taken for rejuvenation and in progress.

### 3.8 Rejuvenation of polluted river stretches

Tamil Nadu has identified Six River stretches namely Sarabanga, Thirumanimutharu, Vasista, Cauvery Bhavani & Thamirabarani based on the level of BOD Priority I to V has been fixed.

As per the Hon'ble NGT (PB) directions to prepare action plans to bring all the polluted river stretches to be fit at least for bathing purposes. River Rejuvenation Committee (RRC) was constituted in Tamil Nadu vide G.O.(D) No.372 dated 26.12.2018 comprising with the members Industries Commissioner, Commissioner Municipal Administration, and the Director of Environment and Member Secretary, Tamil Nadu Pollution Control Board.

The revised action plans for the four polluted river stretches in priority-I (River Sarabanga, Vasista, Thirumanimutharu & Cauvery) were prepared including gap analysis and submitted to CPCB, Delhi on 18.04.2019 after the approval of the River Rejuvenation Committee (RRC) and the same was recommended with conditions by the CPCB Task Team in the 5th review meeting held on 24.04.2019. Also, the revised action plans for the two polluted river stretches in priority-IV & V (River Bhavani & Thamirabarani) were also prepared and submitted to CPCB, Delhi on 29.05.2019 before the Hon'ble NGT (PB). The same is under consideration of CPCB, Delhi. The Action Taken Report on these six river stretches has been submitted to CPCB on 17.09.2019.

#### 4. TIME FRAME /Action Plan for Rejuvenation of Water bodies.

Phase I Data Collection and Mapping	
Collection of Historical, Geographical and geological data ,Collection of catchment and lead channel pollution data, sewage disposal contamination data, industrial effluent disposal data, solid waste, plastic waste, e-waste, hazardous waste and C & D waste disposal data for all the Water Bodies and preparing the Digital map based on the collected information	before 31.03.2020

**Current status**

Out of 90048 water bodies available in Tamilnadu, about 29636 numbers of water bodies rejuvenated till date. And 10136 numbers of water bodies are under rejuvenation. Mean while as per the direction of MP 26 /2019 and OA 325 of NGT, action is being taken to revive the data of all the water bodies and to collect the actual data at field level in respect of disposal of liquid waste and solid waste in and around the water bodies and water course

**Phase II Gap Analysis**

Declaring the Designated Best use of water bodies and ascertain the quality of water as per the standard and conducting Reconnaissance survey to identify the source of pollution and prepare long term preventive measures through Detailed Gap Analysis on Sewage Management, Industrial Effluent Management and Solid waste Management and other associated issues and in-situ facility availability for minimizing the pollution level

before 30.09.2020

**Current status**

Action is being taken to collect the samples from the water bodies already rejuvenated to declare its designated usage

**Phase III Preparation of Detailed Project Report**

1. Preparation of Detailed Project Report to Restore the water bodies by preventing the entry of sewage in to the water bodies, to increase the capacity of tank, strengthen the bund and improving the other amenities based on the local requirement.

01.10.2020 –  
31.03.2021

2. Removal of encroachments and blockades, deciding on flood control measures and preparing cost estimation

<b>Also a parallel activity from the beginning</b>	
<b>Current status</b>	
Around 10500 encroachments removed at Coimbatore where the water body rejuvenation works taken under smart city scheme, and 20800 encroachments were removed by the Public works Department.	

<b>Phase IV Implementation Phase &amp; Sustenance Phase</b>	
1. Tendering and Implementation	
2. Good Governance, transparency and empowerment of stakeholders, deciding ownership of each water body, creating awareness and training programme for conservation, promoting public participation	01.07.2021 – 30.06.2022

**Name and Designation of Designated Officers for ensuring compliance to provisions under Statute**

S.No.	Thematic Areas	Name of the Designated Officers	Department
01.	Compliance to Solid Waste Management Rules including Legacy Waste	Thiru. S. Thirumavalavan Superintending Engineer O/o the Commissioner of Municipal Administration, Chennai.	CMA/GCC
02.	Compliance to Bio-medical Waste Management Rules	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
03.	Compliance to Construction & Demolition Waste	Thiru. S. Thirumavalavan Superintending Engineer O/o the Commissioner of Municipal Administration, Chennai.	CMA/GCC
04.	Compliance to Hazardous Waste Management Rules	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
05.	Compliance to E-Waste Rules	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
06.	351 Polluted river stretches in the country	Dr.S.Selvan Addl. Chief Environmental Engineer	PWD/TWAD/ CMA/MAWS
07.	122 Non-attainment cities	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
08	100 Industrial Clusters	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
09.	Status of STPs and re-use of treated water	Thiru. S. Thirumavalavan Superintending Engineer and Chief Engineer (STP), CMWSSB	CMWSSB/CMA
10.	Status of CETPs/ETPs including performance	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
11.	Ground water extraction/contamination and re-charge	Thiru.S.Prabakaran, Chief Engineer (State Ground and	PWD

		Surface Water Resources Data Centre)	
12	Air Pollution including Noise Pollution	Dr.S.Selvan Addl. Chief Environmental Engineer	TNPCB
13.	Illegal sand mining	Thiru.Muthiah Superintending Engineer Palar Basin, PWDepartment	PWD/ INDUSTRIES
14.	Rejuvenation of water bodies	Thiru. S. Thirumavalavan Superintending Engineer O/o the Commissioner of Municipal Administration, Chennai.	CMA/PWD/TWAD

Chief Secretary to Government  
State of Tamil Nadu

//True Copy//

*G.M. Chinnay 20/1/2020*  
Under Secretary to Government  
M.A. & W.S. Department  
Secretariat, Chennai-600 009.