

**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN BENCH  
CHENNAI**

**Original Application No. 159 OF 2021 (SZ)**

**IN THE MATTER OF:**

Kankana Das

... Applicant

Versus

Union of India and others

... Respondents

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**P. Jayalakshmi**  
Counsel for R-2

**Place: Chennai**  
**Date : 26.04.2023**



*H.D. Varalaxmi*  
**DEPONENT**  
**H.D. VARALAXMI, M.Tech**  
Regional Director  
CENTRAL POLLUTION CONTROL BOARD  
(MoEF & CC, Govt. of India)  
Regional Directorate (Chennai)  
2nd Floor, 77-A, South Avenue Road,  
Ambattur Industrial Estate, Chennai - 600 059

**Status report in compliance of Hon'ble NGT Southern Zone, Chennai Order dated 15.03.2023 in the matter of Kankana Das, Kolkata Vs UOI and others (OA No. 159/2021)**

**1.0 Introduction**

The matter is related to preparation of State Action Plan by Southern States under NCAP along with the State of Kerala and Union Territory of Puducherry for improvement in air quality.

Vide Order dated 15.03.2023 in the matter of OA No.159 of 2021, The Hon'ble NGT (SZ), Chennai directed as follows:

***Para 3.** The Central Pollution Control Board (CPCB) is directed to examine the action plan submitted by each of the States independently considering its climatic condition, industrial cluster, etc. The exercise is basically to be done only by the Central Pollution Control Board which would apply PAN India taking the inputs given by each of the States. We are sure that the Central Pollution Control Board would have received similar action plans from the State Pollution Control Boards/Pollution Control Committee from other States/Union Territories.*

***Para 4.** We only direct the Central Pollution Control Board to collate all these reports and revise the guidelines wherever necessary and appropriately instruct the State Pollution Control Boards/Pollution Control Committees.*

***Para 5.** The State of Kerala and the Union Territory of Puducherry are given a last chance to file their action plan and furnish a copy to the Central Pollution Control Board **within 2 (Two) weeks**. Thereafter, the Central Pollution Control Board is to collate all the reports and consider them with the conditions prevailing in other States also and come up with appropriate suggestions/guidelines which would be suitable, **within 4 (Four) weeks**.*

### Present Status

- Ministry of Environment Forests & Climate Change (MoEF&CC) had shared an indicative template with States/UTs under NCAP for preparation of State Action Plan (SAP) addressing the activities that would help in improvement of air quality. It was directed that States/UTs may also include the activities with respect to specific requirements of their respective State and UT and finalize the State Action Plan for clean air.
- Indicative template for preparing State Action Plan has also been shared with Kerala State Pollution Control Board and Puducherry Pollution Control Board by CPCB on 22.03.2023. (Email copy is attached in **ANNEXURE I**).
- In compliance of the Hon'ble NGT's Order, State Action Plan has been submitted by Puducherry pollution control Committee (PPCC) (copy enclosed as **ANNEXURE A1**) and Kerala State Pollution Control Board (KSPCB) (copy enclosed as **ANNEXURE A2**) on 29.03.2023 and 13.04.2023 respectively. CPCB has reviewed their State Action Plans w.r.t indicative template and observation has been shared with PPCC and KSPCB for rectification. (observations is attached as **ANNEXURE B1 & B2** for PPCC and KSPCB respectively)
- State Action Plan is also received from Tamil Nadu Pollution Control Board (TNPCB) (copy enclosed as **ANNEXURE A3**) on 13.04.2023. CPCB has reviewed their State Action Plans w.r.t indicative template and observation has been shared with TNPCB for rectification. (observations is attached as **ANNEXURE B3**).
- It is pertinent to mention here that CPCB has received State Action Plan for clean air in the MoEFCC's indicative template from 21 States/UTs (*including Andhra Pradesh, Karnataka & Telangana*). CPCB has reviewed all of these action plans with respect to the template and observation has been shared with respective SPCB/PCC and MoEFCC.



H.D. Varalaxmi

**DEPONENT**  
**H.D. VARALAXMI**, M.Tech  
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 2nd Floor, 77-A, South Avenue Road,  
 Tambattur Industrial Estate, Chennai - 600 058

Email

CPCB AQM NCAP

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**Submission of State Action Plan in the matter of Original Application No. 159 of 2021 pending at Hon'ble NGT(SZ)**

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**From :** CPCB AQM NCAP <ncap.cpcb@gov.in> Wed, Mar 22, 2023 12:16 PM**Subject :** Submission of State Action Plan in the matter of Original Application No. 159 of 2021 pending at Hon'ble NGT(SZ)  court case  3 attachments**To :** MS TNPCB <memsec@tnpcb.gov.in>, Pondicherry Pollution Control Committee Pondicherry <ppcc.pon@nic.in>, Sheela A.M <ms.kspcb@gov.in>, DD Air TNPCB <ddairchn@tnpcb.gov.in>**Cc :** Chairperson TNPCB <chairman@tnpcb.gov.in>, CHAIRMAN KSPCB <chn.kspcb@gov.in>, P K GUPTA ADDITIONAL DIRECTOR <pkgupta.cpcb@nic.in>, H D Varalaxmi <rdchennai.cpcb@gov.in>, Pankaj Agarwal <pagarwal.cpcb@gov.in>, RAJKUMAR <rajkumar.cpcb@nic.in>, sundaramism707 <sundaramism707@gmail.com>, rukmaniamuthamani@yahoo.co.in, Rema Rani Tamil Nadu Consultant <ranirema@gmail.com>, ncaptnpb2021@gmail.com

Sir/Madam,

As per Hon'ble NGT order dated 15.03.2023 in the matter of original application No. 159 of 2021 (SZ), Central Pollution Control Board need (CPCB) is **directed to collate and examine State Action Plan (SAP) from the state of Kerala and the Union Territory of Puducherry. CPCB has not received State action plan from Tamil Nadu also.**

As per Para 5 &amp; 6 of the Order from Hon'ble NGT :

*Para5 : The State of Kerala and the Union Territory of Puducherry are given a last chance to file their action plan and furnish a copy to the Central*

*Pollution Control Board within 2 (Two) weeks. Thereafter, the Central Pollution Control Board is to collate all the reports and consider them with the conditions prevailing in other States also and come up with appropriate suggestions/guidelines which would be suitable, within 4 (Four) weeks. Para 6. Let the matter be listed on 28.04.2023.*

In view of above, it is requested to share the respective State action Plan with CPCB by **29-3-23** for further necessary action. Indicative template for preparation of State Action Plan as per MoEFCC OM is attached herewith.

Attachments -

- 1) Hon'ble NGT order dated 15.03.2023
- 2) Office Memorandum related to preparation of State Action Plan
- 3) Indicative template for State Action Plan

Regards,  
AD-AQM  
NCAP Team  
CPCB -Delhi

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 **Indicative template for State Action Plan\_13.10.2021.pdf**

398 KB

 **OM regarding State Action Plan.pdf**

362 KB

 **NGT order.pdf**

500 KB

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No. 412/PPCC/AIR-SAP/SCI-II/2023 / 328  
GOVERNMENT OF PUDUCHERRY  
DEPARTMENT OF SCIENCE, TECHNOLOGY & ENVIRONMENT  
PUDUCHERRY POLLUTION CONTROL COMMITTEE  
III FLOOR, PHB BUILDING, ANNA NAGAR, PUDUCHERRY - 5  
Telephone: (0413) 2201256      Telefax: (0413) 2203494

\*\*\*

Puducherry, the 28 MAR 2023

To

The Additional Director,  
Air Quality Management Division (NCAP),  
Central Pollution Control Board,  
Parivesh Bhawan, CBD - cum - Office Complex,  
East Arjun Nagar, Delhi - 110 032.

Sir,

Sub: PPCC - Submission of State Action Plan on Air Pollution for the  
UT of Puducherry - Hon'ble NGT in OA No.159 of 2021  
dated 20.01.2023 - Reg.

Ref: Your email communication dated 22.03.2023.

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With reference to the subject mentioned above, State Action Plan on Air Pollution for  
the UT of Puducherry is enclosed in the template received vide reference cited above.  
It got approval of Secretary, Environment/Chairperson, PPCC.

Yours sincerely,



(Dr. N.RAMESH)  
MEMBER SECRETARY  
PUDUCHERRY POLLUTION CONTROL COMMITTEE

Encl: As above.

Copy to:

1. The Member Secretary, Central Pollution Control Board,  
Parivesh Bhawan, CBD - cum - Office Complex,  
East Arjun Nagar, Delhi - 110 032.
2. Standing Guard File.

**GOVERNMENT OF PUDUCHERRY**  
**DEPARTMENT OF SCIENCE TECHNOLOGY AND ENVIRONMENT**  
**PUDUCHERRY POLLUTION CONTROL COMMITTEE**

**INDICATIVE TEMPLATE FOR STATE ACTION PLAN**

**1. Industrial Emissions**

<b>Sl. No.</b>	<b>Activities</b>	<b>Status of activity (Completed / Ongoing / To beStarted)</b>	<b>Timeline for completion</b>	<b>Target (Coverage/ Percentage)</b>	<b>Financial implications(Yes/ No)</b>	<b>Funds Allocated (Rs crore)</b>	<b>Funds Utilized ason date (Rs crore)</b>
1.	Policy for permitting new industries in Critically Polluted Areas (CPAs)	Government of Puducherry has taken policy decision of not to permit air pollution potential units, viz M.S.Ingots, Ferro Alloys, Ferro silicon, Calcium carbides and Potassium chlorates with effect from October, 2000.	Already being complied with.	Whole U.T.of Puducherry	No	Nil	Not applicable
2.	Guidelines for laying city gas distribution network	On going	1 month	Urban areas	Local bodies shall have revenue collection	Nil	Nil
3.	Policy for replacement of heavy oil (eg., furnace oil, diesel etc.) based industries to alternate energy sources (CNG/PNG/ Electricity)	Fuel Policy has been formulated in the year 2021. Coal and Pet coke are banned as fuel. Incentives are provided for cleaner and renewable energy sources.	Completed	100 %	Yes	Nil	Nil

Sl. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications(Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
4.	Policy for restriction on usage of Pet coke for industrial use.	Fuel Policy has been formulated in the year 2021. Coal and Pet coke are banned as fuel	Already completed	100 %	No	Nil	Nil
5	Rules and Regulations on uninterrupted power supply in State/ UT	The Electricity Department, Government of Puducherry is a deemed licensee as per Section 14 of the Indian Electricity Act 2003 and the timelines for attending the Fuse of Call, Breakdown in power supply is being carried out as per the timelines specified in the Standards of Performance notified by JERC. The same is available in the department website <a href="https://electricity.py.gov.in">https://electricity.py.gov.in</a> Further being an Utility department, no special funds are earmarked (Electricity Department)					
6	Policy for use of DG sets	Guidelines framed by the CPCB and directions of the Hon,ble NGT are being adopted	One year	100 %	Nil	Nil	Nil
7	Policy regarding installation of CAAQMS based on the emission potential or capacity of air polluting industries.	Air pollution potential units have been directed to provide CAAQMS. Ongoing	One year	100 %	Nil	Nil	Nil
8	Mechanism to be devised for expansion of OCEMS to air polluting industries are not covered currently (such as emission from utility stacks in 17 categories, etc.)	All the 17 category units have provided OCEMS. Other Air pollution potential units have been directed to provide OCEMS Ongoing	6 months	100 %	Nil	Nil	Nil
9	Mechanisms to control fugitive emissions sources.	Industries were directed to provide sprinkler system to control fugitive emissions. Urban Local Bodies are carrying out manual and mechanical road sweeping	6 months	100 %	Yes	Not done	NA
10	Regulations for conversion of brick kilns to clean technologies	To be started	One year	100 %	Nil	NA	NA

Sl. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
11.	Regulations for Emission Trading Scheme (ETS)	To be started	Two year	50 %	Nil	Nil	NA
12.	Policy to set up e-waste recycling unit in industrial areas in compliance with e-waste management rules	To be started	One year				
13.	Any other Policy / Rules/ Standards/ Guidelines pertaining to industrial emissions	Standards specified in Environmental (Protection) rules, 1986 are being adopted	Completed	100 %	Nil	Nil	Nil
14	Number of industries in the State complying emission standards	Based on the available 177	6 months	100 %	Nil	Nil	Nil
15	Inventory of fuel consumed in the industries (type and quantity)	On going	One year	100 %	50 % (Furnace oil inventorisation has been completed)	Nil	Nil
16	Shifting of industries/ commercial units to gaseous fuels (CNG/ PNG/ CBG)	On going	3 years	80%	-	-	-
17	Number of households shifted to PNG/ LPG	LPG – 3,91,033	1 year	95%	-	-	-
18	Any other activity/ project pertaining to industrial emissions	Green award launched	Completed	100%	One laks /3 year	One lakhs	Fully utilized

## 2. Vehicular Emissions

Sl. No.	Activities/ Action plan	Status of activity(Completed/ Ongoing/ To beStarted)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications(Yes/ No)	Funds Allocate (Rs crore)	Funds Utilized as on date (Rs crore)
1.	Notification for phasing out old vehicles (Commercial: 10 years; Private: 15 years)	The action has been initiated for scrapping of Non – Transport Vehicles older than 15 years of age owned by Govt. / quasi Govt./ Agencies of the central and state registered in Puducherry as per the notification of MoRTH vide GSR 29 (E), dated 16-01-2023.	By end of 2024	100%	Yes	Not yet	NA
2.	Policy for scrapping old vehicles	To be started	By end of 2023	-	-	-	-
3.	Policy/ Plan for Li-battery waste management from scrapped vehicles	To be started	One year	50 %	Nil	Nil	Nil
4.	Policy / Scheme for Eco-Friendly Mass Rapid Transport Systems	To be started	-	-	-	-	-
5.	Policy for augment e-vehicles	The Transport department has submitted the draft “Puducherry electric mobility policy 2023” for the approval of the Government	-	-	-	-	-
6.	Notification and enforcement of PUC norms	Integration of NIC software for testing of vehicles for pollution has been implemented. For enforcement of PUC compliance, the submission of Pollution under control certificate is made mandatory for grant / renewal of fitness certificate or renewal of certificate of Registration	-	-	-	-	-

Sl. No.	Activities/ Action plan	Status of activity(Completed/ Ongoing/ To beStarted)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications(Yes/ No)	Funds Allocate (Rs crore)	Funds Utilized as on date (Rscore)
7.	Online monitoring of PUC implementation	As the Vahan system has been linked with testing centre in Puducherry, the monitoring can be done online for the vehicles for which testing was carried out by the pollution testing centres in Puducherry. The online monitoring for all vehicles can be possible only on integration of all testing centres in neighboring States /Country is completed.	-	-	-	-	-
8.	Mechanism for centralized record maintenance of PUC checks, certification and cross check by the concerned transport authorities to be incorporated	The Vahan has been Integrated with the pollution testing centre system developed by NIC. Through the same the data base of pollution data can be created.	-	-	-	-	-
9.	Construction of bypass /ring roads						
10.	Re-filling Stations retrofitted with Vapor Recovery System	To be started	One year	100 % wherever applicable	Nil	Nil	Nil
11.	Incentive of setting up R&D facilities related to EVs	A Clause with respect to encouragement for the R & D facilities related to Electric Vehicle has been incorporated in the draft “ Puducherry Electric Mobility Policy 2023”	-	-	-	-	-
12.	Any other Policy / Rules/ Standards/ Guidelines pertaining to vehicular emissions	Nil	-	-	-	-	-

### 3. Construction & Demolition Waste and Road Dust Management

Sl. No.	Activities/ Action plan	Status of activity(Completed/ Ongoing/ To beStarted)	Timeline for completion	Target (Coverage/ Percentage )	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized ason date (Rs crore)
1.	Policy for development of projects/ plans for C&D waste management	Tender has been floated for setting up Integrated Municipal Solid Waste Management – the scope is inclusive of Collection, Transportation, Processing and Disposal of C&D waste for Pondicherry and Oulgaret Municipalities.  The quantity of C&D waste generated in other ULBs is very minimal – not applicable to set up a processing unit. It is being managed along with Municipal Solid Waste.	September 2023	100% waste generated	No	NA	NA
2.	Policy for use of C&D waste in laying and construction of State High ways.	C&D waste is being used by Pondicherry Municipality in laying of municipal roads.	Ongoing	100% waste generated	No	NA	NA
3.	Demand creation for C&D waste and alternative use of C&D waste material	It is being considered to issue GO/notification to all associated government agencies regarding utilisation of C&D waste and products from C&D processing plant in construction of government buildings, laying of roads filling low – laying areas etc. The same proposition will be extended to Civil Engineers Association and other relevant stakeholders as well.	After the C&D the processing plant is set up, this will be initiated.	-	-	-	-

Sl. No.	Activities/ Action plan	Status of activity(Completed/ Ongoing/ To beStarted)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications(Yes/ No)	Funds Allocate (Rs crore)	Funds Utilized as on date (Rs crore)
4.	Schemes for development of green belt/ open spaces and street sides greening onState highways	To be started	One year	30 %	Yes	Nil	Nil
5.	Penalty provisions for non-compliance of C&D waste management rules at construction sites	Yes	One year	100 %	Nil	Nil	Nil
6	Maintenance, repair and paving of State highways	Completed 90.21 Km.	-	100%	No	94.12	94.12
		To be started 178.675 Km	9 months	-	No	115.22	-
7	Monitoring of road dust especially in and around hotspot areas and in the vicinity of State highways	Yes	-	-	-	-	-
8	Mechanism for development and maintenance of road infrastructures for industrial states and Clusters  Strengthening, Widening & Black topping to the approach road 1st cross, I main, II main, 5th, 9th, 11th, 15th, 19th cross roads at Mettupalayam Industrial Estate, Puducherry.	To be started	3 three months	-	-	2 crores	-
9	Any other Policy / Rules/ Standards/ Guidelines pertaining to C&D waste and Road dust management	Ensuring compliance with the Construction and Demolition Waste Management Rules, 2016	On going	-	-	-	-

Sl. No.	Activities/ Action plan	Status of activity(Completed/ Ongoing/ To beStarted)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated(Rs crore)	Funds Utilized as on date (Rs crore)
10.	C&D waste processingplants	Tender has been floated for setting up Integrated Municipal Solid Waste Management – the scope is inclusive of Collection, Transportation, Processing and Disposal of C&D waste for Pondicherry and Oulgaret Municipalities. The quantity of C&D waste generated in other ULBs is very minimal – not applicable to set up a processing unit. It is being managed along with Municipal Solid Waste.	August / September 2023	100% waste generated	Yes	Please refer to Annexure -I	NA
11.	Greening of open spaces/parks developed	Greening of open spaces (0.0259 sq km of green space) and parks (9 projects) has been taken up and executed by the Urban Local Bodies under AMRUT scheme in the last 5 years.	Completed	-	-	-	-
12.	Any other activity/ project pertaining to C&D waste and Road dust management	C&D waste is being used by the Pondicherry Municipality in laying of roads.	On going	-	-	-	-

## 4. Emissions from burning of waste

Sl. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
1.	Notification and Enforcement of municipalsolid waste (MSW) management rules	Bye laws on Solid Waste Management have been notified by Pondicherry and Oulgaret Municipalities and the documents are under approval for remaining 3 ULBs – Karaikal, Yanam and Mahe.	On going	-	-	-	-
2.	Policy for MSW management	Solid Waste Management Policy for Union Territory of Puducherry was notified on 01.08.2018 and the Solid Waste Management Action Plan was notified for Union Territory of Puducherry on April'18. Based on the State Action Plan, all the Local bodies have prepared their action plan adopted in their respective local bodies	Completed	-	-	-	-
3.	Policy for legacy waste management at dumpsites	<ul style="list-style-type: none"> <li>▶ Bio – mining and Bio - remediation projects are being undertaken in all the ULBs.</li> <li>▶ For Pondicherry and Oulgaret, around 16 acres of land out of 23.6 acres has already being reclaimed by the concessionaire.</li> <li>▶ The concessionaire is being selected for bio-mining and bio-remediation in Karaikal</li> <li>▶ Negotiations are in progress with the concessionaire in Yanam to undertake legacy waste management at the earliest.</li> </ul>	To be started	-	-	-	-

Sl. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
4.	Policy for implementation of ban on single use plastics	Completed		100 %	Nil	Nil	Nil
5.	Policy for development and Construction of Waste to Energy Plants	Integrated Municipal Solid Waste Management projects including the scope of collection, transportation, processing and disposal are being implemented to handle all the types of waste generated in the ULBs – 610 MTs of waste from entire UT of Puducherry (urban local bodies and commune panchayats together) - Selection of concessionaire for IMSWM in Pondicherry and Oulgaret Municipalities is currently in process.	On going	-	-	-	-
	(a) non-recyclable / combustible dry waste			-	-	-	-
	(b) Bio- methanation / Bio CNG			-	-	-	-
	(c) Composting plant etc.		To be started	-	-	-	-
6.	Any other Policy / Rules/ Standards/ Guidelines pertaining to MSW Management	<ul style="list-style-type: none"> <li>• Solid Waste Management Rules (SWM), 2016</li> <li>• E-Waste (Management) Rules, 2016</li> <li>• Bio-Medical Waste Management Rules, 2016</li> <li>• Plastic Waste Management Amendment Rules, 2022</li> <li>• Construction and Demolition Waste Management Rules, 2016</li> <li>• Guidelines for Extended Producer Responsibility</li> <li>• National Green Tribunal</li> <li>• Swachh Bharat Mission (Urban &amp; Gramin) guidelines (Mission 2.0)</li> </ul>	On going	-	-	-	-

Sl. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
7.	Waste collection status in the city (%)	100% waste is being collected from all the ULBs	Completed	100%	-	-	-
8.	Waste segregation status in the city (%)	100% segregation of waste	Completed	100%	-	-	-
9.	Material Recovery Facility	4 TPD Material Recovery Facility is operational in Dubraypet, Pondicherry Municipality  20 TPD Material Recovery Facility is in process – MoU signed in August 2022 and current space for setting up this facility is being considered.	On going  To be started	-	-	-	-
10.	Waste to Energy plants	Integrated MSWM is being taken up for all types of waste	On going	-	-	-	-
11.	Waste to compost plants	Integrated MSWM is being taken up for all types of waste 1 TPD each Bio-methanation plant is operational in Oulgaret Municipality and Karaikal Composting technologies like Windrows method, Black Soldier Fly (BSF) and other aerobic technologies have been adopted by the ULBs.	On going	-	-	-	-
12.	Remediation of dumpsites in the city	Updated in point 11 above	On going	-	-	-	-
13	Control open burning of MSW	Integrated MSWM is being taken up in all ULBs to prevent open burning of MSW	On going	-	-	-	-
14.	Any other activity/ project pertaining to MSW Management	Pondicherry Municipality with Godrej, Swachatha Corporation & Recity Network have launched the project 'KEEP Namma Pandy Clean'. The initiative aims to make Pondicherry one of the cleanest coastal cities in India and undertake awareness activities along with the building of a state of the art Sanitation park to dispose of the waste produced in the city.	On going	-	-	-	-

## 5. Emissions due to burning of agro residues

Sl. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
1.	In-situ treatment of biomass residues for management of stubble burning						
a)	Schemes for procurement of agriculture machinery	Sub-Mission on Agricultural Mechanization (SMAM) Ongoing	March 2023	100%	Yes	2.24	1.84
b)	Assistance for establishment of farm machinery banks/ custom hiring centres	To be started	March 2024	50%	Yes	0.20	0
c)	Use of decomposer for in-situ Crop residue management.	-	-	-	-	-	-
2.	Ex-situ treatment of biomass residues for management of stubble burning						
a)	Schemes for balers/pellet/ briquette machines, etc.	Sub-Mission on Agricultural Mechanization (SMAM) Completed	-	100%	Yes	0.17	0.17
3.	Biomass projects with respect to the hotspots of crop residue burning	-	-	-	-	-	-
4	Policy for supply chain mechanism for in-situ and ex-situ management of stubble	-	-	-	-	-	-

Sl. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)
5.	Supply chain for crop residues to cow shelters	To bring about attitudinal changes among the farmers on the in-situ management of Sugarcane trashes through Demonstrations.	-	-	-	-	-
6.	Development of effective protocol for monitoring of fire incidents including crop area consideration and crop fire area data	-	-	-	-	-	-
7.	Any other scheme/ program that may help in reducing air pollution	-	-	-	-	-	-

**6. Household emissions**

<b>Sl. No.</b>	<b>Activities/ Action plan</b>	<b>Status of activity (Completed/ Ongoing/ To be Started)</b>	<b>Timeline for Completion</b>	<b>Target (Coverage/ Percentage)</b>	<b>Financial implications (Yes/ No)</b>	<b>Funds Allocated (Rs crore)</b>	<b>Funds Utilized as on date (Rs crore)</b>
1.	Schemes for use of LPG/ PNG for cookingfuels	Ongoing	2021-2023	Target - 10.000 Achieved -15,556 156%	Nil	Nil	Nil
2.	Any other Policy / Rules/ Standards/ Guidelines pertaining to Household emissions	To be started	3 years	75 %	Yes	Yet to be estimated	

**Annexure 1**

Details of funds allotted for Integrated Municipal Solid Waste Management projects (including C&D waste management) for ULBs under SBM(U)2.0 and state share

<b>S. No.</b>	<b>Details of the projects</b>	<b>Name of the ULB</b>
1	Disposal of Legacy Waste from Kurumbapet dumping site through bio-remediation and bio-mining with complete reclamation of the land in compliance with SWM Rules 2016 on Design, Build, Finance, Own and Operation model	Puducherry and Oulgaret Municipality
2	Integrated Municipal Solid Waste Management (IMSWM) for Puducherry and Oulgaret Municipalities on DBFOOT model (350 TPD)	Puducherry and Oulgaret Municipality
3	Reclamation of Land (legacy waste disposal) through bio-remediation and bio-mining at Paravaipet, Karaikal Dumping site (9.50 acres)	Karaikal Municipality Rs.5.09 Tentative
4	Integrated Municipal Solid Waste Processing Project at Karaikal Municipality (40 TPD)	Karaikal Municipality, Rs.3.08 Cr
5	Integrated Municipal Solid Waste Processing Project at Yanam Municipality (20 TPD)	Yanam Municipality, Rs.3.00 Cr
6	Disposal of legacy waste from the existing UVK Nagar dumping site through bio-mining technology in Yanam (1.84 acres)	Yanam Municipality, Rs.1.50 Cr Tentative
7	Integrated Municipal Solid Waste Processing Project at Puducherry commune panchayat (150 TPD)	Puducherry Commune panchayat, Rs.11.72 Cr
8	Integrated Municipal Solid Waste Processing Project at Karaikal commune panchayat (80 TPD)	Karaikal Commune panchayat, Rs.3.80 Cr
9	Material Recovery Facility at Truck Terminal Mettupalayam Under EPR Mode (20TPD)	Puducherry and Oulgaret Municipality

Indicative template for State Action Plan								
1. Industrial Emissions								
S. No.	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	
1.	Policy for permitting new industries in Critically Polluted Areas (CPAs)-KSPCB	No Critically Polluted Areas	NA	NA	NA	NA	NA	
2.	Guidelines for laying city gas distribution network-Oil companies, PESO etc.,	The code of practice for Quality of service for city or local Natral Gas Distribution Networks vide G.S.R 720(E) dated 1.9.2010 and further amendment on 15.3.2018 was issued by Petroleum and Natural gas Regulatory Board	Being Utility project, these are ongoing projects. However timelines prescribed by the Petroleum & Natural Gas Regulatory Board (PNGRB) shall be adhered to.	Coverage as per the Minimum Work Program prescribed by the Petroleum & Natural gas Regulatory Board (PNGRB)	No financial impolication to State Govt	Project funded by Company. Total Project Cost for 8 years is approx Rs. 5000 Crs	Approx. Rs. 850 Crs have been spent on the project	
3.	Policy for replacement of heavy oil (eg., furnace oil, diesel etc.)	National policy will be followed.	100%					

4.	Policy for restriction on usage of Pet coke for industrial use (Industries department)	The Hon'ble Supreme Court vid order dated 24-10-2017 in WP(C)13029/1985 banned use of pet coke and furnace oil in National Capital region states as these fuels emit more sulphur dioxide compared to conventional fuels. . The Hon'ble NGT vide order dated 16-5-2017 in OA 471/16 directed all State Governments to take decision as to whether pet coke is an approved fuel or not. Hon'ble NGT vide order dated 4-7-2019 directed that Petcoke and furnace oil may not be allowed in terms of reports of CPCB dated 15-3-2019 as follows. " Considering the various directionsdirections and ordes of hon'ble Supreme Court regarding use of pet coke and furnace oil containing higher sulphur, it is required that states, to formulate fuel policies regarding use of pet coke and furnace oil in the light of Supreme /court order dated 24-10-2017(banning use of petcoke and FO in NCR and 17-11-2017(suggesting states to take similar measurs) and further Hon'ble supreme Court order dated 13-12-2017, 5-2-2018 and 26-7-2017 allowing use of pet coke in industris /processes which pet coke and furnace oil eithe as feed stock (Calcine Pet coke units, Aluminium industries) or where they get absorbed along with product in manufacturing process(cement, lime kiln, calcium carbide industries). It is relevant to mention that use of raw petroleum coke in CPC units has been allowed with condition of 90% recovery of SO2 emission. The instruction ofCPCB to use petcoke in lime kiln will be followed and monitoring will be done for compliance.	100%	NA	NA	NA	NA	
5.	Rules and Regulations on uninterrupted power supply in State/ UT(KSEB)	Notification of Ministry of Power is followed. No separate regulations, specifically for Uninterrupted Power Supply is currently notified in Kerala. SOP notified vide No.1/1/KSERC -2015 dated 15 .12. 2015	Total installed capacity of power in the State as on March 2021 is 2,965.66 MW, of which, hydel power contributed the major share of 2,129.42 MW (71.80 per cent); while 465.58 MW was contributed by thermal projects (15.70 per cent), 300.33 MW (10.13 per cent) from solar and 70.28 MW from wind (2.37 per cent).	NA	NA	NA	NA	
7.	Policy for use of	Regulations of DG sets in the State are as per the notification of Ministry of	On going	NA	NA	NA	NA	
8.	Policy regarding installation of CAAQMS based on the emission potential or capacity of air polluting industries.	Central Pollution Control Board issued direction B-29016/04/06PCI-I /5401 dated 5-2-2014 for the providing of CAAQMS in the State. There are 20 number of 17 category units. Of which, seven are emission potential units and three have provided CAAQMS. Besides the above, three units have provided CAAQMS.	On going	NA	NA	NA	NA	
9.	Mechanism to	There are 20 number of 17 category industrial units. Of which, 17 units	On going	NA	NA	NA	NA	
10.	Mechanisms to	In the Consent to operate/establish issued by the Board, condition for	On going	NA	NA	NA	NA	

11.	Regulations for conversion of brick kilns to clean technologies- KSPCB	Kerala PCB vide circular no. KSPCB/122/2022-SEE-3 dated 31-8-2022 issued direction that the standards for particulate matter in stack emission and minimum stack height specified in the notification of Ministry of Environment and Climate Change shall be strictly addressed to. All new brick kilns shall be allowed only with zig zag technology or vertical shaft or use of piped natural gas as fuel in brick making. The existing brick kilns which are not following as above shall be converted to, within a period of two years. In accordance with the MoEF & CC notification, the consent of existing temporary or seasonal brick kilns can be renewed up to 31/08/2023 subject to compliance of all the conditions in notification and prevailing circulars. CPCB has also been addressed for advice in the case of temporary or seasonal brick kilns.	On going	NA	NA	NA	NA	
12.	Regulations for Emission Trading Scheme (ETS)- KSPCB, Industries	Ministry of Power, Government of India published draft Carbon Credit Trading Scheme (CCTS). They requested comments from the stakeholders on the draft CCTS and not yet finalised.	NA	NA	NA	NA	NA	
13.	Policy to set up e-waste recycling unit in industrial areas in compliance with e-waste management rules-KSPCB, Industries department	E-Waste Management Rules, 2016 is followed in the State. E-waste inventory has been prepared for the State through NIIST by the Kerala PCB. In Kerala, two dismantling units are in operation. Consent to establish for a recycling unit attached to the operational dismantling unit at Idukki by the independent private unit (M/s. Sahya Solutions Group) is under installation.	On going	NA	NA	NA	NA	
14.	Any other Policy	Board issued guidelines for controlling emission from hot mix plants, rendering	On going	100%	NA	NA	NA	
15.	Number of	1212 industrial units in the State and are complying emission standards. Of	On going	100%	NA	NA	NA	

16.	Inventory of fuel consumed in the industries (type and quantity)-Oil companies	Apr-Mar'23 consumption of various types of fuel & qty on industry basis is as below: (Data extracted from industry Y2 file).  MS (Petrol): 1784.78 TMT HSD (Diesel): 2639.26 TMT SKO (Kerosene): 24.08 TMT LPG: 1135.37 TMT FO (Furnace Oil): 422.64 TMT Bitumen: 219.28 TMT Lubes/Greases: 41.31 TMT CNG: 29.03 TMT	NA	NA	NA	NA	NA	
17.	Shifting of industries/ commercial units to gaseous fuels (CNG/ PNG/ CBG)-oil companies	Pipeline network of natural gas is available at / near all the major industrial hubs in the districts of Ernakulam, Thrissur, Palakkad, Malappuram, Kozhikode, Kannur and Kasaragod.  However there is no policy / Guideline for shifting of industries from using pollutant fuels to PNG. Policy is to be issued by the industries department.  Major industries are extensively using solid fuels and FO especially those located in Ernakulum city.  Pipeline network is being laid to provide Natural Gas from LCNG located in DIC Kochuveli, which will cater to major industries in Trivandrum, further network is being developed in Alappuzha & Kollam for CNG & PNG  Industries and entities are still using briquettes, and need to shift to PNG	31-3-2024	100%	NA	NA	NA	
18.	Number of Any other	For LPG, there are 94,60,743 connections.	On going	NA	NA	NA	NA	

## 2. Vehicular Emissions

S. No.	Activities/ Action plan	Status of activity (Completed/	Timeline	Target	Financial	Funds	Funds
1.	Notification for phasing out old	Notification of the Ministry is followed.	Ongoing		Yes	Nil	Nil
2.	Policy for scrapping old vehicles-Transport etc.,	Kerala State Road Transport Corporation own 5435 buses including 50 electric buses. 238 buses below 5 years ; 2302 buses of age 5 -10 years; 2702 buses of 10-15 years and 193 buses of 15-17 years. As per the Government order no GO (P No 11/2023/FIN Dated 31.01.2023, Stage Carriage and other category type vehicles having age more than 15 years has to be removed from the existing fleet. At present KSRTC have 236 stage carriage buses and 153 other vehicles which are having age more than 15 years by 1.04.2023. KSRTC via order no ML3/002 389/17 dated 07.02.2023 has requested Government for an extension on the age of vehicles condemned for scrapping			Yes	Nil	Nil
3.	Policy/ Plan for Li-battery waste	MoEF &CC notified Battery waste Management Rules 2022 including	On going		Yes	Nil	Nil
4.	Policy / Scheme for Eco- Friendly	Kochi Metro Rail Limited, abbreviated to KMRL, is a centre-state public sector					
5.	Policy for augment e-vehicles Industries, Transport, EMC, ANERT etc.,	On Going. An Electric Vehicle Policy (GO No:24/2019/TRANS- EV Policy of the State) is in place for the State of Kerala. The policy aims at enhancing e mobility activities such as promotion of Electric Vehicles, development of resilient charging infrastructures etc.					
6.	Notification and enforcement of PUC norms - Transport, Motor Vehicles department	Ongoing. Notified and the updated pollution norms are in place. Vehicles complying BS6 pollution norms only can be registered in the State from 1/04/2020. Pollution testing centres are now directly linked to Parivahan system. The pollution testing centres, testing of vehicles and pollution under control certificate issued by the centre are now being monitored centrally by the Motor Vehicles Department.					
7.	Online monitoring of PUC implementation-Transport, Motor Vehicles	Ongoing. Notified and the updated pollution norms are in place. Pollution testing centres are now directly linked to Parivahan system. The pollution testing centres, testing of vehicles and pollution under control certificate issued by the centre are now being monitored centrally by the Motor Vehicles Department.					
8.	Mechanism for centralized record	Ongoing. Notified and the updated pollution norms are in place.					
9.	Construction of bypass / ring roads-Highways, PWD, NATPAC						
10.	Re-filling Stations retrofitted with Vapor Recovery System -Oil companies	Directions of Central Pollution Control Board are followed. 31 Vapour recovery system already provided	On going				
11.	Incentive of setting up R&D facilities related to EVs- Industries	NA					

12.	Any other Policy / Rules/ Standards/ Guidelines pertaining to vehicular emissions-Transport etc.	<p>With more than 100 CNG Stations operational in the State, Govt. may consider policy to</p> <ol style="list-style-type: none"> <li>1. Convert all govt. vehicles to CNG.</li> <li>2. All public transport to be converted on CNG - KSRTC buses, School buses, Autos, Taxis, City buses, Contract buses, etc</li> <li>3. All LCVs also should be converted to CNG</li> <li>4. IOAGPL / AGP City Gas is converting a Govt Boat on CNG as a pilot project. Govt may consider policy to ban liquid fuels to be in vessels used for inland navigation to control the marine and air pollution.</li> </ol> <p>Kerala State Road Transport Corporation has initiated the following steps</p> <ol style="list-style-type: none"> <li>1. KSRTC purchased and introduced 50 nos of fully built 9 metre non AC electric buses for operating city circular services in Thiruvananthapuram City.</li> <li>2. As a part of eco-friendly initiatives and reduction in fuel cost KSRTC envisages conversion of its existing 5 diesel buses to CNG. Now the trial conversion has completed and put in regular service operation for performance evaluation.</li> <li>3. KSRTC has given purchase order to produce 131 BSVI diesel buses for super fast services and 113-9 metre non AC electric buses for city operations.</li> <li>4. KSRTC has purchased new BSVI diesel buses under latest pollution norms.</li> <li>5. KSRTC has participated in National Electric bus programme initiated by Convergence Energy Service Limited (CESL). As a part of deploying electric buses CESL has invited unified e-tender and KSRTC participated in the e-tender to procure 450-12 meter non AC standard floor electric buses under GCC model on wet lease basis through M/s. Switch Mobility. Now the tender procedures are under</li> </ol>					
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Assessment of the number of vehicles which are more than 15 year old has been taken

## 3. Burning

S. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage /	Financial implications	Funds Allocated	Funds Utilized
1.	Notification and Enforcement	Notification Done. Enforcement of SWM Rules Ongoing.		100%	No		
2.	Policy for MSW management	Keral Solid Waste Management Policy Notified.		100%	No		
3.	Policy for legacy waste management at dumpsites	Policy approved for remediation of legacy sites . Process of Biomining completed @ Kollam Municipal Corporation and process ongoing in all other Corporations. G.O.(Rt)No.2629/2022/LSGD Dated 29/10/2022.		100%	Yes		
4.	Policy for implementation of ban on single use plastics	Ban on Single Use Plastics notified by Government of kerala. 1. G.O.(Rt) No.06/2020/ENVT. dated 11.05.2020 2. G.O.(Rt) No.04/2020/ENVT. dated 16.02.2020 3. G.O.(Ms)No.2/2020/Envvt. dated 27.01.2020 4. G.O.(Ms)No.8/2019/Envvt. dated 19.12.2019		100%	No		
5.	Policy for development and Construction of Waste to Energy Plants	Policy for Waste to Energy Plants approved. All the Six Corporations, Palakkad & Malappuram have Waste To Energy Projects, which will be started once the Bio mining process is over.		31/03/2026	Yes.		
	(a) non-recyclable / combustible dry waste						
	(b) Bio- methanation / Bio CNG						
	(c) Composting plant etc.						
6.	Any other Policy / Rules/	Policy for Domestic Hazardous Waste approved and is					

## 4. Municipal Solid Waste

S. No.	Activities/ Action plan	Status of activity (Completed/ ongoing/ To be Started)	Target Number (No.)/ (%)	Total Capacity (TPD) / Coverage	Funds Allocated (Rs. crore)	Timeline for completion	Target Completed as on date	Funds Utilized as on date (Rs crore)
1.	Waste collection status in the city (%)	Data of each ULB consolidated in a separate sheet.	100%	66%				
2.	Waste segregation status in the city (%)	Data of each ULB consolidated in a separate sheet.						
3.	Material Recovery Facility	MCF functional in all ULBs	224	229	<u>total 37.08 under SBM 44.72 Crores</u>	2023-24	1149 Functional MCFs 31/03/2024	To be implemented through KSWMP
4.	Waste to Energy plants	Projects to be started.	8					
5.	Waste to compost plants	Existing Decentralised Aerobic Thumboomuzhi ( 2150 BINS) in all ULBs , projects yet to be started under SBM(U) 2.0	809	717.4	<u>140.97 SBM(U) 2.0</u>	2026	nil	
6.	Remediation of dumpsites in the city	308 Urban Dumpsites cleared. Process ongoing for the Remaining 69 Dumpsites .	44	66233 T	<u>93.94 SBM 2.0</u>	2025	18	
7.	Control open burning of MSW	Executive Directive No. 9/2016 instructing the Special drive for take penal actions against the waste dumping and burning has been issued from the DGP& State Police Chief.  Notification No. G.O.(Rt)No. 673/2023/LSGD Dated 21.03.2023 has been issued on formation of Enforcement squad. Enforcement Squads and Night Squads are conducting frequent inspections. IEC activities and						
8.	Any other activity/ project	5 Mechanized road sweepers are proposed under SBM(U)	5	-	3.2	2026		

## 5. Construction &amp; Demolition Waste and Road Dust Management

S. No.	Activities/ Action plan	Status of activity (Completed/	Timeline	Target	Financ	Funds	Funds
1.	Policy for development of	Construction and Demolition Wasten Rules 2016 is followed in the State. Kerala	Ongoing	NA	NA	NA	NA
2.	Policy for use of C&D waste in	Construction and Demolition Wasten Rules 2016 is followed in the State					
3.	Demand creation for C& D waste and alternative use of C& D waste material	Usage of C&D waste for the laying of road and demand creation for the material is to be incorporated in the C&D waste policy					
4.	Schemes for development of green belt/ open spaces and street sides greening on State highways						
5.	Penalty provisions for non-	Report of the CPCB in-house Committee on Methodology for assessing environmental					
6.	Maintenance, repair and paving of State highways	Roads are being maintained by various agencies in Kerala, like Local Governments, Public Works Department (PWD) (Roads and Bridges) and National Highways, Municipalities, Corporations, Irrigation, Forests, Railways etc. Total road length in Kerala is 2,38,773.02 km. This includes classified and non-classified roads as stipulated by Indian Road Congress. Road density in Kerala is 548km per 100 sq. km, which is roughly three times the national average. The length of road per lakh population is 993.54km and almost 90 per cent of the road network is single lane. The National Highways, considered to be the primary network, carries 40 percent of the total traffic, and the State Highways and Major District Roads (MDRs) - the secondary road network - carries another 40 percent of the road traffic. Thus around 12 per cent of the road network handles almost 80 per cent of the traffic in the State.					
7.	Monitoring of road dust especially						
8.	Mechanism for development and						
9.	Any other Policy / Rules/ Standards/ Guidelines pertaining to C&D waste and Road dust management						
10.	C&D waste processing plants	Consent to establish issued to two private companies for setting up such plants		133 TPD		7.98	
11.	Greening of open spaces/parks						
12.	Any other activity/ project	Kerala PCB published the standard operating procedure of siting requirements and					

6. Household Emissions							
S. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for Completion	Target (Coverage/)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilize
1.	Schemes for use of LPG/ PNG for cooking fuels	PMUY Phase 1 and PMUY Phase 2 IOAGPL has made PNG infrastructure ready for over 50,000 houses in the districts of Ernakulam, Thrissur, Palakkad, Malapuram, Kozhikode, Waynad, Kannur & Kazargod. AGP City Gas has made PNG infrastructure ready for over 20,000 houses in the districts of Trivandrum & Alappuzha.	3/1/2020 for Phase 1	100%	1600/- Per connection	NA	NA
2.	Amendments to the building by-laws for "Indoor air quality management"	National rule will be followed					
3.	Any other Policy / Rules/ Standards/ Guidelines pertaining to Household emissions						
<b>Additional Instructions:</b>		<ul style="list-style-type: none"> <li>Air quality is affected by both regional and background contributions hence actions at state and regional levels which also consider the airshed approach are required.</li> <li>Identification of prominent air polluting sources: Inventory of air pollution sources in State/UT including hotspots or areas of concern pertaining to air pollution should be carried out.</li> <li>Hotspots of air pollution: Hotspots with respect to air pollution (such as stubble burning, illegal waste burning, unauthorised operations, cluster activities, forest fires etc.) should be identified and localised action plan for mitigation of the same should be prepared.</li> <li>Categorization of industrial zones into red, orange, and green sectors has already been implemented so states may choose to permit or ban an industry depending on the state of the environment in their state or zones, for example- in TTZ some industries are banned. A similar strategy could be adopted by other states.</li> <li>Ambient air quality data: Plan to get access to available air quality monitoring stations in the State/UT operated by both public and private agencies. Quantification of improvement in existing air quality.</li> <li>Awareness on Air Quality: To develop Mobile App / Online portal for dissemination of air quality as well as to take complaints on local air pollution.</li> <li>State Action plan may dwell upon other relevant action points as per need and requirement of that state which are not mentioned in above template.</li> </ul>					
		<p>For Kerala is concerned, on the eastern side, Western ghats exist and on the western side, there is Arabian sea. Hence there is restriction on the flow of air from neighbouring states namely Tamil Nadu and Karnataka. Action is being taken to study source apportionment study of the two main cities of Kerala namely Trivandrum and Kochi. Expression of interest has been invited and action is taken to scrutinise the proposals. In Kerala, the extent of paddy fields is very less and is located only on a few parts of Kerala. In those areas, hay will be used as feed for cattle and stubble is burnt. In order to avoid illegal waste burning, door to door collection by authorised agencies like Haritha Karma Sena has been provided and efforts are being taken to collect non biodegradable waste from source itself and this will in turn reduce the illegal waste burning operations. Regarding forest fires, localised action plan will be collected from the Forest department.</p> <p>In Kerala, there are only a few industrial units having emission potential. Altogether there 1212 units in red, orange and green category. Control measures are insisted in these units through conditional consent issued.</p> <p>In Kerala there are nine continuous ambient air quality stations and the same with air quality index is available in the website of the KSPCB. The quality is being assessed.</p> <p>Ambient air quality data from continuous air quality monitoring stations are available in the website of the Board for the public.</p>					

## 7. Emissions

S. No.	Activities/ Action plan	Status of activity	Timeline for	Target	Financial	Funds	Funds
1.	In-situ treatment of biomass residues for management of stubble burning						
	a) Schemes for procurement of agriculture machinery	Burning of crop residues /stubble burning is not practised in Kerala. The crop residue is usually ploughed back to the field after the harvest of crop.					
	b) Assistance for establishment of farm machinery banks/ custom hiring centres						
	c) Use of decomposer for in-situ Crop residue management.						
2.	Ex-situ treatment of biomass residues for management of stubble burning						
	a) Schemes for balers/ pellet/ briquette machines, etc.						
3.	Biomass projects with respect to the hotspots of crop residue burning						
4.	Use of biomass / crop residue based pellets mass blending with coal and its co-firing in thermal power plants with blending ratio which needs no modification in boilers						
5.	Policy for supply chain mechanism for in-situ and ex-situ management of stubble						
6.	Supply chain for crop residues to cow shelters						
7.	Development of effective protocol for monitoring of fire incidents including crop area consideration and crop fire area data						
8.	Collaboration with ISRO and preparation of Satellite based maps for monitoring of fire incidence						
9.	Any other scheme/ program that may help in reducing air pollution						

**TAMILNADU POLLUTION CONTROL BOARD**

From	To
Thiru.V.Thiagarajan, M.Sc., Deputy Director (Labs), Tamil Nadu Pollution Control Board, No.76, Mount Salai, Guindy, Chennai-600 032.	The Additional Director, Air Quality Management Division (NCAP), Central Pollution Control Board, Parivesh Bhawan, CBD-cum -Office Complex, East Arjun Nagar, Delhi - 110 032

**Letter No. TNPCB/DD(L) Air /0982/2021 dated: 13.04.2023**

Sir,

Sub: TNPCB – Submission of State Action Plan of Tamil Nadu – Hon'ble  
NGT in OA No.159 of 2021 (SZ) –reg.

Ref: 1. Email received from CPCB – AQM NCAP Dated: 22.03.2023  
2. DO Letter No. Q-11017/39/2020-CPA from Additional Secretary,  
MoEF&CC Dated: 03.04.2023

\*\*\*\*\*

With reference to the subject cited above and the email communication under reference, State Action Plan for Tamil Nadu approved by the Chairperson, TNPCB is uploaded in the PRANA Portal (fed in the received template) for your perusal and necessary action please.

Encl: As above

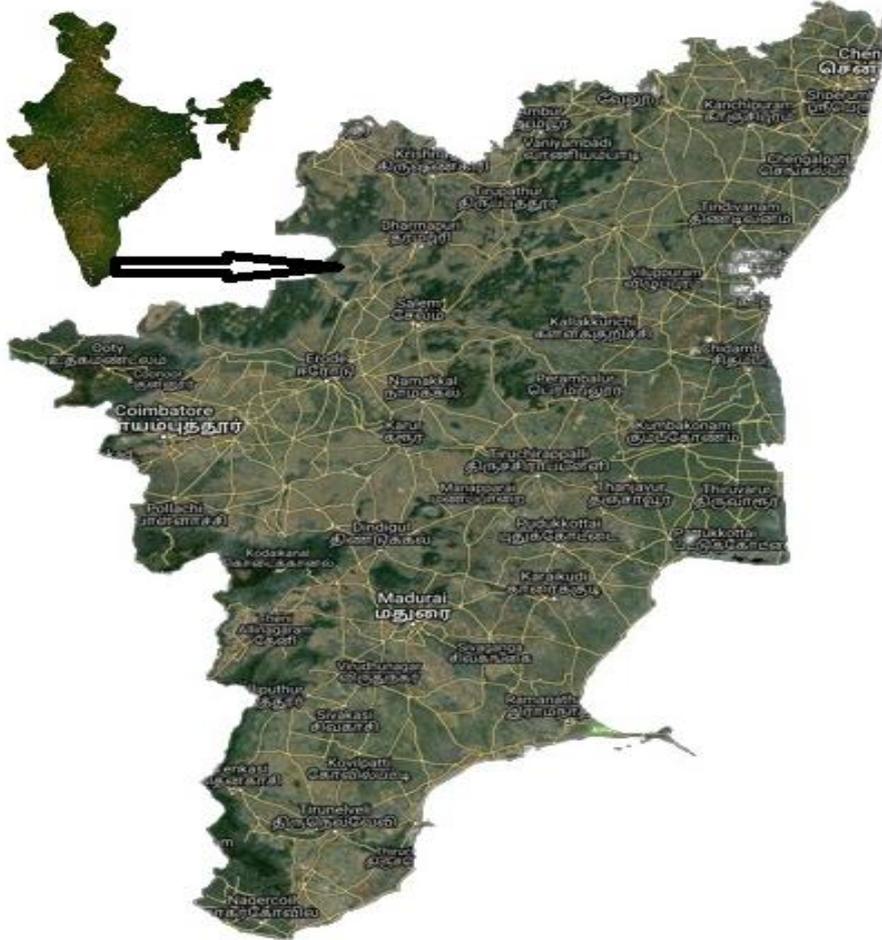
Dr.Jayanthi.M  
Chairperson

//Forwarded by order//

*V. Thiagarajan*  
Deputy Director (Labs)

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## STATE ACTION PLAN FOR AIR POLLUTION



**Tamil Nadu Pollution Control Board**  
 76, Mount Salai,  
 Guindy, Chennai - 600 032

**March - 2023**

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## 1. Back Ground

The Central Pollution Control Board (CPCB) has identified 131 non-attainment cities based on air pollution levels exceeding  $60 \mu\text{g}/\text{m}^3$  limits for  $\text{PM}_{10}$  as prescribed under National Ambient Air Quality Standards (NAAQS). In 2018, the National Green Tribunal (NGT) directed a State-level six-member committee called the Air Quality Monitoring Committee, comprising of Director of Environment, Transport, Industries, Urban Development, Agriculture and the Member Secretary of Pollution Control Boards, for the purpose of preparing the city clean air action plans. The Non-Attainment Cities (NAC) were further advised to prepare action plans detailing how to build internal capacity and achieve clean air. The NAC action plans prepared by TNPCB were approved by CPCB and the same is in implementation.

The Original Application No. 159 of 2021 (SZ) taken up by the NGT under the caption State Action Plan for Air Pollution for all 23 States by 2020 as envisaged in the National Clean Air Programme (NCAP).

The objective of the National Clean Air Programme (NCAP), is to have a State Plan to provide a mechanism to monitor the air quality in the respective States and take mitigation measures for Air (Prevention and Control of Pollution, so as to provide clean air as part of Right to Life as enshrined under Article 21 of the Constitution of India. The Hon'ble NGT has issued the following directions (viz)

*“The Central Pollution Control Board and State Pollution Control Boards of Tamil Nadu, Karnataka and Telangana and the respective State Governments through their Environment Secretary are directed to file independent statements and reports regarding the action taken by them*

*for preparing the State Action Plan as envisaged by in National Clean Air Programme (NCAP) plan Programme and what is the stage of implementation and how it is being effectively monitored and implemented by the respective regulators and if there is any gap what is the action taken by the respective State Governments for filling the gap and fully implement the scheme within the respective States.”*

In order to comply the Hon'ble NGT order 159, CPCB has shared a template with TNPCB to fill the action components

## **2. Status of National Clean Air Programme in Tamil Nadu**

The CPCB has identified 131 Non-attainment Cities (NAC) in India based on the data received from the NAMP stations- city/towns that exceed the National Ambient Air Quality Standards (NAAQS). Chennai, Madurai, Trichy and Thoothukudi are among the 131 NACs based on the air quality data with respect to PM<sub>10</sub> concentrations. Of which Chennai, Madurai and Trichy also fall into million plus cities (MPCs) category. The city action plan of the NACs/ MPCs are approved by CPCB and being implemented involving various stakeholders such as Municipal Administration Departments, Urban Local Bodies, Transport Department, Department of Industries & Commerce, Police Department, Traffic Police, Town Planning, State Highway, National highway and Oil companies (Table-1)The key sectoral interventions under NCAP given in the figure.1 .

**Table 1 Details of source of pollution and Implementation agencies to reduce the pollution**

S No	Source of Pollution	Major Stake Holders
1	Road Dust	Municipal Corporations. Highway Department.
2	Construction and Demolition	Municipal Corporations, TNPCB.
3	Vehicular Emission	Transport Department, RTO, Police Department, Traffic. Oil Companies
4	Industrial Emission	Industries Department, TNPCB.
5	Biomass	Municipal Corporation, Agriculture Department.



Figure 1 Sectoral interventions under NCAP

### 3. Ambient Air Quality Monitoring Stations

#### 3.1 Manual Air Quality Monitoring Stations

For more effective representativeness of the ambient air quality and effective implementation of the mitigation strategies, in Tamil Nadu, TNPCB is operating 52 Manual monitoring stations in 16 cities/towns across the state, under National Air Quality Monitoring Programme (NAMP) funded by Central Pollution Control Board. These stations are functioning on 24 hours basis, twice a week for Particulate Matter

(PM<sub>10</sub> and PM<sub>2.5</sub>) and gaseous pollutants such as Sulphur di oxide (SO<sub>2</sub>) and Nitrogen di Oxides (NO<sub>2</sub>). The number of NAMP stations in the State is given in the Table.2.

**Table 2 NAMP stations in the State**

<b>S.No</b>	<b>Name of the City/Town</b>	<b>No. of stations operated</b>
1	Chennai	8
2	Coimbatore	3
3	Cuddalore	3
4	Dharmapuri	3
5	Madurai	3
6	Mettur	2
7	Nagercoil	3
8	Perambalur	3
9	Theni	3
10	Tiruvannamalai	3
11	Tiruvarur	3
12	Trichy	5
13	Thoothukudi	3
14	Salem	1
15	Sivagangai	3
16	Villupuram	3
<b>Total</b>		<b>52</b>

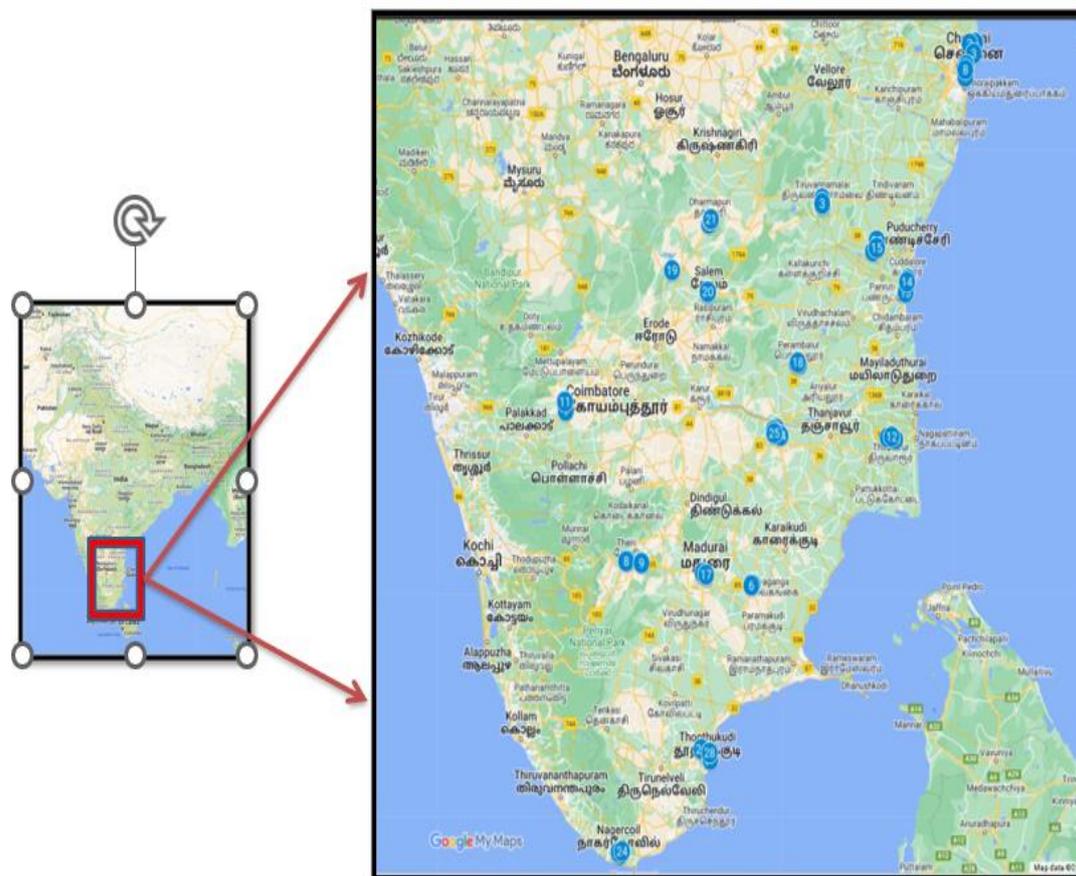


Figure 2 Google Map on location of NAMP Station

### 3.2 Continuous Ambient Air Quality Monitoring Stations

To continuously monitor the ambient air quality on a real time basis, 34 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are established in the State. for monitoring the air quality for parameters such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, NH<sub>3</sub>, O<sub>3</sub>, CO, Benzene, Toluene, Xylene every 15 minutes on 24\*7 basis. The number of CAAMQ stations in the State is given in the Table.3( <https://tnpcb.gov.in/air-quality.php>).

Table 3 CAAQM stations in the State

S.No	Name of the district/ City/Town	No. of stations operated
1	Ariyallur	1
2	Chennai	10
3	Coimbatore	2
4	Cuddalore	2
5	Chengalpet	1
6	Dindigul	1
7	Kanchipuram	1
8	Karur	1
9	Krishnagiri	1
10	Madurai	1
11	Nagapattinam	1
12	Nammakkal	1
13	Nilgiris	1
14	Perundurai	1
15	Pudukottai	1
16	Ramanathapuram	1
17	Tiruppur	1
18	Trichy	2
19	Thoothukudi	1
20	Thirunelveli	1
21	Salem	1
22	Virudhanagar	1
<b>Total</b>		<b>34</b>

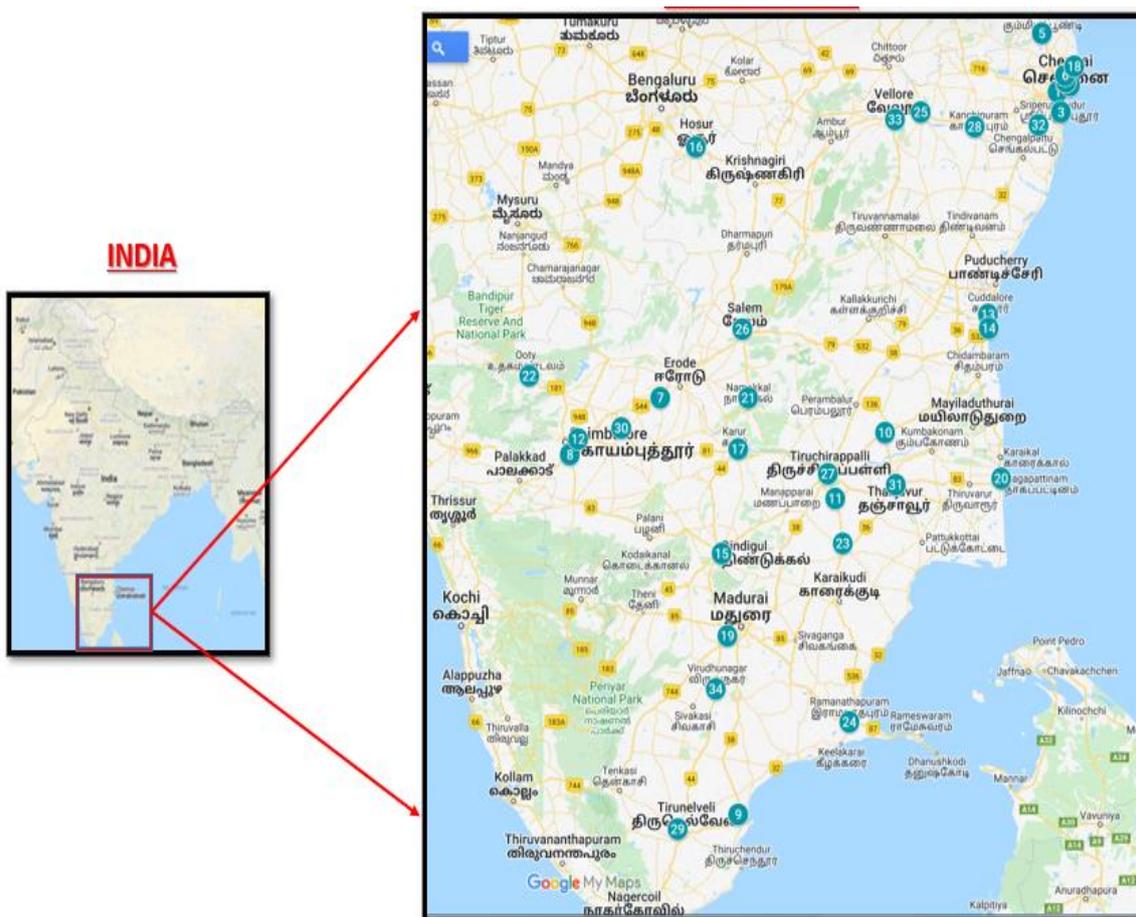


Figure 3 Google Map on location of CAAQM Station

### 3.3 Proposal for the Expansion of Monitoring Programme

CPCB has sanctioned 4 stations, 3 at Erode and 1 at Mettur in Tamil Nadu for the purpose of monitoring the pollution level and to identify the vulnerable air pollution points for monitoring the pollution levels in Erode and Mettur. To keep the track of air quality in various places such as residential areas, industrial areas, commercial areas, roadside areas, TNPCB has proposed air quality monitoring network of 25 CAAQM stations in the cities of more than 1 Lakh population of Tamil Nadu.

#### **4. State Action Plan for Air Pollution**

Since collaborative and participatory approach involving State Governments, Local bodies, relevant Central Ministries, and other Stakeholder with focus on all sources of pollution form crux of the Programme, success of NCAP is depending upon active involvement of State Governments. State Government's participation is not limited for evolving an effective implementation strategy but as has been indicated by Department of Expenditure since the outcome of the NCAP would be contingent upon the investments to be made by the States, more involvement of the States in the area of funding is to be explored.

According to the guidance document of NCAP, a State Action Plan (SAP) is to be prepared for addressing the air pollution to be formulated for all the states which harbor 131 non-attainment cities in India. State Action Plan for Air Pollution is to be taken up for implementation by State Government and city administration.

As per the NCAP document by MoEFF&CC 2018, at Appendix-VI (NCAP agencies and timelines) mentions about the State Action Plan for Air Pollution is given in the Table. 4

**Table 4 Components/ Activities under NCAP, Time line and Implementing authorities**

<b>S.No</b>	<b>Component/ Activities</b>	<b>Level for funding</b>	<b>Level for implementation</b>	<b>Agencies</b>	<b>Time lines</b>
1.13.1	A preliminary state action plan for air pollution to be formulated for all the 23 states, which harbor 102 non-attainment cities	Center	State	SPCB, CPCB & MoEF&CC	2020
1.13.2	SAP for air pollution to be taken up for implementation by the state government and city administration	State	State	State Government	2020
1.13.3	The guidelines for the preparation of the SAP to be formulated	State	State	CPCB MoEF&CC	2020

A preliminary state action plan for air pollution to be formulated for all the 23 states, which harbor 102 non-attainment cities by the Centre (MoEF&CC and CPCB) as per the NCAP document 1.13.3. Accordingly, CPCB communicated the State Action Plan template on 15.11.2021 to TNPCB.

#### **4.1 Action Points**

1. Preliminary State Action Plan for Air Pollution to be formulated for all 23 states which harbour 102 non-attainment cities;
2. State Action Plan for Air Pollution to be taken up for implementation by State Government and city administration;

3. The State Action Plan to have detailed funding mechanism.

The action plan is divided into the following emission sectors. Detailed action plan is given in the Table 5

1. Industrial Emissions
2. Vehicular Emissions
3. Construction and Demolition Waste and Road Waste management
4. Emissions from burning of wastes
5. Emissions due to burning of agro residues
6. Household Emissions

Table 5 State Action Plan

## 4.1.1. Industrial Emission

S. No.	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	Stake holders
1.	Policy for permitting new industries in Critically Polluted Areas (CPAs)	New industries are permitted as per the guidelines prescribed by MoEF&CC letter vide F. No 22-23/2018- IA.III (Pt) as per the Hon'ble NGT order dt19.08.2019. All the industries in the CPAs are permitted with stringent environmental conditions by TNPCCB	31.03.2026	CEPI Score for all PIAs for the Pre and Post monsoons is found to be below 50 Thus achieving 100%	No	NA	NA	TNPCCB
2.	Guidelines for laying city gas distribution network	Petroleum and Natural gas Regulatory Board has issued the code of practice for Quality of service for city or local Natural Gas Distribution Networks G.S.R 720(E) issued on 1.9.2010 and amended on 15.3.2018 (PNGRB/Monitoring/QS/CGD./01 ) Phase-1: Ennore - Manali section (Trunk line: OD- 16, Length 22.6 km): Commissioned in March 2019. Phase-2: Ramanathapuram - Tuticorin section (Trunk line:OD- 18,	31.03.2024 Ongoing	38 Districts of Tamil Nadu Urban LPG holders - 100% Rural LPG holders- 100%	Yes (IOCL)	6025	5127.11	Industries Department

		Length 143 km): Commissioned and dedicated to Nation by Hon'ble PM on 17.02.2021. Delivery commenced from 13.03.2021. Phase-3: Ennore to IP 101 Section (Trunk line: 115 Km) and Thiruvallur - Bengaluru Section (Trunk Line: 271 Km): Commissioned and dedicated to Nation by Hon'ble PM on 26.05.2022. Delivery commenced to Anchor customer M/s Saint Gobain on 12.09.2022."						
3.	Policy for replacement of heavy oil (e.g. furnace oil, diesel etc.) based industries to alternate energy sources (CNG/ PNG/ Electricity)	Under Progress	31.03.2026	100%	No	Nil	Nil	TNPCB, Industries & MoPNG
4.	Policy for restriction on usage of Pet coke for industrial use.	TNPCB has permitted the use of pet coke in the only Cement Industries and the usage is regularly monitored	Completed	100%	No	Nil	Nil	TNPCB
5.	Rules and Regulations on uninterrupted power supply in State/ UT	Electricity (Rights of Consumers) Rules, 2020 issued by GoI Vide Gazetted Notification No. G.S.R. 818(E) dated 31st December, 2020, stipulates 24 X 7 Power supply to consumers. Further in 2022, Ministry of Power	31.03.2022	100%	No	Nil	Nil	TNEB

		notified the amended rule 2022, Section 10 rule sub rule (2) which stipulate In view of the increasing pollution level particularly in the metros and the cities with a population 100,000 and above, the distribution licensee shall ensure 24x7 uninterrupted power supply to all the consumers, so that there is no requirement of running the diesel generator sets. Tamil Nadu State is strictly following the above rule notified by the Gol.		Total Capacity- <b>33,877.31 MW</b>				
6,	Policy for use of DG sets	All the DG sets are regulated as per the notifications of MoEF &CC dated 11 <sup>th</sup> December, 2013	Ongoing 31.03.2026	100%	No	NA	NA	TNPCB
7.	Policy regarding installation of CAAQMS based on the emission potential or capacity of air polluting industries.	As per the direction of Central Pollution Control Board vide its letter No. B-29016/04/06PCI-1/5401 dated 05.02.2014 issued directions under section 18(1)b of the Water and Air Acts to the State Pollution Control Boards and Pollution Control Committees, 170 No of 17 category industries installed the CAAQMS and are connected to OCEMS.	On going 31.03.2026	100%	No	NA	NA	TNPCB

8.	Mechanism to be devised for expansion of OCEMS to air polluting industries is not covered currently (such as emission from utility stacks in 17 categories, etc.)	Out of 188 Industries, 170 industries are connected to OCEMS	On going 31.03.2026	100%	No	NA	NA	TNPCB
9.	Mechanisms to control fugitive emissions sources	<p>All the industries are required to install pollution control devices to trap fugitive emissions wherever required treated before discharged in to the ambient air.</p> <p>As per the TN Industrial policy 2021 13.5.3 Green industry incentive-industrial projects undertaking green initiative for recycling waste and water for industrial use and sustainable energy usage coupled with online monitoring (wherever applicable) indicated below are eligible for 25% subsidy on the cost of setting up such environmental protection infrastructure in the following solution areas subject to a limit of Rs 1.0 Cr.</p> <ol style="list-style-type: none"> <li>1. Safety and Energy Efficiency Solutions.</li> <li>2. Water Conservation solutions</li> </ol>	Ongoing	100%  2025	No  All industries with new/expansion projects greater than Rs 50 Cr investment and 50 jobs(except those industries in the list of industries ineligible for incentives-Annexure-1 of TNIP 2021)	Nil  Yes	Nil  Rs 1900 Cr.(FY 2020-21) Including green industry incentive and special subsidies for Environment protection infrastructure	Industries Department and TNPCB

		3. Greening Solutions Pollution Control Solutions						
10	Regulations for conversion of brick kilns to clean technologies	TNPCB has given direction to all 344 Brick-kilns Installation of zig-zag technology in the brick kilns as per the directions issued by CPCB vide Letter IPC-V(SST)/Brick klin/2017 dated 27.06.2017 and Letter CPCB/IPC-V/Brick-kilns/2021 5152 dated 21.01.2021	Ongoing	2026	N	Nil	Nil	TNPCB
11	Regulations for Emission Trading Scheme (ETS) (PM <sub>10</sub> )	Emission Trading Scheme(ETS) is not in operation in the State of Tamil Nadu due to the non availability of cluster of similar type of industries in the industrial areas.	Not Applicable	Not Applicable	No	Nil	Nil	TNPCB
12	Policy to set up e-waste recycling unit in industrial areas in compliance with e-waste management rules	There are 38 E-Waste Dismantlers & 4 E-Waste Recyclers registered with Tamil Nadu Pollution Control Board as of 31/12/2022	Ongoing	100%	No	Nil	Nil	TNPCB, Industries Department and ULBs
13	Any other Policy / Rules/ Standards/ Guidelines pertaining to industrial emissions	Nil	Nil	Nil	Nil	Nil	Nil	
14	Number of industries in the state complying emission standards	All the industries are complying the emission standards as per manual monitoring	Ongoing	100%	Nil	Nil	Nil	TNPCB

15	Inventory of fuel consumed in the industries (type and quantity)	HSD, Coal, Furnace Oil Briquettes, Firewood, petcock, Countrywood, LPG, CNG, Biogas. Quantification is being done by TNPCB	31.07.2023	100%	Nil	Nil	Nil	TNPCB & Industries
16	Shifting of industries/ commercial units to gaseous fuels (CNG/ PNG/ CBG)	Shifting of industries and commercial Units will be decided jointly by Industries and TNPCB based on the availability of CNG/ CBG/ LNG of the respective districts.	31.12.2024	100%	Nil	Nil	Nil	TNPCB and Industries Department
17	Number of households shifted to PNG/ LPG	Number of households having LPG connections-216.18 lakhs Registered LPG customers of OMC-248.69 Lakhs. LPG coverage as per customers count-103.2%	Ongoing	100%	Nil	Nil	Nil	Civil Supplies Department and Oil Companies
18	Any other activity/ project pertaining to industrial emissions	Nil	--	--	--	--	--	

#### 4.1. 2.Vehicular Emissions

S.No	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	Stake holders
1.	Notification for phasing out old vehicles (Commercial: 10	The notification for phasing out old vehicles (Commercial: 10 years; Private: 15 years) is yet to be started	2024	100	No	Nil	Nil	Transport

	years; Private: 15 years)							
2.	Policy for scrapping old vehicles	The policy for scrapping of old vehicles is yet to be notified.	2024	100	No	Nil	Nil	Transport
3.	Policy/ Plan for Li-battery waste management from scrapped vehicles	The MoEF&CC, Government of India have come out with a fresh draft Rules of Battery Waste management Rules 2020” vide S.O 770 (E) dt.20.02.2020. the draft rules covers the management of used Lithium-ion batteries and also this covers the responsibilities of original Equipment Manufacturer (OEM) on management of used batteries. The draft rule applicable throughout India.	Completed	Completed	Nil	Nil	Nil	TNPCB
4.	Policy / Scheme for Eco- Friendly Mass Rapid Transport Systems							CMRL
	Phase-1- Km	Chennai Beach to Tirumailai 8.55Km	Completed					
	Phase-2 Km	Tirumailai to Velachery- 11.165 Km	Completed		Yes	912 .10Cr		
	Phase-2 (Extension) Km	Inner Ring Road (IRR) from MBI Road to St. Thomas Road – 3.5 Km			Yes	387.85 crores.		
	Phase-3 Km	St. Thomas Mount— Villivakkam 16.76 Km						

	Metro- Phase 1	Corridor 1 – Washermanpet to Air port 23.085Km	Completed		No	Nil	Nil	
		Corridor 2- Chennai Central to St Thomas Mount 29.961 Km						
		Phase 1 Extension Washermen pet to Wimco Nagar. 9.05 Km	Near Completion					
	Metro-Phase 2 <a href="https://chennaiMetroRail.org/cmrl-profile/">https://chennaiMetroRail.org/cmrl-profile/</a>	Corridor - 3 – Madhavaram to SIPCOT	31.12.2026			63,246	-	
		Corridor - 4 Lighthouse to Poonamalle Bypass						
		Corridor-5 Madhavaram to Sholinganallur						
	Coimbatore Metro project	Avinashi Road to Sathyamangalam Road corridor.	31.12.2027	100	Yes	9,000	-	CMRL
	Madurai Metro Lite project	Thirumangalam to Othakadai- 31 Km	Feasibility report is under preparation			17,500	-	CMRL
5.	Policy for augmentation e-vehicles	Tamil Nadu Government has notified Tamil Nadu electric Vehicle Policy 2023 <a href="https://investingintamilnadu.com/DIGIGOV/StaticAttachment?AttachmentFileName=/pdf/poli_noti/TN_Electric_Vehicles_Policy_2023.pdf">https://investingintamilnadu.com/DIGIGOV/StaticAttachment?AttachmentFileName=/pdf/poli_noti/TN_Electric_Vehicles_Policy_2023.pdf</a>						Industries Department
6.	Notification and enforcement of PUC norms	Regular Activities	Regular	100	Nil	Nil	Nil	

7.	Online monitoring of PUC implementation	Completed	Ongoing	100	Nil	Nil	Nil	Transport
8.	Mechanism for centralized record maintenance of PUC checks, certification and cross check by the concerned transport authorities to be incorporated	Completed	Ongoing	100	Nil	Nil	Nil	
9.	Construction of bypass / ring roads	<p><b>Chennai- UA (Chennai Circle)</b> Chennai -inner ring road (SH-2) -25.2 Km &amp; Southern sector of inner ring road(SH-2A -5 Km</p> <p>Velachery bypass road (SH-48C)-1.9 Km</p> <p><b>Thiruvallur(H)</b> Gummidipoondi bypass road (SHU-17)-4.6 Km</p> <p><b>Vellore (H)</b> Vellore Old bypass road- (SH -230) 1.2 Km</p> <p><b>Chengalpettu ((H)</b> Chennai Outer ring road(SH234) – 42.15 Km</p>	Completed	100	Yes	3276.44	State High way	

	<p><b><u>Cheyvar (H)</u></b>  1.Arni bypass road-5.134 Km  2.Thiruvathipuram bypass road -3 Km  3.Vandavasi bypass road (SHU-185)-2.2 Km</p> <p><b><u>Kallakurichi (H)</u></b>  Thirukoilur bypass road –(SH 211)-4.391Km</p> <p><b><u>Cuddalore (H)</u></b>  Vridhachalam bypass road(SH-213)-9.153Km  Chidambarambypass link road (SH-214)-1.904 Km</p> <p><b><u>Perambalur (H)</u></b>  Perambalur bypass road (SH-182)-3.875 Road</p> <p><b><u>Trichy (H)</u></b>  Turaiyur bypass road -3.4 Km  Thiruchirappali-pudukottai-arathangi-memisal bypass (SH-26)1.6Km  Chinthamani bypass road (SHU-11)-1.4 Km  Samayapuram bypass road (SHU-134)-1.150Km</p> <p><b><u>Tanjavaur (H)</u></b>  Kubhaknamtownbypass (SH-209)-6.3Km  Bypass road to Tanjavur Town phase -II-14.265Km</p>	Completed	100	Yes	3276.44	State High way
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	<p><b><u>Nagapattinam (H)</u></b> Sirkalibypass road SH-210-1.015Km</p> <p><b><u>Salem (H)</u></b> Salem Newby pass road SHU 54-5 Km</p> <p>Salem Junction to Salem New bypass SHU53 -0.4Km</p> <p><b><u>Edapaddi (H)</u></b> Sankari Bypass road (SHU117)-9.750Km</p> <p><b><u>Madurai (H)</u></b> Avaniyapuram bypass road (SH72B)-2.4Km</p> <p><b><u>Coimbatore (H)</u></b> Valankumal bypass road (SHU-70)-3.2 Km</p> <p>Dharapuram \ (H) Dharapurambypassphase-I- Alangiam road junction to Km72/4Mettur-Thiruppur road (SHU171)-3.6 Km</p> <p>Dharapuram bypass phase-II Upputhuraipalayam to Madukkampalayampirivu(SHU 172)-1.2 Km</p> <p>Taj bypass road-SHU-59-0.6 Km</p> <p><b><u>Karur (H)</u></b> Aravakurichi bypass road (SHU4)-1.6 Km</p> <p>Thirunevelveli (H)</p>	Completed	100	Yes	3276.44	State High way
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		Thirunelveli bypass road (SH75A)- 7.6Km <b><u>Krishnagiri (H)</u></b> Hosur inner ring road(SH-208)– 8.85 Km <b><u>Tiruppur (H)</u></b> Thiruppur ring road (via)Thirumuruganpoondi-Nallur- 15 Vellampalayam- 38 Km						
Construction of bypass / ring roads	1. Thiruthuraipoondi phase –I	Ongoing 05.07.2023	11	Yes	22.46	2.4	State Highway	
	2. Rasipuram (phase -1 Part -2)	Ongoing 21.10.2022	74	Yes	15.2	11.31		
	3. Coonoor	Ongoing 11.05.2024	10 (7%)	Yes	1	0.47		
	4. Tiruthani	Work foreclosed 20.05.2020/ 30.09.2022 (EO	94	Yes	46.06	40.82		
	5. Parthibanur	On going 27.01.2024	$\frac{40}{5}$	Yes	10	0.0571		
	6. Bhavani by pass (Phase I &II)	To be started	-	Yes	85.79	-	Highway Department	
	7. Mudhukulathur By pass (phase –I)	To be started	-	-	18.30	-		
	8. Ambasamudram by pass	To be started	-	-	65.99	-		
	9. Formation of Tamabarma Eastern bypass Km 5.540-	Ongoing 31.12. 2022	-	-	55.79	-		

		8/080						
		10. Formation of Bypass to Erode town (Phase –I)	Completed	-	-	14	14	
		11. Formation of Bypass to Erode town (Phase –II)	Completed			12	12	
		12. Formation of Bypass to Erode town (Phase –III)	Completed			69.3	69.3	
		13. Formation of Western by to Pollachi town	Ongoing	33% works Completed Balance 67% will be completed by 2023	Yes proposal for Rs 73.33 crore sent to Government	45.84	18.04	
10.	Re-filling Stations retrofitted with Vapour Recovery System	TNPCB has issued letter to all District Collectors and Oil Companies to follow the Guidelines by CPCB for the Setting up of New petrol Pumps in compliance of Hon'ble NGT order dt 18.01.2019 in O A. No 86/2019 Where in Installation , Operation and Maintenance Of VRS has been detailed	Ongoing	100	No	Nil	Nil	TNPCB & Oil Companies
11.	Incentive of setting up R&D facilities related to EVs	Notified in the E vehicle Policy -2023  The Tamil Nadu R&D Policy 2022 strives to provide an accelerated push to R&D activities in the State.			Yes	100		Industries Department

		Research & Technology Fund – The Government of Tamil Nadu has set up a Research & Technology Fund under the Tamil Nadu Industrial Policy 2021 which allocated fund for EV R&D.		
12.	Any other Policy / Rules/ Standards/ Guidelines pertaining to vehicular emissions	Vehicular emissions standards as per CMVR (1989) are being complied.	NA	

#### 4.1. 3. Construction & Demolition Waste and Road Dust Management

S.No.	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	Stake holders	
1	Policy for development of projects/ plants for C&D waste management	To be started							Municipal Administration
2	Policy for use of C&D waste in laying and construction of State highways.	To be prepared	31.12.2024	-	-	-	-	Municipal Administration Highway	

3	Demand creation for C&D waste and alternative use of C&D waste material	Usage of C&D waste for the laying of road and demand creation for the material is to be incorporated in the C&D waste policy.	-	-	-	-	-	Municipal Administration
4	Schemes for development of green belt/ open spaces and street sides greening on State highways	To be started						Highway Department
5	Penalty provisions for non-compliance of C&D waste management rules at construction sites	Every waste generator shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities; Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall have to pay for the processing and disposal of construction and demolition waste generated by them, apart from the payment for storage, collection and transportation. The rate shall be fixed by the concerned local authority or any other authority designated by the State Government. <b>Solid Waste Management Bye-Laws 2019</b> of Greater	Ongoing	100	No	Nil	Nil	Municipal Administration

		Chennai has notified that The unauthorised dumping of C&D waste in public places will attract a fine of up to Rs 2,000 for waste up to 1 ton, and Rs 5,000 for more than 1 ton.  <b>Solid Waste Management Bye-Laws 2016</b> of Tenkasi notified that For not delivering Construction and Demolition waste in a segregated manner as specified attracts a user fee of Rs 500						
6	Maintenance, repair and paving of State highways	The highway Department maintains 63,956 Km length of Roads in the category of State highway, District Roads, and other District roads under the Scheme Comprehensive Road Infrastructure Development Programme (CRIDP)	Ongoing 31.03.2026	100	Yes	3276.44	-	Highway Department
7.	Monitoring of road dust especially in and around hotspot areas and in the vicinity of State highways	<p>In case of mobile sources such as transport vehicle, the role of highway department is limited to reducing the waiting time / travel time so as to minimize the vehicular emission. The following works are carried out which in turn reduce pollution within a town or city.</p> <ul style="list-style-type: none"> <li>• Formation of Bypasses and Ring Roads around major cities and towns</li> <li>• End to End widening and paver blocks in terms in Urban areas, so that the dust in urban areas will be reduced</li> <li>• Construction of Elevated Corridor at Major cities to ease congestion</li> <li>• Widening the roads to the required width, based on the PCU of the Road</li> </ul>						

		<ul style="list-style-type: none"> <li>• Plantation of Avenue plantation and compensatory afforestation</li> <li>• Strengthening and maintenance of the roads based on renewal cycle, which ensure dust free environment Works being carried out by Highway Department are continuous in nature and generally it helps in reducing pollution. Maintenance and repair activities are carried only in short duration as and when required. Pollution due to road side dust is also minimum. Air quality is measured in respect of Major Projects implemented by Tamil Nadu Road Sector Project and Chennai- Kanyakumari Industrial Corridor Projects.</li> </ul>						
8.	Mechanism for development and maintenance of road infrastructures for industrial states and clusters.	<p>The Govt of Tamil Nadu create or enable the ecosystem like the creation of innovation centers or research parks or those that support the creation of common facilities/ecosystem for industries in sunrise sectors for the purpose of phototyping, testing etc will be eligible for partial funding under this fund.</p> <p>TN Small Industries Development Corporation Limited maintains the roads in their SIDCO estates in TN</p> <p>Total road length in RM-3145</p>	<p>On going 2025</p> <p>Ongoing 4 months</p>	<p>2025</p> <p>54%</p>	<p>All industries with new/expansion projects greater than Rs 50 Cr investment and 50 jobs(except those industries in the list of industries ineligible for incentives-Annexure-1 of TNIP 2021</p> <p>Yes</p>	<p>Yes</p> <p>41.51</p>	<p>Rs 500Cr</p> <p>22.44</p>	<p>Industries Department</p>
9.	Any other Policy / Rules/ Standards/ Guidelines pertaining to C&D waste and Road dust management	NA						

S.N o.	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	Stake holders
10	C&D waste processing plants	C&D waste processing plant is established in Chennai and on pilot basis C&D waste processing plants are to be established in more than 5 lakh plus population ULBs	31.03.2026	100	-	-	-	Municipal Administration
11	Greening of open spaces/ parks developed	553 completed under smart and Amrut 48 progress in smart citits,44 progress in KNMT 11 to be commenced in KMIT	-	-	-	-	-	Municipal Administration
12	Any other activity/ project pertaining to C&D waste and Road dust management	NA						

## 4.1.4 .Emissions from burning of waste

S.No	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	Stake holders
1.	Notification and Enforcement of municipal solid waste (MSW) management rules	Solid waste management rules were notified by MoEF&CC, Govt of India on 8.4.2016 and TN State Solid Waste Management policy notified in August-2018. Various directions issued by Hon'ble NGT in O.A. No 606 of 2018, 519 of 2019 and 386 of 2019 are being complied which includes legacy waste management.	Continuous process	Continuous process	Nil	Nil	Nil	TNPCB Municipal Administration
2.	Policy for MSW management	In Tamil Nadu as per the Solid Waste Management rules 2016, ULB wise SWM action plan and SWM strategy prepared and notified.						Municipal Administration
3.	Policy for legacy waste management at dumpsites	In Tamil Nadu as per the Solid Waste Management rules 2016, all dump sites are being cleared by the Bio mining process.,	2026 Ongoing	100	No	Nil	Nil	TNPCB Municipal Administration
4.	Policy for implementation of ban on single use	Ban on single use of plastics notified from 1.1.2019. The	Ongoing	100	No	Nil	Nil	TNPCB

	plastics	Govt of Tamil Nadu has notified the ban on single use of plastics of 14 categories and banned the production of such items. EPR and revised high court order. Comprehensive action plan is in place on elimination of Single use plastics and advisory on phasing out of single use plastics items. <b><u>Manjapai campaign</u></b>						
5.	Policy for development and Construction of Waste to Energy Plants	To be prepared	2024		No	Nil	Nil	Municipal Administration
	(a) non-recyclable / combustible dry waste	It is notified in the Solid Waste Management policy	Ongoing 2026	100	No	Nil	Nil	Municipal Administration
	(b) Bio- methanation / Bio CNG							
	(c) Composting plant etc.							
6.	Any other Policy / Rules/ Standards/ Guidelines pertaining to MSW Management.	NA						

## 4.1. 5. Emissions due to burning of agro residues

S. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs crore)	Funds Utilized as on date (Rs crore)	Stake holders	
1.	In-situ treatment of biomass residues for management of stubble burning								
a)	Schemes for procurement of agriculture machinery	Ongoing	31.3.2022	2293 Nos	Yes	25.0	--	Agriculture Department	
		On going	31.3.2022	1100 FPGs formed. Govt of TN is providing corpus fund of Rs 5.0 lakhs for each FPG to purchase farm machineries	Yes	55.41	0.14		
		Sub mission on Agricultural Mechanization (SMAM) On going	within the Financial year	Schemes are implemented at Block level Rotavator-221 nos Sugarcane Trash cutter -17 nos Coconut Front Chopper-10 nos Power weeder-141 nos	Yes	2.1287	---		

b)	Assistance for establishment of farm machinery banks/ custom hiring centers	Sub mission on Agricultural Mechanization (SMAM) On going	within the Financial year	Schemes are implemented at Block level	Yes	3.60		Agriculture Department	
c)	Use of decomposer for in-situ Crop residue management.	1.RAD and NHM vermin compost beds 2.NHM vermi compost units On going	31.3.2022 31.3.2022	760 Nos 200 Nos	Yes Yes	0.496 1.00	0.072	Agriculture Department	
2.	Ex-situ treatment of biomass residues for management of stubble burning								
a)	Schemes for balers/ pellet/ briquette machines, etc.	Sub mission on Agricultural Mechanization (SMAM) – Baler 62 nos. On going	Within the financial year	Schemes are implemented at Block level	Yes	1.24	0.5541	Agriculture Department	
3.	Biomass projects with respect to the hotspots of crop residue burning	In the State of Tamil Nadu there is no major hot spots of crop residue burning and if any crop residue burning is observed the same is immediately put off and necessary actions are immediately taken.						Agriculture Department	
4.	Use of biomass / crop residue based pellets mass blending with coal and its co-firing in thermal power plants with blending ratio which needs no modification in boilers	In Tamil Nadu the bio mass generated are made in to pellets and used in Small and medium scale industries as fuel to the boilers.						Agriculture Department	
5.	Policy for supply chain mechanism for in-situ and ex-situ	The paddy straw generated in the State of Tamil Nadu are not usually burnt and is mostly used for feeding of livestock, mushroom cultivation, packing of crockery and			Completed	Completed	Nil	Nil	Agriculture Department

	management of stubble	glassware's in warehouses etc. For Ex-situ Crop Residue management method more quantity of paddy straw/stubble and bio mass power plant and bio fuel projects are requires. Hence the Ex-Situ Crop Residue management method was not in existence in Tamil Nadu.					
6.	Supply chain for crop residues to cow shelters	Already the practice of supply of crop residues to cow shelters are in place and coordination with farmers it is executed.	Completed	Completed	Nil	Nil	Agriculture Department
7.	Development of effective protocol for monitoring of fire incidents including crop area consideration and crop fire area data	The Agricultural Officers were deputed to create awareness on the effects of the burning of Agricultural residues/stubbles and to keep watch on burning and actions are being taken against the violators.	Completed	Completed	Nil	Nil	Agriculture Department
8.	Collaboration with ISRO and preparation of Satellite based maps for monitoring of fire incidence	Tamil Nadu Government has established the GEOMATICS CENTRE for the Satellite base maps for monitoring the fire incidence. The primary objective of the centre is to strengthen field based application of remote sensing and GIS by making use of the latest Information and Communication Technology (ICT) and also contributing to the planning, monitoring, evaluation and interpretation of various decisions.	Completed	Completed	Nil	Nil	Agriculture Department
9.	Any other scheme/program that may help in reducing air pollution	In the State of Tamil Nadu to reduce the air pollution in the Non Attainment cities and in million plus cities action plans has been prepared and are implemented in the cities of Thoothukudi, Chennai, Madurai and Trichy	Under progress	Under progress	Chennai-191 Cr Trichy-31C  Madurai-21 Cr		Agriculture Department

## 4.1.6. Household emissions

S No.	Activities	Status of activity (Completed/ Ongoing/ To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs core)	Funds Utilized as on date (Rs core)	Stake holders
1.	Schemes for use of LPG/ PNG for cooking fuels	All Oil marketing companies are implementing schemes such as Ujjwala and Ujjwala 2.0 for Below Poverty Level (BPL) families and the subsidies are transferred directly to Bank account linked to the consumer number.	Completed.	100%	Nil;	Nil	Nil	Civil Supplies Department and Oil companies
2.	Amendments to the building by-laws for “Indoor air quality management”	Completed Rules-Framing of the Tamil Nadu Combined Development and Building Rules-2019 was issued vide GO (MS) No 18 dated 4.2.2019	Completed	Completed	Nil	Nil	Nil	Municipal Administration
3.	Any other Policy / Rules/ Standards/ Guidelines pertaining to Household emissions	NA						

## 5. Hotspots in Million Plus Cities/ Non-attainment Cities of Tamil Nadu

The hotspots have been identified in 3 of the Non-attainment Cities- Chennai, Madurai and Trichy. The hotspot identification is in progress at Thoothukudi Town. List of hotspot areas are as follows:

### 5.1 Chennai U A

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
01	Kathivakkam (Residential land-use pattern)	Narrow roads, Road dust, Vehicle exhaust emission and Parking	Major road should be widened	Highway & ULB
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with black topping to avoid road dust	Highway and ULB
			An efficient traffic management system and strict enforcement of parking rules should be followed to avoid violation	Traffic
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Arterial roads should be properly maintained, repaired and regulated across the bus terminal area	ULB
			Promote the use of E- rickshaws and E-two-wheelers to reduce exhaust emissions. Develop electric vehicle charging infrastructure in all fuel outlets	ULB & Transport
			Green barriers for the control of fugitive emissions from the construction of high rise buildings	ULB

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			Regular monitoring of PM and gaseous pollutants should be done	TNPCB
02	Manali (Industrial land-use pattern)	Petroleum Industries and other industrial clusters	Regular inspection of control technologies in industries chimney should be done	Industries & TNPCB
			Wet Scrubbers should be promoted to be installed as control equipment in chimneys	Industries & TNPCB
			End to end carpeting of road with blacktopping to avoid road dust as many HCV travels in this region	ULB & Highway
			Major roads should be widened	ULB & Highway
03	Madhavaram (Residential land-use pattern)	Coal storage site, road dust and HCVs	Mechanical sweepers should be deployed regularly to collect road dust	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB & Highway
			Parking should be avoided in front of the establishment and kerbside of the road to prevent the congestion	Traffic
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Arterial roads should be properly maintained, repaired and regulated across the bus terminal area	ULB
			An efficient traffic management system and strict enforcement of parking rules should be followed against the parking violation	Traffic
			Cleaner fuel should be promoted for domestic purposes	Oil companies

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
04	Tondiarpet (Mixed land-use pattern)	Metro construction, Traffic	Measures to remove the kerbside parking of vehicles	Traffic& MRTS
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			Separate auto stand should be built to avoid on-street parking	ULB
			Bike / Bicycle sharing system and cyclist-friendly zone should be introduced	ULB
05	Kilpauk (Residential land-use pattern)	Road dust	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Arterial roads should be properly maintained, repaired and regulated across the bus terminal area	ULB
			Development of cycle-friendly zone	ULB
			Major roads should be widened	ULB& Highway
06	Ambattur (industrial and commercial)	Road dust, traffic and LCVs	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			Multilayer Parking Facility should be developed for effective land use	ULB
			Promote the use of E- rickshaws and E-two-wheeler to reduce the	ULB &Transport

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			exhaust emission also develop electric vehicle charging infrastructure in all fuel outlets	
			Regular monitoring of PM and gaseous pollutants	TNPCB
			Use of low sulphur fuel should be promoted in industries	Industries
			Control technologies should be deployed in industries chimney	Industries & TNPCB
07	Anna Nagar ( Residential and commercial land-use pattern)	Road dust, traffic, commercial area, LCVs	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	TNPCB
			End to end carpeting of road with blacktopping to avoid road dust	ULB & Highway
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Diversion of traffic during peak hours	Traffic
			Major roads should be widened	ULB& Highway
08	Nungambakkam (Residential and commercial land-use pattern)	Traffic, roaddust, parking	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			The pavement of all roads, either bitumen or concrete	ULB& Highway
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
09	T Nagar (Commercial land-use pattern)	Commercial Vehicle movement and Road dust	Diversion of traffic during peak hours	Traffic
			End to end carpeting of road with blacktopping should be to avoid road dust	ULB& Highway

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			Non-motorized zone should be introduced near congested commercial zones	ULB
			Inspection, maintenance, and strict enforcement of traffic management to avoid the traffic violations	Transport-Traffic
			One way traffic should be introduced to divert the vehicles move accordingly near the bus terminal.	Traffic
10	Valasavakka m (Residential and commercial land-use pattern)	Metro construction, road dust, parking, traffic	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			Green barriers for the control of fugitive emissions from the construction of high rise buildings	ULB
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Arterial roads should be properly maintained, repaired and regulated across the bus terminal area	ULB
			Development of cyclist-friendly zone	ULB
11	Alandur (Traffic land-use pattern)	Road dust and traffic	Mechanical sweepers should be deployed regularly to collect road dust	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB&Highway
12	Adyar (Residential and commercial land-use)	Traffic	End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			During peak hours, traffic signals should be properly synchronised to ensure that traffic flow is	Traffic

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
	pattern)		maintained	
			Multilayer Parking Facility should be developed for effective land use	ULB
			Arterial roads should be properly maintained and repaired at regular intervals	ULB
			Promote the use of E- rickshaws and E-two-wheeler to reduce the exhaust emission also develop electric vehicle charging infrastructure in all fuel outlets	ULB& Transport
			Development of cyclist-friendly zone	ULB
13	Perungudi (Residential and commercial land-use pattern)	Landfill site, road dust, traffic	Mechanical sweepers should be deployed regularly to collect road dust	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Arterial roads should be properly maintained, repaired and regulated across the bus terminal area	ULB
14	Avadi (Traffic land-use pattern)	Road dust and traffic	End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			Mechanical sweepers should be deployed regularly to collect road dust	ULB
15	Royapuram (residential and commercial land-use pattern)	Congested roads, Road dust, Vehicle exhaust emission, small	The commercial zone should be made non-motorized	ULB
			Multi-level parking should be built for efficient use of land	ULB
			Proper control measures like water sprinkling, curtains, barriers and dust suppression	ULB

S. No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
		enterprises and Parking	must be undertaken for fugitive emissions from metro construction sites.	
16	Poonamallee	Metro construction, Congested traffic, HCVs and LCVs	Diversion of traffic from hot-spot areas	Traffic
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
17	SP Road	Frequent traffic jams	End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			Diversion of traffic during peak hours should be implemented	Traffic
18	Sholinganallur (Traffic land-use pattern)	Road dust and traffic	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with blacktopping to avoid road dust	ULB& Highway
			Multilayer Parking Facility should be developed for effective land use	ULB

## 5. 2.Madurai U.A

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
1	Periyar bus stand	Vehicular emission, restaurants and eateries, DG set, constructions, sugarcane juicer, road dust.	Pedestrian sub-way should be proposed from Periyar bus stand through Netaji Road enroute to Meenaskhi temple.	ULB
			Multi-level vehicle parking should be Completed near Periyar bus stand and around "Masi" streets.	ULB
			Water fountain should be proposed near traffic-island near "KATTABOMMAN" statue.	ULB
			One Water fountain should be introduced in the	ULB

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			PUTHUMANDAPAM area (near temple)	
			Permanent retention of water in "KODLE ALAGAR PERUMALTANK" should be ensured and green space and public park be developed around the edges of the tank.	ULB
			Vertical gardens should be developed around Meenakshi Temple and mass plantation drives should be carried out in the city.	ULB
			Only eco-friendly vehicles should be allowed around Meenakshi Temple.	ULB
			The whole-sale market should be shifted from the vicinity of Temple to the outskirts of the city.	ULB
			E – Vehicle can be promoted for both public and personnel uses.	ULB
			Promote LPG/LNG can be used in restaurant.	Civil Supplies/ Oil Companies
			Vacuum cleaner can be used for deep cleaning.	ULB
			Provision for the wind fencing/ Tarpaulin/fine screen of appropriate height around the periphery of the Construction Site should be provided.	ULB
			All DG sets users should install retrofitted devices in DG Sets above 125 kVA	Industries/ ULBs
			Steps should be taken to ensure the uninterrupted power supply to consumers to avoid the use of DG sets	TANGEDCO
2	Mattuthava	Vehicular	Biodiversity floating island can be	Department of

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
2	ni bus stand          Mattuthavani bus stand	emissions, restaurant and eateries, concrete mixing unit, industrial emissions, DG set, construction, road dust, road side juicer.          Vehicular emissions, restaurant and eateries, concrete mixing unit, industrial emissions, DG set, construction, road dust, road side juicer.	developed in "VANDIYUR LAKE" on the lines of HEBBAGODI LAKE and MADIVALA LAKE in Bengaluru.	Environment
			Walker club park should be extended all around the "VANDIYURLAKE".	ULB
			All DG sets users should install retrofitted devices in DG Sets above 125 kVA	Industries/ULBs
			Steps should be taken to ensure the un interrupted power supply to consumers to avoid the use of DG sets	TANGEDCO
			New road should be propounded for connecting KK NAGAR and MADURAI ring road along the northern bank of VANDIYUR LAKE.	ULB
			Enforcement of <i>The Road Traffic Regulation Act</i> and traffic signal installation should be made at Mattuthavani High roads to reduce the traffic near the Mattuthavani bus stand.	Traffic
			OMNI BUS STAND should be leveled and completely paved.	ULB
			Concrete Mixing Units near Mattuthavani Bus Stand should be covered with fine screen around the mixing unit.	ULB
			Encourage the use of LPG or LNG in restaurant.	Civil supplies/Oil Companies
			Vacuum cleaner can be used for deep cleaning.	ULB
Provision for the wind fencing/Tarpaulin/fine screen of appropriate height around the periphery of the Construction Site should be provided	ULB			

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			All DG sets users should install retrofitted devices in DG Sets above 125 kVA	Industries/ ULBs
			Steps should be taken to ensure the un interrupted power supply to consumers to avoid the use of DG sets	TANGEDCO
3	Arappalayam	Vehicular emissions, road dust, DG set, restaurant and eateries, crematorium.	Fish-market should be shifted outskirts.	ULB
			Eco-friendly cremation (Electric/ Gas) should be adopted to avoid the Traditional open burning	ULB
			Water fountain should be proposed at traffic island between Vaigai bank road and Arappalayam bus stand.	ULB
			Promote the use of Electric /CNG auto-rickshaw	Transport
			Encourage the use of LPG residential area.	Civil supplies/ Oil Companies
			Create awareness among the people.	DoE/ ULB/ Agriculture
			All DG sets users should install retrofitted devices in DG Sets above 125 kVA	Industries/ ULBs
			Steps should be taken to ensure the un interrupted power supply to consumers to avoid the use of DG sets	TANGEDCO
4	Goripalayam	Vehicular emissions, road dust, road side eateries, hotel, DG sets.	E – Vehicle can be promoted for both public and personnel uses.	Transport
			Vacuum cleaner can be used for deep cleaning.	ULB
			All DG sets users should install retrofitted devices in DG Sets above 125 kVA	Industries/ ULBs
			Steps should be taken to ensure the un interrupted power supply to consumers to avoid the use of DG sets	TANGEDCO
5	Thiruppara	Vehicular	Encourage the use of LPG or LNG	Civil supplies/

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department	
6	nkundram	emissions, road dust, hotel and eateries, DG sets, sugarcane juicer,	in restaurant.	Oil Companies	
			Vacuum cleaner can be used for deep cleaning.	ULB	
			Electric/ CNG – Vehicle can be promoted for both public and personnel uses.	Transport	
	Ismailpura m	Vehicular emissions, road side hotel, DG sets, constructions.	All whole-sale market should be shifted outskirts of city.	ULB	
			Cover the roadsides by laying bitumen	Highway/ ULB	
			Road dividers should be proposed to regulate the flow of vehicles.	Highway	
			Use mechanical sweeper for road cleaning regularly.	ULB	
				Open burning should be prohibited	ULB
				All DG sets users should install retrofitted devices in DG Sets above 125 kVA	Industries/ ULBs
				Steps should be taken to ensure the uninterrupted power supply to consumers to avoid the use of DG sets	TANGEDCO

### 5.3. Trichy UA

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
01	Central Bus Stand (Commercial Land-use Pattern)	Road Dust and Vehicles exhaust emission	Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			Water sprinkling should be done regularly at major roads.	ULB
			End to end carpeting of road with black topping should be to avoid road dust	ULB and Highway Dept
			An integrated bus stand should be developed outside the city limit to reduce congestion at the central bus stand.	ULB and Transport
			Promote the use of E-	Transport

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			rickshaws and E-two-wheeler	
			Arterial Roads should be properly maintained, repaired and regulated across bus terminal area	ULB
			Inspection, maintenance, and strict enforcement of traffic management to avoid the traffic violations	Traffic
			One way traffic should be introduced to divert the vehicles move accordingly near bus terminal.	Traffic
			Multi-layer parking facility should be constructed to avoid the double parking of vehicles at bus terminal	ULB
			Shifting commercial activity in the Gandhi market to the outskirts of the city will reduce the traffic congestion.	ULB
			Road should be properly maintained, repaired and regulated across Gandhi Market	Highway and ULB
			Water sprinkling should be done regularly at major roads.	ULB
2	Gandhi Market (Commercial Land-use Pattern)	Commercial Vehicle movement and Road dust	End to end carpeting of road with black topping to avoid road dust	ULB and highway
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			Introduction of urban consolidation center (UCC) near palpanni to reduce the heavy-duty vehicle movement inside the Gandhi market. From the UCC, small pickup vans can be used for the intra city movement or inside the Gandhi market	ULB

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			Commercial vehicles are loading/unloading the commodities in front of the establishment. In order to mitigate this issue, freight terminal should be introduced to facilitate the loading and unloading.	ULB
			E-cargo vehicle should be promoted for the intracity movement	Transport and ULB
			Strict monitoring on Off-hour Delivery (OHD) system should be followed to restrict the entry of heavy-duty vehicles to market area during the peak hour durations”	Traffic
3	Woraiyur (Residential Land-use Pattern)	Narrow roads, Road dust, Vehicle exhaust emission and Parking	Major roads should be widened.	Highway
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			End to end carpeting of road with black topping to avoid road dust.	Highway and ULB
			Water sprinkling should be done regularly at major roads.	ULB
			Parking should be avoided in-front of the establishment and curbside of the road to prevent the congestion in narrow roads of Woraiyur. So an efficient traffic management system and strict enforcement of parking rules should be followed to avoid parking violation in Woraiyur	Traffic
			Multilayer Parking Facility should be developed to avoid the on-road parking	ULB
			Arterial roads should be properly maintained, repaired and regulated across bus terminal	ULB

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
			area	
			Promote the use of E- rickshaws and E-two-wheeler to reduce the exhaust emission also develop electric vehicle charging infrastructure in all fuel outlets	Transport and ULB
			Development of cyclist-friendly zone	ULB
4	Srirangam (Residential Land-Use Pattern)	Parking and narrow roads	Parking should be avoided in-front of the establishment and curb side of the road to prevent the congestion in narrow roads of Srirangam, An efficient traffic management system and strict enforcement of parking rules should be followed to avoid parking violation in Srirangam	Traffic
4			A new multi-layer parking facility should be provided	ULB
			Bike / Bicycle sharing system and cyclist-friendly zone should be introduced	ULB
			Promote the use of E- rickshaws and E-two-wheeler to reduce the exhaust emission also develop electric vehicle charging infrastructure in all fuel outlets	Transport/ULB
			Road should be properly maintained, repaired and regulated across Srirangam	ULB
5	Thillai Nagar (Mixed Land- use Pattern)	Exhaust emission and parking	infrastructure in all fuel outlets	
			Road should be properly maintained, repaired and regulated across Srirangam	ULB
			Srirangam bus stand/stop should be moved from turning location to another suitable	ULB

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
5	ThillaiNagar (Mixed Land- use Pattern)	Exhaust emission and parking	location with wider road, to avoid bus bunching and overtaking the bus.	
			Bus bay should be introduced and it should not disturb the main flow of traffic. So, segregated bus bay at srirangam should be developed	ULB
			Flower market should be properly maintained and steps may be taken for reducing the curb side parking and unloading/loading commodities in front of the establishment.	ULB
			An efficient traffic management system and strict enforcement of parking rules should be followed against the parking violation	Traffic
			Measures to remove the curb side parking of vehicles	ULB
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			Water sprinkling should be done regularly at major roads.	ULB
			Auto should be parked at separate space. Auto should not place in turning street of each street.	ULB
			Promote the use of E- rickshaws and E-two-wheeler to reduce the exhaust emission also develop electric vehicle charging infrastructure in all fuel outlets	Transport/ULB
			Bike / Bicycle sharing system and cyclist-friendly zone should be introduced	ULB
6	Ariyaman	Solid waste and	Strict restriction on open burning of municipal solid waste,	ULB

S.No	Hotspot Location	Possible Potential Cause of pollution	Action Plan on Priority	Responsible Department
	galam (Mixed Land- use Pattern)	Commercial Vehicles movement, and road side dust	Biomass (Crop residue, and horticulture waste) and plastics Biomethanation or Composting shall be implemented	
			Introduction of electric vehicles for solid waste management from door step collection	ULB
			Increment of stack height of rice mills by 15 to 50%	TNPCB
			Turning space in NH-83 toward dump yard should be increased for free flow of commercial vehicles and solid waste vehicles	ULB
			A flyover should be constructed for free movement of commercial vehicles and solid waste vehicles	ULB
			Mechanical sweepers should be deployed regularly to clean the mud and dust on the roads	ULB
			Water sprinkling should be done regularly at major roads.	ULB

## 5. Monitoring Mechanism

The details of the various committee members involved in the overall guidance, monitoring and implementation of the state action plan is given in the table below

### a) Steering Committee members

The Steering committee members to provide overall guidance for the National Clean Air Programme in respect of State will be constituted as follows

1	The Chief Secretary to Government of Tamil Nadu	Chairman
2	The Additional Chief Secretary/ Principal Secretary to Government, Finance Department	Member
3	The Additional Chief Secretary /Principal Secretary to Government, Environment and Forest Department.	Member
4	The Additional Chief Secretary/ Principal Secretary to Government, Municipal Administration and Water Supply Department	Member
5	The Additional Chief Secretary/ Principal Secretary to Government, Industries Department	Member
6	The Additional Chief Secretary /Principal Secretary to Government, Home(Transport) Department	Member
7	The Additional Chief Secretary/ Principal Secretary to Government, Agriculture Department.	Member
8	The Additional Chief Secretary/ Principal Secretary to Government Highways &Minor Ports Department	Member
9	The Member Secretary, Tamil Nadu Pollution Control Board	Member and Convener.

**b) Air Quality Monitoring Committee (AQMC) at State Level**

The Government of Tamil Nadu has constituted the Air Quality Monitoring Committee (AQMC) at state level with following members for the non-attainment cities/ million plus cities Chennai, Madurai and Trichy Vide GO (D) no.96 dated 14.06.2021 and for Thoothukudi Vide GO (D) No 20 dated 10.01.2019. The same will be proposed to extend to other districts/cities.

1	The Principal Secretary to Government, Environment Climate Change and Forest Department.	Chairman
2	Commissioner/ Director Industries and Commerce	Member
3	Commissioner, Municipal Administration Department	Member
4	Commissioner, Transport Department	Member
5	Director, Agriculture Department	Member
6	The Director of Environment	Member
7	The Member Secretary, Tamil Nadu Pollution Control Board	Member &Convener

**c) The District Level Committee shall be constituted as follows**

1	The District Collector	Chairman
2	Commissioner of Urban Local Bodies	Member
3	Commissioner of Police	Member
4	Joint chief Environmental Engineer(Monitoring) Tamil Nadu Pollution Control Board	Member & Convener
5	District Environmental Engineer, TNPCB,	Member
6	Joint Transport Commissioner	Member
7	Chief Engineer State highways Department	Member
8	Joint Commissioner. Civil Supplies Department	Member
9	Regional Oil Companies Coordinator , Tamil Nadu	Member
10	National Highway Authority of India,	Member
11	Deputy Director, Agriculture Department,	Member
12	Hotel Owners Association	Member
13	Chief Planner, Local Planning Authority	Member
14	Regional Director, CPCB, Chennai	Member
15	Chief Scientific Officer, TNPCB	Member



**ANNEXURE B1****Observations on State Action Plan (SAP) of Puducherry**

MoEF&CC/CPCB shared an indicative template for preparation of State Action Plan (SAP) addressing the activities that would help in improvement of air quality.

In reference to above, observations on the State Action Plan of Puducherry w.r.t. the template are as follows:

**Industrial Emission:**

- Fund allocation and utilization status missing despite mentioning financial implication for point no. 3.
- Exact timelines for completion need to be provided for point no. 2,6,7,8,9,10,11,12,14,15,16 & 17.
- Financial implication (Yes/No) need to be provided for the point no. 16 & 17.
- Targets need to be provided for point no. 12.

**Vehicular Emission:**

- Targets and Financial implication need to be added for point no. 2.
- Exact timelines for completion need to be provided for point no. 3 & 10
- Timelines and financial implications(Yes/No) need to be provided for point no. 4,5 & 6.
- Fund implications need to be added for point no. 9.
- Targets and fund implications need to be added for point no. 11.

**C&D Waste & Road Dust Management:**

- Fund allocation and utilization status missing despite mentioning financial implication for point no. 4.
- For point no. 6: Maintenance, repair and paving of State highways, for 90.21 km, fund implications is given no in spite of fund allocated and fund utilised is given.
- For Sr. No. 8: Mechanism for development and maintenance of road infrastructures for industrial states and Clusters, targets may be added. Also for the same activity fund implications is given no in spite of fund allocated is given.
- Financial details need to be added for the point no. 11 & 12.

**Emissions from burning of waste:**

- Exact timelines and financial implications need be provided for the points no. 1,3,5,6,9,10,11,12 & 13.

**Emissions due to burning of agro residues**

- Targets, status, timelines and financial implications need to be added for point no. (1) (C), 3,4,5,6 & 7.

**Following additional information is required**

1. Hot spot of air pollution from different activities and Union Territory plan to combat the pollution sources from different activities.
2. Implementation of GRAP in Union Territory in case of air pollution emergencies.
3. Categorization of activities as short term, medium term and long term.
4. Regional airshed approach.
5. List of activities which need to be discussed and implemented by neighbouring states in the same airshed need to be separately mentioned. Also, the coordination committee composition and meeting frequency for each neighbouring state need to be shared.
6. Co-ordination committee composition for co-ordination and abatement of causes for air pollution, at intra and inter district / city or State level. Fund provision for implementation of the identified activities and share of each stakeholder (department/District authority/ULBs and neighbouring States/Districts/ cities).
7. A review & monitoring mechanism for effective roll-out and functioning of State Action Plan need to be prepared and shared.
8. Details of awareness plan on air quality management also need to be included in the state action plan.
9. Mechanism for smooth and seamless flow of information, tie funds and inter-departmental coordination.

**ANNEXURE B2****Observations on State Action Plan (SAP) of Kerala**

MoEF&CC/CPCB shared an indicative template for preparation of State Action Plan (SAP) addressing the activities that would help in improvement of air quality.

In reference to above, observations on the State Action Plan of Kerala w.r.t. the template are as follows:

**Industrial Emission:**

- Exact timelines for completion need to be provided for point no. 2,3,4,5,6,8,9,10,12,13,14,15&18.
- Targets need to be provided for point no. 2,3,5,8,9,10,11,12,13&18.
- Financial implications need to be added for the point no. 3.

**Vehicular Emission:**

- Exact timelines for completion need to be provided for point no. 1,2,3,4,5,6,8,9,11&12.
- Targets need to be provided for point no. 1,2,3,4,5,6,9,10,11,&12.
- Financial implications need to be added for the point no. 9,10,11&12.
- Fund details need to be added for 1,2 & 3.

**Burning:**

- Exact timelines for completion need to be provided for point no. 1,5(a),5(b) & 5(c).
- Targets need to be provided for point no. 5, 5(a),5(b),5(c) & 6
- Fund details need to be added for 3 & 5.

**Municipal Solid Waste:**

- Exact timelines for completion need to be provided for point no. 1 & 4.
- Financial implications need to be added for the point no. 1 & 4.
- Fund utilised for point no. 5,6 & 8.

**C&D Waste & Road Dust Management:**

- Exact timelines for completion need to be provided for point no. 1,4,8,10 & 11.
- Targets need to be provided for point no. 2,3,4,6,7 & 11.
- Fund utilised for point no. 10.
- Status need to be provided for point no. 4,7,8,9&11.
- Financial implications need to be provided for point no. 3,6,7,8&11.

**Following additional information is required**

1. Hot spot of air pollution from different activities and State plan to combat the pollution sources from different activities.
2. Implementation of GRAP in State in case of air pollution emergencies.
3. Categorization of activities as short term, medium term and long term.
4. Co-ordination committee composition for co-ordination and abatement of causes for air pollution, at intra and inter district / city or State level. Fund provision for implementation of the identified activities and share of each stakeholder (department/District authority/ULBs and neighbouring States/Districts/ cities).
5. A review & monitoring mechanism for effective roll-out and functioning of State Action Plan need to be prepared and shared.
6. Details of awareness plan on air quality management also need to be included in the state action plan.
7. Mechanism for smooth and seamless flow of information, tie funds and inter-departmental coordination.

**ANNEXURE B3****Observations on State Action Plan (SAP) of Tamil Nadu**

MoEF&CC/CPCB shared an indicative template for preparation of State Action Plan (SAP) addressing the activities that would help in improvement of air quality.

In reference to above, observations on the State Action Plan of Tamilnadu w.r.t. the template are as follows:

**Industrial Emission:**

- Fund utilization status missing for point no. 9.
- Exact timelines for completion need to be provided for point no.17.

**Vehicular Emission:**

- Targets need to be provided for point no. 4{Metro phase 2 (corridor3, corridor 4 corridor 5) & Coimbatore Metro project.}, 9{point no. 6,7,8,9,10,11 & 12 under construction of bypass/ring roads) & 11.
- Complete financial details (e.g. fund allocated, fund utilized and financial implications) details for the point no. 4, 9 & 11.
- Exact timelines for completion need to be provided for point no. 4 (Inner Ring Road (IRR) from MBI Road to St. Thomas Road – 3.5 Km & St. Thomas Mount-Villivakkam 16.76 Km ).

**C&D Waste & Road Dust Management:**

- Targets need to be provided for point no. 3,7 & 11.
- Exact timelines for completion need to be provided for point no. 1,3,4,7 & 11.
- Financial implications need to be added for the point no. 3, 7,10 & 11.
- Fund allocated for point no. 8.
- Fund utilized for point no. 6.

**Emissions from burning of waste:**

- Targets need to be provided for point no.5.

**Emissions due to burning of agro residues**

- Targets need to be provided for point no. 1(b), 2(a) & 4.
- Fund utilized for 1(a), 1(c) & 9.
- Financial implications need to be added for the point no. 4.
- Exact timelines for completion need to be provided for point no. 4.

**Following additional information is required**

1. Categorization of activities as short term, medium term and long term.
2. Regional airshed approach.
3. List of activities which need to be discussed and implemented by neighbouring states in the same airshed need to be separately mentioned. Also, the coordination committee composition and meeting frequency for each neighbouring state need to be shared.
4. Details of awareness plan on air quality management also need to be included in the state action plan.
5. Mechanism for smooth and seamless flow of information, tie funds and inter-departmental coordination.
6. State Action plan may dwell upon other relevant action points as per need and requirement of that state which are not mentioned in above template.

**BEFORE THE NATIONAL GREEN  
TRIBUNAL (SOUTHERN ZONE)  
CHENNAI**

**Original Application No. 159 OF 2021  
(SZ)**

**IN THE MATTER OF:**

Kankana Das

... Applicant

Versus

Union of India and others

... Respondents

**STATUS REPORT FILED ON  
BEHALF RESPONDENT NO. 2,  
CENTRAL POLLUTION CONTROL  
BOARD (CPCB)**

**Advocate P. Jayalakshmi**

**COUNSEL FOR CPCB**