

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

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

**IN THE MATTER OF:**

Kankana Das

... Applicant

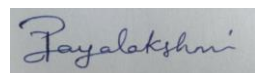
Versus

Union of India and others

... Respondents

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(P. Jayalakshmi)

Counsel for Central Pollution Control Board

**Place: Chennai**

**Date: 18.10.2024**

**Status Report Filed by Central Pollution Control Board in the Matter of Original Application No.159 of 2021 Pending Before Hon'ble NGT (SZ) in Compliance to the Order Dated 03.09.2024**

It is submitted that with respect to Hon'ble NGT order dated 09.05.2024 in the matter of Original Application No.159 of 2021 (SZ), CPCB has prepared "Guidelines for preparation of State Action Plan (SAP) and shared the same with the concerned SPCBs / PCCs on 13.06.2024.

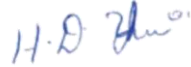
Further, Vide order dated 03.09.2024, Hon'ble NGT directed that *each of the State Pollution Control Boards and Puducherry Pollution Control Committee to give their response to the revised guidelines issued by CPCB within a period of 2 (Two) weeks. Thereafter, the CPCB is directed to collate all the State Action Plans and specifically point out any change in the same of the respective States to enable the States to come up with a uniform template and the said exercise has to be completed within a period of 4 (Four) weeks.*

It is submitted that as per the Guidelines for preparation of State Action plan, prepared by CPCB, respective State/UT's Air Quality Monitoring Committee (AQMC) under chair of Principal Secretary-Environment has to prepare SAP and get it approved by Steering Committee under chair of Chief Secretary.

CPCB vide letter dated September 24, 2024 requested all SPCBs/PCCs to forward the copy of the approved SAP of the respective state/UT to CPCB. (Copy of letter dated 24/9/2024 is enclosed at **Annexure 1**).

However, only one SPCB i.e. Kerala State pollution control board (KSPCB) and Puducherry Pollution Control Committee have responded so far.

KSPCB has emailed State Action Plan (SAP) of Kerala as per the guidelines of CPCB on 27.09.2024 (copy enclosed as **Annexure 2**) and informed that the committees as prescribed in the guidelines are being constituted at the Government level and upon its constitution, the State Action Plan of Kerala will be placed before the Committees for approval.

  
**H.D. VARALAXMI**  
Regional Director  
CENTRAL POLLUTION CONTROL BOARD  
Regional Directorate (Chennai)  
MoEF & CC, Govt. of India  
2nd Floor, 40-E, BSNL Building, TVK Industrial Estate,  
CIPET Road, Guindy, Chennai - 600032

Puducherry Pollution Control Committee has emailed an advance copy of the State Action Plan on Air Pollution for the UT of Puducherry on 30.09.2024 (Copy enclosed as **Annexure 3**) and informed that SAP has been submitted to the Chief Secretary, Govt. of Puducherry for approval. Further, preparation of the state action plan through AQMC is not mentioned in the submission and a letter in this regard is communicated to Puducherry Pollution Control Committee (Copy of letter enclosed as **Annexure 4**).

It is submitted that approved State Action Plans as per the guideline are awaited from all southern SPCBs/PCCs i. e. Andhra Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu and Telangana. SPCBs/PCCs have again been asked by CPCB vide letter dated 18/10/2024 to submit the approved copy of the respective State Action plans as per the guideline to CPCB. (Copy of letter enclosed as **Annexure 5**).

It is humbly submitted that upon receipt of approved State Action Plan from the SPCBs/PCCs (Andhra Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu and Telangana), CPCB shall collate the State Action Plans and specifically point out any change in the same of the respective States to enable the States to come up with a uniform template.

**Place: Chennai**  
**Date: 18.10.2024**



**DEPONENT**

**H.D.VARALAXMI**

Regional Director  
CENTRAL POLLUTION CONTROL BOARD  
Regional Directorate (Chennai)  
MoEF & CC, Govt. of India  
1<sup>st</sup> Floor, 40-E, BSNL Building, TVK Industrial Estate,  
CIPET Road, Guindy, Chennai - 600032



केन्द्रीय प्रदूषण नियंत्रण बोर्ड  
CENTRAL POLLUTION CONTROL BOARD  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

EMAIL

**REMINDER-I**

CM-13013/56/2021-LAW-HO-CPCB-HO

24.09.2024

To,

The Member Secretaries  
State Pollution Control Boards /PCCs  
(As per list)

**Subject: Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) -  
Guidelines for preparation of State Action Plan for clean air - reg.**

Sir,

This has reference to CPCB letter no. CM-13013/56/2021-LAW-HO-CPCB-HO dated 13.06.2024 regarding formulation of State Action Plan for clean air as per the Guidelines prepared by CPCB (copy enclosed for ready reference).

It is understood that in compliance to Hon'ble NGT order, the states/UTs may have formulated /revised their respective State Action Plans (SAP) for clean air as per the said guidelines.

Accordingly, SPCBs/PCCs are once again requested to forward the copy of the approved SAP of the respective State/UT to CPCB at the earliest.

This issues with approval of the Competent Authority.

Yours faithfully,

(P. Agarwal)

Director & Head AQM

Encl.: As above

Copy to:

1. Additional Secretary, CP, MoEFCC :for kind information please  
Indira Paryavaran Bhawan  
Jor Bagh, Aliganj, New Delhi- 11003
2. Principal Secretaries-Environment :for kind information please  
All States/UTs

(P. Agarwal)

**'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032**

Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032

दूरभाष/Tel: 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in

**List:**

1. The Member Secretary,  
Andhra Pradesh Pollution Control Board  
D.No. 33-26-14 D/2, Near Sunrise Hospital,  
Pushpa Hotel Centre, Chalamalavari Street,  
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2. The Member Secretary  
Assam Pollution Control Board,  
Anuradha Cinema Complex,  
Maniram Dewan Rd, New Guwahati Railway Colony  
Bamunimaidan, Guwahati, Assam- 781021
3. The Member Secretary  
Bihar State Pollution Control Board  
Parivesh Bhawan, Plot No. NS-B/2  
Paliputra Industrial Area  
Patliputra, Patna (Bihar) – 800010
4. The Member Secretary  
Chandigarh Pollution Control Committee  
Paryavaran Bhawan, Madhya Marg,  
Ground Floor, Sector - 19 B, Chandigarh – 160019
5. The Member Secretary  
Chhattisgarh Environment Conservation Board  
Room No.-E5/10, Mahanadi Bhavan,  
Nava Raipur Atal Nagar, Dist-Raipur 492101
6. The Member Secretary  
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5<sup>th</sup> and 6<sup>th</sup> Floor, C-wing, ISBT Building  
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7. The Member Secretary  
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8. The Member Secretary  
Himachal Pradesh State Pollution Control Board  
Paryavaran Bhavan, Phase III,  
New Shimla – 171009, Himachal Pradesh
9. The Member Secretary  
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C-11, Sector-6, Panchkula, Haryana-134109
10. The Member Secretary  
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11. The Member Secretary  
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17. The Member Secretary  
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Nagaland – 797112
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19. The Member Secretary  
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20. The Member Secretary  
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21. The Member Secretary  
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22. The Member Secretary  
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23. The Member Secretary  
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Gomti Nagar, Lucknow - 226 020
24. The Member Secretary  
Uttarakhand Pollution Control Board  
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Dehradun, Uttarakhand-248001
25. The Member Secretary  
West Bengal State Pollution Control Board  
Paribesh Bhavan, Building, No.10-A,  
Block –LA, Sector 3, Salt Lake City,  
Kolkata, West Bengal - 700 091
26. The Member Secretary  
Arunachal Pradesh State Pollution Control Board  
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27. The Member Secretary  
Goa State Pollution Control Board, Nr. Pilerne Industrial Estate  
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28. The Member Secretary  
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31. The Member Secretary  
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32. The Member Secretary  
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34. The Member Secretary  
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35. The Member Secretary  
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36. The Member Secretary  
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State land Use & Environment Cell  
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**Copy to:**

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11. Commissioner Secretary, Environment  
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16. Additional Chief Secretary, Environment  
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Additional Secretariat, Shillong  
Meghalaya – 793001
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22. Special Chief Secretary, Environment  
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Aranya Bhavan, Saifabad  
Hyderabad – 500004
23. Principal Secretary, Environment  
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Government of Mizoram, Secretariat, Aizawl- 796001
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29. Director, Environment  
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30. Secretary, Forest and Environment Department,  
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Gangtok, East Sikkim
31. PCCF and Principal Secretary,  
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Secretariat, Itanagar- 791111

32. Secretary  
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33. Secretary, Environment  
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34. Department of Environment & Forest  
Office of the Deputy Conservator of Forest, Daman, Fort Area,  
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Daman & Diu (U.T.)  
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35. Secretary, Environment  
Civil Secretariat, Leh, Ladakh 194101
36. Deputy Consevator & Forests  
Forestry & Wildlife  
Mullaiyagam Forest Campus  
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37. Principal Secretary  
UT of Andaman & Nicobar Islands  
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**KERALA STATE POLLUTION CONTROL BOARD**

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ, തിരുവനന്തപുരം 695 004



KSPCB/135/2023-CEE

Date: 19-09-2024

From

The Member Secretary

To

The Member Secretary,  
Central Pollution Control Board,  
Parivesh Bhavan, East Arjun Nagar  
Delhi -110032

Sub: O.A. no. 159/2021 - State Action Plan of Kerala - forwarding of – reg.

Ref: Order dated 03.09.2024 of the Hon'ble NGT in O.A. no. 159/2021.

Sir,

This has reference to the above. The Hon'ble NGT vide order cited above had directed SPCBs to give their response to the revised guidelines issued by CPCB. The State Action Plan of Kerala as per the common guidelines of CPCB is enclosed in respectful compliance of the order of the Hon'ble NGT. The Committees as prescribed in the guidelines are being constituted at the Government level and on its constitution, the same will be placed before the Committees. This is for your kind information and further necessary action.

Yours faithfully

Signed by

Sheela A M

Date: 19-09-2024 20:58:32

**MEMBER SECRETARY**

**Indicative template for STATE ACTION PLAN - KERALA**

**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.	<b>Policy for permitting new industries in Critically Polluted Areas (CPAs) -KSPCB</b>	No Critically Polluted Areas in Kerala	NA	NA	NA	NA	NA
2.	<b>Guidelines for laying city gas distribution network -Oil companies, PESO etc.,</b>	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 implication 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.	<b>Policy for replacement of heavy oil (eg., furnace oil, diesel etc.) based industries to alternate energy sources (CNG/ PNG/ Electricity) - Industries department/ EMC/ KSPCB etc.,</b>	National policy will be followed.	Ongoing	100%	Industries will incur to expenditure for clean fuels.		
		<b>KSRTC</b> Dispose the used oil/ heavy oil through sucessfull bidders in MSTC auctions possessing valid registration of Central & State pollution control board.	Ongoing	100%	No	NA	NA
		This policy is for the purpose of prohibiting / regulating the use of furnace oil to reduce air pollution and its impact on the environment. BPCL Kochi Refinery is using Low Sulphur fuel / furnace oil in heaters / boilers to reduce SO2 emission. In addition to the above, Kochi Refinery is using low hydrocarbon fuel for reducing load of emission.	Continuous	100%	Company's own fund		

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
4.	<b>Policy for restriction on usage of Pet coke for industrial use (Industries department)</b>	<p>The Hon'ble Supreme Court vide 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.</p> <p>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 directions and orders 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 measures) and further Hon'ble supreme Court order dated 13-12-2017, 5-2-2018 and 26-7-2017 allowing use of pet coke in industries /processes which pet coke and furnace oil either 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 of CPCB to use petcoke in lime kiln will be followed and monitoring will be done for compliance.</p>	Ongoing	100%	NA	NA	NA

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
5.	<b>Rules and Regulations on uninterrupted power supply in State/ UT(KSEB)</b>	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 September 2023 is 3765.32 MW, of which, hydel power contributed the major share of 2173.77 MW (57.73 per cent); while 696.34 MW (159.96MW - KSEBL +536.38 MW-Private –IPP & CPP) was contributed by thermal projects (18.49 per cent), 824.94MW (21.91 per cent) from solar and 70.28 MW from wind (1.87 per cent).	98%	No	NA	NA
7.	<b>Policy for use of DG sets (KSPCB)</b>	Regulations of DG sets in the State are as per the notification of Ministry of Environment and Forests and Climate Change. Kerala SPCB issued order No. PCB/HO/SEE3/Tech/82/2019 dated 9-12-2020 and 26-3-2021 on retrofitting of emission control devices/equipments in DG sets of capacity of 500 KVA and above in the State of Kerala	Continuously implemented	100% wherever applicable	NA	NA	NA
		Board has installed CAAQMS Stations: 9 no.s (Plamoodu, Kariavattom, Kollam, Thrissur, Kannur, Eloor Ernakulam, MG Road Ernakulam, Vytilla Ernakulam, Palayam Kozhikode) Proposed CAAQMS Stations: 4 no.s (Idukki, Malappuram, Alappuzha, Palakkad)	9 Installed  4 Proposed : 1 Year	Around Kerala	Yes	Rs. 1 crore approx. is required for each CAAQM station. State fund is being utilized for the same.	

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
8.	<b>Policy regarding installation of CAAQMS based on the emission potential or capacity of air polluting industries.</b>	<p>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 16 number of 17 category units. Out of which 15 industries are complying with environmental standards.</p> <p>Besides the above, three units have provided CAAQMS.</p> <p>CAAQMS installed by Industries: Online data from all the AAQMS is transmitted to CPCB on a continuous basis. The ambient air quality information is also communicated to general public through an electronic display board. In addition to the above, a third party monitoring system is also being maintained which is accredited by NABL Lab to ensure emission and ambient conditions are well within prescribed limits.</p>	Continuous	100%	Company's own fund		
9.	<b>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.)</b>	<p>17 category industrial units have provided OCEMS.</p> <p>Besides the above, 21 industrial units have provided OCEMS.</p> <p>Guidelines for bringing industries under OCEEMS (Online Continuous Effluent &amp; Emission Monitoring System) has been issued by the Board vide PCB/HO/SEE-3/TECH/136/2021 dated 28-2-2022.</p>	<p>On going</p> <p>In 2 years</p>	100%	NA	NA	NA
		<p>In the Consent to operate/establish issued by the Board, condition for controlling fugitive emission is included. The standards for ambient air quality with respect to particulate matter is prescribed for the industrial units especially crushers. The compliance of consent condition is also checked.</p>	Continuous	100%	NA	NA	NA

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
10.	<b>Mechanisms to control fugitive emissions sources - KSPCB, Industries department</b>	<p>Various measures are taken and maintained by industries to minimise VOC emissions from storage, transport, and effluent handling facilities.</p> <ul style="list-style-type: none"> <li>- Double seal floating roofs ensure low vapourisation and avoids escape of hydrocarbon vapours.</li> <li>- Double mechanical seals are provided for pumps</li> <li>- Closed loop sample points are employed for sampling.</li> <li>- Fixed VOC meters are provided in Petrochemical complex.</li> <li>- In addition to the above, a third - party monitoring system accredited by NABL Lab is also being done periodically (LDAR Program)</li> <li>- In addition, VOC control and treatment system are installed in ETP for VOC vapours generated in the effluent treatment area.</li> </ul>	Continuous	100%	No	NA	NA
11.	<b>Regulations for conversion of brick kilns to clean technologies-KSPCB</b>	<p>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.</p> <p>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.</p> <p>In accordance with the MoEF &amp; CC notification, the consent of existing temporary or seasonal brick kilns can be renewed up to 22.02.2025 subject to compliance of all the conditions in notification and prevailing circulars.</p> <p>Since Kerala is mainly having temporary/ seasonal brick kilns, CPCB has also been addressed for advice in the case of temporary or seasonal brick kilns.</p>	In 2 years	100%	No	NA	NA

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
12.	<p><b>Regulations for Emission Trading Scheme (ETS)-KSPCB, Industries department, Energy Management Centre</b></p>	<p>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.</p> <p>The State Government has declared its ambitious carbon neutral target to be achieved by 2050 and is keen to formulate an action plan for carbon neutrality. To facilitate this, the State has constituted a Working Group as per G.O (Rt) No. 81/2021/Envt dated 10.11.2021, with Additional Chief Secretary, Environment as the Chairperson to draw up an action plan for achieving carbon neutrality by 2050. The Directorate of Environment and Climate Change (DoECC) is leading the initiatives for the formulation of the Carbon Neutral Framework for the State in coordination with all the major stakeholder departments/agencies. In this regard, the DoECC has partnered with Vasudha Foundation, an independent not- for-profit policy research institution, working in the areas of climate policy and clean energy, for the development of a Carbon Neutral Pathway and a detailed Greenhouse Gas (GHG) inventory for the State of Kerala. The GHG inventory is being prepared for the period 2005 to 2021, accounting carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) emissions. This inventory will cover all four sectors - Energy, IPPU (Industrial Processes and Product Use), AFOLU (Agriculture, Forestry &amp; Other Land Use) &amp; Waste, and all relevant sub-sectors in the State that contribute to GHG emissions, as given in the methodology guidelines developed by the Intergovernmental Panel on Climate Change. Currently, the Directorate is in the stage of finalization of the GHG inventory Report for the State in consultation with all Stakeholder departments. On finalization of the GHG Inventory, the Carbon Neutral Pathway for the State will also be developed. In addition to this, the State Action Plan on Climate Change (SAPCC) 2.0 (Approved in principle by the State Govt as per G.O. (Rt)No 4/2023/Envt dated 21.01.2023) also devised strategies and interventions for adaptation and mitigation for the 2023-30 period. The planned mitigation strategies devised in SAPCC 2.0 for the 2023–30 period could avoid ~ 57000 kt CO<sub>2</sub> in 2030 from various sectors</p>	<p>In the stage of finalization of GHG Inventory report. Carbon Neutrality by 2050.</p>	<p>100% wherever applicable</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
13.	<b>Policy to set up e-waste recycling unit in industrial areas in compliance with e-waste management rules-KSPCB, Industries department</b>	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) started functioning. Consent to operate and EPR registration issued. Govt. has taken initiatives to provide more units.	Completed  Ongoing	North and South Kerala	No	NA	NA
14.	<b>Any other Policy / Rules/ Standards/ Guidelines pertaining to industrial emissions-KSPCB</b>	Board issued guidelines for controlling emission from hot mix plants, rendering plants. Local Self Government in Kerala issued guidelines for rendering plants	On going (in 2 years)	100%	NA	NA	NA
15.	<b>Number of industries in the state complying emission standards -KSPCB</b>	15 out of 16 operational 17 category industries are complying emission standards. 19 out of 21 operational GPI are complying emission standards.	Completed	100%	NA	NA	NA
16.	<b>Inventory of fuel consumed in the industries (type and quantity) -Oil companies, Industries dept</b>	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

**Indicative template for STATE ACTION PLAN - KERALA**

**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)
		KSRTC: Consumption of various types of fuels & quantity on the period of April 2023 to December 2023 is as below: HSD (qty in ltr) : 10,04,44,995 CNG (qty in ltr) : 53,388	NA	NA	Yes	NA	Diesel - Rs.9,63,71,01,055  CNG-Rs. 44,44,419
17.	<b>Shifting of industries/ commercial units to gaseous fuels (CNG/ PNG/ CBG) -oil companies, Industries dept</b>	<p>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.</p> <p>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.</p> <p>Major industries are extensively using solid fuels and FO especially those located in Ernakulum city.</p> <p>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 &amp; Kollam for CNG &amp; PNG</p> <p>Industries and entities are still using briquettes, and need to shift to PNG as pipeline network is available in DIC Kochuveli, Trivandrum Dist. Kollam &amp; Alappuzha</p>	31-3-2024	100%	NA	NA	NA



2. Vehicular Emissions							
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)
1.	<b>Notification for phasing out old vehicles (Commercial: 10 years; Private: 15 years) -Transport, MVD etc.,</b>	Notification of the Ministry is followed. All the 15 year old vehicle registered under Central Govt, State Govt, LSGD,public sector has been phased out. The Registration of those vehicles remain cancelled in VAHAN software.	Ongoing	100%	No	Nil	Nil
2.	<b>Policy for scrapping old vehicles -Transport, MVD etc.,</b>	Kerala State Road Transport Corporation own 5526 buses as on 01.01.2024 including 110 electric buses. 360 buses below 5 years; 2046 buses of age 5 -10 years; 2612 buses of 10-15 years and 508 buses of 15 years and above. As per the Government order no GO (P No 11/2023/FIN Dated 31.01.2023, Stage Carrage and other category type vehicles having age more than 15 years has to be removed from the existing fleet. At present KSRTC have 508 stage carriage buses and 155 other vehicles which are having age more than 15 years by 01.01.2024. Govt has entrusted KSRTC to set up Scrapping Centres (RVSF) through GO (P) No: 100/2023/TRANS dated 9/3/2023. All the 15 year old vehicle under the ownership of Govt (Central, State) related departments shall be scrapped through RVSF. The decision for the same has been taken GO (P) No: 17/2023/TRANS. The scrapped vehicles can use the Certificate of Deposit to buy new vehicle with reduced tax. This direction being given through GO(P) No: 18/2023/TRANS. As per State Government orderNo.162/2023/Trans dt: 28.04.2023. The validity of scrapping of KSRTC vehicles which completed 15 years of age has been extended up to 30.09.2024. At present KSRTC have 1277 vehicles which are going to be completed 15 years of age on 30.09.2024. The process of the implementation of Registered Vehicle Scrapping Facility is under PPP model with KSRTC is under process.	Ongoing	100%	Yes (The estimated cost for procuring new vehicles in place of vehicles to be scrapped is Rs.440.5 crore approximately)  Yes (For RVSF)	Nil	Rs.1,13,205/- (Utilized for RVSF tender advertisement in News papers) (own fund)
3.	<b>Policy/ Plan for Li-battery waste management from scrapped vehicles -KSPCB</b>	MoEF &CC notified Battery waste Management Rules 2022 including the plan for Li Battery waste management from scrapped vehicles.This rule is followed.	On going	100%	No	Nil	Nil

## 2. Vehicular Emissions

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)
4.	<p><b>Policy / Scheme for Eco-Friendly Mass Rapid Transport Systems -Transport, MVD etc.,</b></p>	<p>Kochi Metro Rail Limited (KMRL) is a centre-state joint venture company entrusted with the implementation of Kochi Metro Rail Project and Kochi Water Metro Project.</p> <p>The Phase I of Kochi Metro Rail Project extending from Aluva to Petta over a length of 25.20 km with 22 stations is fully operational currently. The Phase I extension of Kochi Metro Rail Project extending from Petta to Thripunithura over a length of 3 km and 3 stations is partially commissioned (2 stations and 1.8km).</p> <p>The Union govt. had approved the Phase II corridor of Kochi Metro Rail Project, extending from JLN Stadium to Infopark via Kakkanad over a length of 11.2 km with 11 stations, in September 2022, and the project implementation has commenced currently. According to the funding plan, the Centre government and State government will give Rs. 274.90 Crore each as equity share in the project.</p> <p>The Kochi Water Metro Project which is a first of its kind water transport project in India using electric boats is also in the implementation stage. It is a 76 km long integrated transport system connecting 10 islands with mainland Ernakulam city through a network of 16 routes comprising 38 stations. For enhancing first and last mile connectivity electric vehicles has been exempted from availing permits (STA/RTA) separately.</p> <p>As a part of promoting green energy KSRTC has introduced 130 electric buses to augment city circular service. The financial implications are mentioned in SI No.12.</p>	Implemented	Presently at Kochi	Yes	Nil	<p>a) Rs.46,21,99,300/- (50 buses from PMI through 2021-22 KIIFB fund)</p> <p>b) Rs.18,37,79,680/- (20 buses from PMI through Smart City Trivandrum Ltd)</p> <p>c) Rs.56,09,83,500/- (60 buses from VE Commercial through Smart City Trivandrum Ltd)</p> <p>d). Rs.24,75,602/- Utilized for purchasing new CNG engines.</p> <p>e) Rs.6,27,200/- utilized from plan fund for converting one CNG bus.</p> <p>f) Rs.25,08,800/- utilized for converting 4 CNG buses using KSRTC's own fund.</p>

## 2. Vehicular Emissions

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)
5.	<b>Policy for augment e-vehicles Industries, Transport, MVD, EMC, ANERT etc.,</b>	<p>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 Vehilces, development of resilient charging infrastructures etc. Registration fee for electric vehicle has been exempted in the State. As per GO (P) No: 12/2021/TRANS dated 23/2/2021, 50% (fifty percentage) tax reduction for a period of five years with effect from the 1st day of April, 2021 has been provided on the rate of tax levied for Electric Transport Vehicles. Also tax has been exempted for first five years in the case of electric 3 Wheelers. For the Non Transport Vehicle Category a consolidated tax percentage of 5% of the invoice price is levied in the place of 10 to 20 % of invoice price.</p> <p>As part of E Mobility awareness and E Mobility promotion the following schemes were implemented. The year wise components and the expenditures for those are given below. E Mobility promotion fund has started from the year 2019. And till now the total expenditure under the E Mobility awareness plan fund is Rs 3794.19 lakhs. The detailed programs and its expenditures are given below. We are conducting E Mobility conference and Expo named EVOLVE since 2021. Two versions of the event were already conducted one at Eranakulam and the other at Trivandrum. The program intended to have a state of art knowledge of recent developments and opportunities in E Mobility. It also helps in enhancing the awareness on E Mobility area. E Subsidy is being given to electric three wheelers at a rate of Rs 30000 per vehicle. More than 2600 subsidies have been distributed till now. The financial details ae consolidated in a separete table.</p>	On going	100% wherever applicable			
			On going and developing each year	100% wherever applicable	Yes.	Expenditure from E Mobility Promotion Fund (Govt. of Kerala) : Rs. 3794.19 Lakhs	

2. Vehicular Emissions							
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)
6.	<b>Notification and enforcement of PUC norms - Transport, Motor Vehicles department</b>	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. All the two wheelers with BS4 pollution norms are mandated with a PUC validity of 6 months instead of one year validity.	on going	100%	No.		
7.	<b>Online monitoring of PUC implementation-Transport, MVD</b>	Pollution testing centres are now directly linked to Parivahan system. The pollution testing centres, testing of vehicles and pollution under control certificate issued by pollution testing centres are now being monitored centrally by the Motor Vehicles Department. Each enforcement can digitally monitor the status of pollution certificate for a particular vehicle in field itself.	on going	100%	No.		
8.	<b>Mechanism for centralized record maintenance of PUC checks, certification and cross check by the concerned transport authorities to be incorporated - Transport, Motor Vehicles department etc.</b>	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. Department is ensuring the calibration of testing equipments through the provisions of parivahan system.	on going	100%	No.		
		Kollam- alappuzha bypass	ongoing				
		Under the scheme Development of Urban links NH fund allocation is Rs. 226.53 Lakhs, expenditure is Rs.31.66 Lakhs	ongoing	100%	Yes	2.26	0.31
		Traffic safety measures at NH urban links Fund allocation is 1647.45Lakhs,Expenditure is 532.59	ongoing	100%	Yes	16.47	5.33

2. Vehicular Emissions							
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)
9.	<b>Construction of bypass / ring roads- Highways, PWD, NATPAC</b>	CRF Roads (Ordinary Allocation) Fund allocation is 5094.72 Lakhs, Expenditure is 2421.57 Lakhs	ongoing	100%	Yes	50.95	24.22
		CRF Bridges ,Fund allocation is 6.52 Lkajs,Expenditure is 6.52 Lakhs	ongoing	100%	Yes	0.065	0.065
		Construction of Bypass in NH	Ongoing	100%	Yes	0.0083	0
		Construction of bylanes in selected town along NH Fund allocation is 101.03Lakhs,Expenditure is 80.44 Lakhs	on going	100%	Yes	1.01	0.8
		Roads of economic importance (CSS) having 50%,Fund Allocation is 0.83 Lakhs,Expenditure is 0	Ongoing	100%	Yes	0.0083	0
		Elevated Highway in Wayanad-bandipur of NH 212 (Cost sharing with NHAI)	Ongoing	100%	Yes	0.0083	0
		Investigation and planning	Ongoing	100%	Yes	0.5	0
		Land Acquisition C,Fund Allocation is 1000Lakhs,Expenditure is 121.6Lakhs	Ongoing	100%	Yes	10	1.22
		Land Acquisition V, Fund Allocation is 100 Lakhs, Expenditure is 0	Ongoing	100%	Yes	1	0
		10.	<b>Re-filling Stations retrofitted with Vapor Recovery System -Oil companies</b>	Direction of Central Pollution Control Board are followed. 31 vapour recovery system alreadyprovided	On going	100% wherever applicable	No
11.	<b>Incentive of setting up R&amp;D facilities related to EVs- Industries, MVD</b>	NA					



## 2. Vehicular Emissions

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)
Assessment of the number of vehicles which are more than 15 year old has been taken							

<b>E-MOBILITY PROMOTION FUND: 2019-20</b>	
Components	Expenditure (in lakhs)
Kerala EV Expo 2019	189.45
UK visit of delegates	18.13
E-Mobility symposium organized jointly by Transport Department and Sree Chitra Thirunal College of Engineering	5
Installation of charging stations by KSEB	Nil
E-auto subsidy	1.2
<b>Total</b>	<b>213.79</b>

<b>E-MOBILITY PROMOTION FUND: 2020-21</b>	
Components	Expenditure (in lakhs)
E-auto subsidy	33.9
Installation of charging stations by KSEB	500
Project on Establishment of Hydrogen Generator and Dispensing unit by Sree Chitra Thirunal College of Engineering	966
<b>Total</b>	<b>1499.9</b>

<b>E-MOBILITY PROMOTION FUND: 2021-22</b>	
Components	Expenditure (in lakhs)
Charging stations in public places through ANERT	In progress
Conversion of diesel mini buses and auto rickshaw into electric vehicles by SCT College of engineering	30
E-auto subsidy	366.6

## 2. Vehicular Emissions

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)
		KTDFC –for purchasing 30 numbers of e-auto rickshaws	85				
		Payment towards KSEB Nilayakal EV charging station for KSRTC	12.32				
		<b>Total</b>	<b>493.92</b>				

<b>E-MOBILITY PROMOTION FUND: 2022-23</b>	
Components	Expenditure (in lakhs)
E-mobility awareness and Expo	65.22
Charging stations in public places through ANERT	500
E-auto subsidy	269.7
EV charging stations at 20 MVD offices	In progress
EV charging stations at 15 MVD offices	In progress
Subsidy through ANERT for 2w/3w EV charging stations	nil
Installation and commissioning of EV charging stations at KSRTC Trivandrum city depot	200
Setting up of Centre of Excellence for EV at SCT College	In progress
Financial assistance to CET for developing electric 4w driven All-Terrain Vehicle	In progress
Financial assistance to Govt. Engineering College, Barton Hill	In progress
Balance	
<b>Total</b>	<b>1039 (67%)</b>

<b>E-MOBILITY PROMOTION FUND: 2023-24</b>	
Components	Expenditure (in lakhs)
ELAMS proposals 2022-23	
e-auto subsidy	110.4
e- mobility awareness and Expo	65.47
EVCS at 15 MVD offices	135
Subsidy for 2/w/3w charging stations	Nil
Financial assistance to Barton College of Engineering	23.4

## 2. Vehicular Emissions

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)
		Financial assistance to College of Engineering	2.99				
		<b>ELAMS Total</b>	<b>337.26</b> <b>(21.69%)</b>				
		Plan 2023-24					
		e-auto subsidy	196.8				
		EVCS at 20 MVD offices	Nil				
		Centre for Excellence for EV	Nil				
		E-mobility awareness and expo	0.2				
		Conversion of peat gas to hydrogen	Nil				
		EV performing testing	Nil				
		EVS 36 expo – travel expenses	13.32				
		<b>Plan 2023-24 total</b>	<b>210.32</b>				
		<b>Total</b>	<b>547.58</b>				

<b>3. Emissions from burning of waste</b>							
<b>S. 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.	<b>Notification and Enforcement of municipal solid waste (MSW) management rules</b>	Notification Done. Enforcement of SWM Rules Ongoing. Vide G.O.(Rt)No. 673/2023/LSGD Dated 21.03.2023 Enforcement squad has been formed for monitoring and penalizing the violators against implementation of SWM rules, 2016	Completed	100%	No	NIL	NIL
2.	<b>Policy for MSW management</b>	Kerala Solid Waste Management Policy notified in 2018. GO(P) No: 65/2018/LSGD dated 13.09.2018	Completed	100%	No	NIL	NIL
3.	<b>Policy for legacy waste management at dumpsites</b>	Policy approved for remediation of legacy sites . Process of Biomining completed at 22 sites and process ongoing at 9 locations. Work order has been given to 3 sites and tender proceedings are ongoing in another 5 sites. Tender process is initiated in 19 sites. Vide G.O.(Rt)No.2629/2022/LSGD Dated 29/10/2022, Government has approved guidelines for Remediation of Legacy Waste Dumpsites through Bioremediation.	22-completed 9 - ongoing	100%	No		

3. Emissions from burning of waste							
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)
4.	<b>Policy for implementation of ban on single use plastics</b>	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/Envt. dated 27.01.2020 4. G.O.(Ms)No.8/2019/Envt. dated 19.12.2019  Two Enforcement teams formed; (a) LSGD (23 teams) and (b) Vigilance squad (14 teams) Enforcement team formed for monitoring open dumping, open burning, open littering. Training for Haritha Karma Sena and Enforcement team conducted. Swap shops, Eco alternative products expos have been conducted by Kudumbasree mission and other SHGs in the state. IEC activities are being carried out through Print-dailies in state.	Ongoing	100%	No		
		<a href="#">Assessment of alternatives to plastic in the state of Kerala, DATA REPOSITORY</a>	Completed	100%	No		
5.	<b>Policy for development and Construction of Waste to Energy Plants</b>	Draft guidelines for engaging private agencies for implementation of waste management projects is being prepared and submitted to government. (a) Cogo Ecotech Solutions Private Limited (10 TPD) plant in Thiruvananthapuram is planned.	2025-26	80%	Yes		
	<b>(a) non-recyclable / combustible dry waste</b>	(b) Bio CNG plant (150 TPD) is Brahmapuram is planned.					

<b>3. Emissions from burning of waste</b>							
<b>S. 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>
	<b>(b) Bio- methanation / Bio CNG</b>	Recycling plants are planned. 9 Waste to Energy plants are proposed.					
	<b>(c) Composting plant etc.</b>	Kozhikode Palakkad					Rs. 358 Cr Rs. 120 Cr
6.	<b>Any other Policy / Rules/ Standards/ Guidelines pertaining to MSW Management</b>	Policy for Domestic Hazardous Waste approved and is being implemented. Policy for management of Construction and Demolition waste approved and the process to be started.	2025	100%	No		
		Policy for EPR (Extended Poluuter Responsibility)	2024	100%	No		

4. Municipal Solid Waste								
S. No.	Activities/ Action plan	Status of activity (Completed/ ongoing/ To be Started)	Target Number (No.)/ (%)	Total Capacity (TPD) / Coverage (Acres)	Funds Allocated (Rs. crore)	Timeline for completion	Target Completed as on date	Funds Utilized as on date (Rs crore)
1.	<b>Waste collection status in the city (%)</b>	Data of each ULB consolidated in a separate sheet. Waste Generated = 3472 TPD Waste Collected/ treated = 3231 TPD	100%	Coverage: 19,505 wards	-	12 months	84.83%	Total SBM Expenditure : Rs. 54.90 Cr
2.	<b>Waste segregation status in the city (%)</b>	Data of each ULB consolidated in a separate sheet.	100%	Coverage: 19,505 wards				
3.	<b>Material Recovery Facility</b>	MCF functional in all ULBs. 223 proposed projects of MRF under SBM (U) having Rs 37.1 crore fund. Already 1191 MCF and 174 RRF existing in Kerala.	223	228.5	Total cost Rs 37.1 crore under SBM (U). Rs 8.26 crore central share.	2023-26	1149 Functional MCFs 31/03/2024	To be implemented through KSWMP
4.	<b>Waste to Energy plants</b>	9 Waste to Energy plants proposed: 1. Thiruvananthapuram - land not yet identified 2. Kollam - Biomining of legacy waste completed 3. Kochi - Biomining of legacy waste completed 4. Thrissur - land not yet identified 5. Palakkad - Land take over by KSEB Ltd 6. Malappuram - Land identified 7. Kozhikode - Work awarded 8. Kannur - Work awarded 9. Munnar - Work awarded	9	200 TPD each	PPP model	2026	-	-
5.	<b>Waste to compost plants</b>	Existing Decentralised Aerobic Thumboormuzhi ( 2150 BINS) in all ULBs , projects yet to be started under SBM(U) 2.0	809	717.4	140.97 <a href="#">SBM(U) 2.0</a>	2026	nil	-

4. Municipal Solid Waste								
S. No.	Activities/ Action plan	Status of activity (Completed/ ongoing/ To be Started)	Target Number (No.)/ (%)	Total Capacity (TPD) / Coverage (Acres)	Funds Allocated (Rs. crore)	Timeline for completion	Target Completed as on date	Funds Utilized as on date (Rs crore)
6.	<b>Remediation of dumpsites in the city</b>	18 Urban Dumpsites cleared. Process ongoing at 11 sites and Remaining 15 LSGIs are at planning stage .	44	66233 T	93.94 <a href="#">SBM 2.0</a>	2025	22	13.7
7.	<b>Control open burning of MSW</b>	Executive Directive No. 9/2016 instructing the Special drive for take penal actions against the waste dumping and burying 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 activites and campaigns ongoing.	100%	NA	NIL	2026		
8.	<b>Any other activity/ project pertaining to MSW Management</b>	5 Mechanized road sweepers are proposed under SBM(U) 2.0 projects	5	-	3.2	2026	-	-

5. Construction & Demolition Waste and Road Dust Management							
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)
1.	<b>Policy for development of projects/ plants for C&amp;D waste management</b>	Construction and Demolition Waste Management Rules 2016 is followed in the State. Kerala Government vide GO(Ms) No. 168/2022/LSGD dated 30-7-2022 published "Guidelines for managing construction and demolition waste in Kerala" and vide GO (Rt) No. 811/2020/LSGD dated 1-5-2020 published integrated waste management -strategy document.The CPCB has already published 'Guidlines on Environmental Management of Construction & Demoilition Wasts' and "Guidlines on dust mitigation measures in handling construction material and C & D wastes"	Ongoing	100%	No	NA	NA
2.	<b>Policy for use of C&amp;D waste in laying and construction of State highways. - PWD</b>	Construction and Demolition Waste Management Rules 2016 is followed in the State. vide GO(Ms)No. 168/2022/LSGD dated 30-7-2022 published "Guidelines for managing construction and demolition waste in Kerala".The Building Materials and Technology Promotion Council (BMTPC) IN 2016 released infrastrucure in housing schemes of the Government ".The construction & demolition (C&D) waster guidlines pertain to building industry.The Central Public Works Department (CPWD),the PART IV:Guidlines on reuse and recycling of construction and demolition (C&D)waste is availble in CPWD's Guidlines for Sustainable Habitat (March 2014)-also address the building sector	Ongoing	100% wherever applicable	No		

<b>5. Construction &amp; Demolition Waste and Road Dust Management</b>							
<b>S. 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>
3.	<b>Demand creation for C&amp; D waste and alternative use of C&amp; D waste material</b>	Usage of C&D waste and demand creation for the material is incorporated in the "Guidelines for managing construction and demolition waste in Kerala" . IS: 383(2016) Indian Standard COARSE AND FINE AGGREGATE FOR CONCRETE – SPECIFICATION. Utilisation of C&D waste permitted in various concrete works by IS: 383(2016).National Building Code (NBC-CED 46) of India 2005 : Part 11 of NBC 2005 on ‘Approach to Sustainability’ states the reuse of recycled construction materials. Building Materials and Technology Promotion Council (BMTPC) in 2016 released “Guidelines for utilization of C & D waste in construction of dwelling units and related infrastructure in housing schemes of the Government”. d. The PART IV of Central Public Works Division (CPWD): The “Guidelines for Sustainable Habitat (March 2014)” discusses ‘Guidelines on reuse and recycling of Construction and Demolition (C & D) waste’. e. Indian Road Congress has permitted the use of produce of C&D waste processing and has issued IRC: 121-2017 “Guidelines for use of construction and demolition waste in road sector”.	2025	100% wherever applicable	No		
4.	<b>Schemes for development of green belt/ open spaces and street sides greening on State highways - PWD</b>	No activity					
5.	<b>Penalty provisions for non-compliance of C&amp;D waste management rules at construction sites</b>	Report of the CPCB in-house Committee on Methodology for assessing environmental compensation and action plan to utilize the fund by CPCB for evaluating Environmental compensation associated with Construction and demolition rules.	To be implemented continuously	100% wherever applicable	No	Nil	

<b>5. Construction &amp; Demolition Waste and Road Dust Management</b>							
<b>S. 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>
6.	<b>Maintenance, repair and paving of State highways - PWD</b>	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.	Ongoing	100%			
		Maintenance, repair and paving of roads: Completed and ongoing	6 months to 18 months	100%	Yes	61.77	61.68
7.	<b>Monitoring of road dust especially in and around hotspot areas and in the vicinity of State highways</b>	Action plan for setting up Mechanical Road Sweepers got approval under SBM(U)2.0 for Thiruvananthapuram and Kochi corporations	2026	100% wherever applicable	No		
8.	<b>Mechanism for development and maintenance of road infrastructures for industrial states and clusters</b>	NA					

5. Construction & Demolition Waste and Road Dust Management							
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)
9.	<b>Any other Policy / Rules/ Standards/ Guidelines pertaining to C&amp;D waste and Road dust management</b>	Construction and Demolition Waste Management Rules 2016 is followed in the State. Kerala Government vide GO(Ms)No. 168/2022/LSGD dated 30-7-2022 published "Guidelines for managing construction and demolition waste in Kerala" and vide GO (Rt) No. 811/2020/LSGD dated 1-5-2020 published integrated waste management -strategy document. The CPCB has already published 'Guidlines on Environmenttal Management of Construction & Demoilition Wasts' and "Guidlines on dust mitigation measures in handling construction material and C & D wastes"	Continuously monitored	100%	No		
10.	<b>C&amp;D waste processing plants</b>	- Consent to Establish certificate issued to two private companies for setting up C&D waste plants - C&D waste processing plant of capacity 100-150 TPD is proposed to be constructed in a total area of 2 acres of land under PPP mode in Edayar Industrial Area, Ernakulam.	2026	133 TPD		7.98	
11.	<b>Any other activity/ project pertaining to C&amp;D waste and Road dust management</b>	Kerala PCB published the standard operating procedure of siting requirements and pollution control measures CPCB published "Guidelines on dust mitigation measures in handling construction materials and C&D wastes and Guidelines for environment management of C&D waste. Action plan for setting up Mechanical Road Sweepers got approval under SBM(U)2.0 for Thiruvananthapuram and Kochi corporations	completed	Trivandrum Corporation-1 Vehicle Kochi Corporation- 4 Vehicles		3.2	

<b>6. Household Emissions</b>							
<b>S. 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</b>
1.	<b>Schemes for use of LPG/ PNG for cooking fuels</b>	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.	<b>Amendments to the building by-laws for “Indoor air quality management”</b>	National rule will be followed		100%	No		
3.	<b>Any other Policy / Rules/ Standards/ Guidelines pertaining to Household emissions</b>						

<b>7. Emissions due to burning of agro residues</b>							
<b>S. 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.	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.	Nil					
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						

<b>Additional Informations:</b>	
<p>• <b>Topography and Geography of the state:</b></p>	<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.</p> <p>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>• <b>Identification of prominent air polluting sources:</b> Inventory of air pollution sources in State/UT including hotspots or areas of concern pertaining to air pollution should be carried out.</p>	<p>As per the Hon'ble NGT Order dated 14.07.2021 in OA 76/2017, 259/2017 &amp; 260/2017, it was directed to conduct Source Apportionment Studies in Kochi &amp; Thiruvananthapuram cities in Kerala. The Environment Department, Govt. of Kerala was directed to conduct the study and the Committee appointed by the Hon'ble Tribunal to provide necessary guidance for the study. As per the direction from Government of Kerala, Expression of Interest was invited from institutions approved by the project steering committee of CPCB. Actions are being taken to evaluate the revised proposals submitted by the institutions for conducting Source Apportionment Study.</p>
<p>• <b>Hotspots of air pollution:</b> Hotspots with respect to air pollution (such as stubble burning, illegal waste burning, un-authorised operations, cluster activities, forest fires etc.) should be identified and localised action plan for mitigation of the same should be prepared.</p>	
<p>• 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.</p>	<p>In Kerala, there are only a few industrial units having emission potential. Control measures are insisted in these units through conditional consent issued.</p>

<p><b>• Augmentation and Strengthening of Air Quality Monitoring Network:</b> 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.</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. There are 41 no.s of NAMP stations and 6 no.s of SAMP stations.</p>
<p><b>• Awareness on Air Quality:</b></p>	<p>Awareness programs are arranged with the stakeholders for assessing the progress of implementation of action points in pollution control. - Training programme on Climate change and decarbonisation was organised by KSPCB on 18.11.2023, to Stakeholders of Dept. of Environment and Climate change, Directorate of Industries and commerce and various industries.</p>
<p><b>• Public grievance redressal mechanism at State Level:</b></p>	<p>1. CMO Portal: Government has composed the CMO portal by consolidating then existed grievance redressal systems. The portal mainly considers either the petitions which remain unresolved for a long term before the concerned officers of hierarchically lower offices or the applications in which those offices can't make a decision. The Primary concern of the CMO portal is to hand over the received petition to the concerned officer in no time. It is assured that proper expedition has been made on the matters mentioned in the petition and the petitioner gets informed accordingly. The Office of the Chief Minister can make a full length scrutiny from beginning to the conclusion stage of the petition. When the petition gets disposed it is ensured that the petitioner gets a detailed reply. Tenure of 2 weeks is allowed to dispose the petition. If it needs more time for disposal, petitioner will get a comprehensive interim reply. The Department Secretaries and Directors are entrusted to ensure the disposal of petitions in a time bound manner. It is also ensured that the petitions are scrutinized at the appropriate levels. Thus the CMO portal ensures a transparent scrutiny and appropriate decision in each and every petition received, by which we are advancing to a more people centric and efficient Civil Service.</p>

	<p>2. KSPCB Complaint Cell: The Board is also maintaining a dedicated complaint cell for addressing the complaints and grievance of the public. The complaints can be submitted via email or through telephonic communications. Actions will be initiated upon the receipt of the complaint.</p>
<p><b>• Air Quality Data and Information System:</b> To develop Mobile App / Online portal for dissemination of air quality as well as to take complaints on local air pollution.</p>	<p>National programme (NAMP Stations) - 41 established State programme (SAMP Stations) - 6 Continuous Ambient Air Quality Monitoring (CAAQM Stations) – 9</p> <p>Integrated web portal (online web portal) is being prepared for the dissemination of air quality to the public. Ambient air quality data from continuous and manual air quality monitoring stations are available in the website of the Board for the public. Air Quality directory published in website and articles related to Air Pollution are also shared.</p>
<p><b>• Review and approval mechanism:</b></p>	<p>As per the common guideline of CPCB for the preparation of State Action Plan, an Air Quality Monitoring Committee (AQMC) under the chair of the Principal Secretary, Environment Department shall be constituted for the preparation of the SAP and the SAP shall be approved by the Steering Committee constituted under the Chair of Chief Secretary. AQMC shall periodically monitor the progress of implementation of the State Action Plan and report to the Steering Committee which shall review the progress and give necessary guidance in the matter.</p>

<p>Implementation of GRAP in State in case of air pollution emergencies:</p> <p><b>GRAP (Graded Response Action Plan)</b> is a set of emergency action plan implemented in four stages depending on the severity of the air pollution - which is determined by the air quality index (AQI).</p>	<p>In Kerala the air quality varies from Good to Satisfactory.</p> <ul style="list-style-type: none"> <li>- The first stage of GRAP is imposed when the overall air quality is in the 'poor' category. Under this stage, the government imposes a heavy fine on garbage burning and sweeping without sprinkling water, ensuring proper implementation of guidelines on dust mitigation measures, ensuring regular lifting of municipal solid waste, construction and demolition waste, and hazardous wastes from dedicated dumping sites, and enforcing guidelines for use of anti-smog guns at construction sites.</li> <li>- The second stage of GRAP is imposed when the air quality enters the 'very poor' category. This necessitates a ban on diesel generators, use of coal or firewood in hotels, restaurants, and open eateries, increased parking fees, and increased bus and metro frequency. The government also issues an advisory for children, the elderly, and those with respiratory problems under this stage.</li> <li>- The third stage is imposed when the air quality breaches the 'severe' category. Under this stage, the government imposes a strict ban on construction and demolition activities, hot mix plants, brick kilns, and stone crushers.</li> <li>- The fourth and final stage of the GRAP is enforced when the air quality is in the 'severe plus' category. This stage entails stopping entry of trucks except for LNG/CNG trucks and those involved in essential services, imposing a ban on diesel-operated Medium Goods Vehicles (MGVs) and Heavy Goods Vehicles (HGVs)</li> </ul>
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SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
			As per Approved Action Plan		
SI No.	District	ULB Name	No. of units	Capacity (TPD)	Cost (Cr)
1	Trivandrum	Trivandrum corporation	179	112.8	28.9
2	Trivandrum	Attingal	0	0	0
3	Trivandrum	Varkala	31	7	1.17
4	Trivandrum	Nedumangad	45	4.5	0.925
5	Trivandrum	Neyyatinkara	23	2.8	0.46
6	Kollam	Kollam Corporation	0	0	0
7	Kollam	Punalur	8	1.2	0.56
8	Kollam	Karunagappally	3	0.15	0.066
9	Kollam	Kottarakara	10	0.2	0.088
10	Kollam	Paravur	3	0.15	0.063
11	Pathanamthitta	Thiruvalla	1	6	1.08
12	Pathanamthitta	Adoor	1	5	0.675
13	Pathanamthitta	Pathanamthitta	1	6	1.08

SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
14	Pathanamthitta	Pandalam	2	4	0.74
15	Alappuzha	Alappuzha	18	9	1.26
16	Alappuzha	Kayamkulam	12	2	0.4
17	Alappuzha	Mavelikkara	2	4	0.6
18	Alappuzha	Cherthala	1	6	0.9
19	Alappuzha	Chenganoor	2	4	0.68
20	Alappuzha	Haripad	5	1	0.256
21	Kottayam	Kottayam	6	23	2.645
22	Kottayam	Changanacherry	9 locations-120 aerobic bins	3	0.8362
23	Kottayam	Pala	5	2	0.5596
24	Kottayam	Vaikom	16	1	0.3802
25	Kottayam	Erattupetta	8	5	1.7736
26	Kottayam	Ettumanoor	1	1	0.35
27	Idukki	Kattappana	2	4.5	0.7015
28	Idukki	Thodupuzha	1	6	0.9

SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
29	Ernakulam	Kochi Corporation	1	225	45
30	Ernakulam	Perumbavur	10	1	0.2
31	Ernakulam	North Paravoor	1	6	0.7
32	Ernakulam	Aluva	1	0.5	0.12
33	Ernakulam	Kothamangalam	1	5.5	0.6325
34	Ernakulam	koothatukulam	1	0.5	0.2
35	Ernakulam	Kalamassery	0	0	0
36	Ernakulam	Maradu	0	0	0
37	Ernakulam	Thrikkakara	1	9.5	1.0925
38	Ernakulam	Eloor	0	0	0
39	Ernakulam	Muvatupuzha	3	3.6	0.87
40	Ernakulam	Piravom	21	6	1.15
41	Ernakulam	Angamaly	0	0	0
42	Ernakulam	Tripunithura	20	4	3
43	Thrissur	Thrissur Corporation	68	11.3	5.085

SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
44	Thrissur	Kodungallur	2	2.5	0.29
45	Thrissur	Chalakkudy	1	5	0.75
46	Thrissur	Chavakkad	0	0	-
47	Thrissur	Irinjalakkuda	14	1.4	0.32
48	Thrissur	Kunnamkulam	1	1	0.25
49	Thrissur	Wadakkancherry	1	4	0.46
50	Thrissur	Guruvayur	0	0	-
51	Palakkad	Palakkad	1	3	0.555
52	Palakkad	Chittur Tathamangalam	1	1.5	0.2775
53	Palakkad	Cherpulassery	1	8	1.48
54	Palakkad	Pattambi	10	1.5	0.39
55	Palakkad	Shornur	6	1	0.26
56	Palakkad	Mannarkkad	1	8	1.48
57	Palakkad	Ottappalam	1	5	0.925
58	MALAPPURAM	MALAPPURAM	1	16.5	1.8975

SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
59	MALAPPURAM	MANJERI	19	10	1.15
60	MALAPPURAM	THIRURANGADI	3	6	0.69
61	MALAPPURAM	PONNANI	5	10	1.15
62	MALAPPURAM	KONDOTTY	1	7	0.805
63	MALAPPURAM	KOTTAKKAL	6	4	0.46
64	MALAPPURAM	NILAMBUR	1	9	1.035
65	MALAPPURAM	PARAPPANAGADI	3	5	0.575
66	MALAPPURAM	TIRUR	3	7	0.805
67	MALAPPURAM	PERINTHALMANNA	2	3	0.345
68	MALAPPURAM	TANUR	3	7	0.805
69	MALAPPURAM	VALANCHERI	2	4	0.46
70	Kozhikode	Kozhikode Corporation	24	1.2	0.6
71	Kozhikode	Koduvally	23	1.15	0.575
72	Kozhikode	Payyoli	34	1.7	0.85
73	Kozhikode	Mukkam	19	0.95	0.4751

SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
74	Kozhikode	Ramanattukara	16	0.8	0.4
75	Kozhikode	Vatakara	8	0.6	0.36
76	Kozhikode	Feroke	22	1.1	0.55
77	Kozhikode	Koyilandy	18	0.9	0.45
78	Wayanad	Kalpetta	1	4.5	0.6783
79	Wayanad	Mananthavady	5	10.7	1.7249
80	Wayanad	Sulthan Bathery	4	6.2	0.97394
81	Kannur	Kannur Corporation	1	20	3
82	Kannur	Anthoor	1	2	0.3
83	Kannur	Kuthuparamba	1	3	0.45
84	Kannur	Mattannur	1	6	0.9
85	Kannur	Payyannur	1	4	0.6
86	Kannur	Sreekandapuram	2	6	0.9
87	Kannur	Taliparamba	1	3	0.45
88	Kannur	Iritty	1	3	0.45

SI No.	District	ULB Name	As per Approved Action Plan		
			No. of units	Capacity (TPD)	Cost (Cr)
89	Kannur	Panoor	1	8	1.2
90	Kannur	Thalassery	1	5	0.75
91	Kasaragod	Kanhangad	0	0	0
92	Kasaragod	Kasaragod	20	2	0.508
93	Kasaragod	Nileshwaram	1	1	0.115
			<b>809</b>	<b>717.4</b>	<b>140.97434</b>

			As per SLTC Approved Action Plan	
SI No.	District	ULB Name	Legacy waste quantity proposed in action plan (MT)	Proposed Cost (Cr.)
			As per SLTC Approved Action Plan	
SI No.	District	ULB Name	Legacy waste quantity proposed in action plan (MT)	Proposed Cost (Cr.)
1	Trivandrum	Trivandrum corporation	1,600	0.152
2	Kollam	Kollam Corporation	104,907	11.8545
3	Alappuzha	Alappuzha	30,102	3.7025
4	Kottayam	Kottayam	80,000	7.6
5	Kottayam	Changanacherry	7300	0.6935
6	Kottayam	Erattupetta	8000	0.76
7	Idukki	Kattappana	8,000	0.76
8	Idukki	Thodupuzha	28000	2.66
9	Ernakulam	Kochi Corporation	496713	27.3192
10	Ernakulam	North Paravoor	18565	1.0211
11	Ernakulam	Kothamangalam	4000	0.44
12	Ernakulam	koothatukulam	2500	0.2625
13	Ernakulam	Muvatupuzha	76000	7.98

SI No.	District	ULB Name	As per SLTC Approved Action Plan	
			Legacy waste quantity proposed in action plan (MT)	Proposed Cost (Cr.)
14	Thrissur	Thrissur Corporation	54,000	5.13
15	Thrissur	Kodungallur	1,600	0.088
16	Thrissur	Chalakkudy	4,918	0.2705
17	Thrissur	Chavakkad	5,040	0.2772
18	Thrissur	Irinjalakkuda	24,000	1.32
19	Thrissur	Kunnamkulam	24,660	1.3563
20	Thrissur	Wadakkancherry	60960	3.3528
21	Palakkad	Palakkad	57,960	5.4098
22	Palakkad	Ottappalam	20000	1.866
23	MALAPPURAM	MANJERI	15433	1.7594
24	MALAPPURAM	TIRUR	1010	0.1
25	Kozhikode	Kozhikode Corporation	24,720	1.3596
26	Kannur	Thalassery	56783	5.3944
27	Kasaragod	Kanhangad	5,600	0.45
28	Kasaragod	Kasaragod	11000	0.605
			<b>1,233,371</b>	<b>93.9443</b>

		CONSOLIDATION OF SWM PROJECTS										
		AS ON MARCH 2023										
District	Name of ULB	Total No. of Projects			Completed Projects							
		DPC Approved	Completed	Ongoing	Cost of Project		Total Cost of Project	Expenditure		Total Expenditure	SBM Expenditure Status	Percentage
					SBM Share	ULB Share		SBM Share	ULB Share			
THIRUVANANTHAPURAM	ATTINGAL (M)	12	7	5	7075960	2246773	9322733	6026560	831138	6857698	0.735588802	73.56%
THIRUVANANTHAPURAM	NEDUMANGAD (M)	7	3	4	1335070	954930	2290000	1529353	52863	1582216	0.690924017	69.09%
THIRUVANANTHAPURAM	NEYATTINKARA (M)	7	1	6	1888920	1351080	3240000	1755908	1251080	3006988	0.928082716	92.81%
THIRUVANANTHAPURAM	THIRUVANANTHAPURAM	11	4	7	9328000	6672000	16000000	17023600	5504400	22528000	1.408	140.80%
THIRUVANANTHAPURAM	VARKALA (M)	9	3	6	2915000	2085000	5000000	386605.956	276526.044	663132	0.1326264	13.26%
<b>TOTAL</b>		<b>46</b>	<b>18</b>	<b>28</b>	<b>22542950</b>	<b>13309783</b>	<b>35852733</b>	<b>26722026.96</b>	<b>7916007.04</b>	<b>34638034</b>	<b>0.966119766</b>	<b>96.61%</b>
KOLLAM	KARUNAGAPALLY	3	0	3	0	0	0	0	0	0	0	0
KOLLAM	KOLLAM	15	5	10	9441688	11157252	20598940	4012334	5162237	9174571	0.445390442	44.54%
KOLLAM	KOTTARAKKARA	9	4	5	1770831	1423219	3194050	1132200	976783	2108983	0.660284905	66.03%
KOLLAM	PARAVOOR (M)	6	1	5	1865600	1334400	3200000	1050000	0	1050000	0.328125	32.81%
KOLLAM	PUNALUR (M)	1	1	0	1279685	915315	2195000	1279685	0	1279685	0.583	58.30%
<b>TOTAL</b>		<b>34</b>	<b>11</b>	<b>23</b>	<b>14357804</b>	<b>14830186</b>	<b>29187990</b>	<b>7474219</b>	<b>6139020</b>	<b>13613239</b>	<b>0.466398645</b>	<b>46.64%</b>
PATHANAMTHITTA	ADOOR (M)	6	2	4	2232189	1596607	3828796	879867	488774.7	1368641.7	0.357460074	35.75%
PATHANAMTHITTA	PANDALAM											
PATHANAMTHITTA	PATHANAMTHITTA (M)											
PATHANAMTHITTA	THIRUVALLA (M)	7	3	4	4186596	2994530	7181126	2946393.27	2424634.73	5371028	0.747936744	74.79%
<b>TOTAL</b>		<b>13</b>	<b>5</b>	<b>8</b>	<b>6418785</b>	<b>4591137</b>	<b>11009922</b>	<b>3826260.27</b>	<b>2913409.43</b>	<b>6739669.7</b>	<b>0.612145091</b>	<b>61.21%</b>
ALAPPUZHA	ALAPPUZHA (M)	9	3	6	12842000	9185444	22027444	9831294	6472064	16303358	0.740138438	83.75%
ALAPPUZHA	CHEGANNUR (M)	3	2	1	1591590	1138050	2729640	1517438	1085372	2602810	0.953535997	95.35%
ALAPPUZHA	CHERTHALA (M)	10	3	7	6546896	4664647	11211543	4579349	2082707	6662056	0.594214017	85.40%
ALAPPUZHA	HARIPAD	10	7	3	5481335	3821497	9302832	4717535	3582127	8299662	0.892165096	89.22%
ALAPPUZHA	KAYAMKULAM (M)	7	3	4	2236680	1599821	3836501	2615354	1555076	4170430	1.087039988	82.41%
ALAPPUZHA	MAVELIKKARA (M)	5	2	3	1859275	1314489	3173764	1859275	1314489	3173764	1	100.00%
<b>TOTAL</b>		<b>44</b>	<b>20</b>	<b>24</b>	<b>30557776</b>	<b>21723948</b>	<b>52281724</b>	<b>25120245</b>	<b>16091835</b>	<b>41212080</b>	<b>0.788269339</b>	<b>87.35%</b>
KOTTAYAM	CHANGANASSERY (M)	5	1	4	979323	700477	1679800	979323	700477	1679800	1	100.00%
KOTTAYAM	ERATTUPETTA	7	5	2	5331418	3813382	9144800	5117301	1198792	6316093	0.690675903	69.07%
KOTTAYAM	ETTUMANOOR	13	7	6	6593016	4535759	11128775	5827704	3622259	9449963	0.849146739	84.91%
KOTTAYAM	KOTTAYAM (M)	2	0	2	0	0	0	0	0	0	0	0
KOTTAYAM	PALAI (M)	5	3	2	1184656	847344	2032000	1082340	774160	1856500	0.91363189	91.36%
KOTTAYAM	VAIKOM (M)	4	3	1	1576141	1127360	2703501	1415757	1127410	2543167	0.940693937	84.90%
<b>TOTAL</b>		<b>36</b>	<b>19</b>	<b>17</b>	<b>15664554</b>	<b>11024322</b>	<b>26688876</b>	<b>14422425</b>	<b>7423098</b>	<b>21845523</b>	<b>0.818525404</b>	<b>80.92%</b>
IDUKKI	KATTAPPANA	6	3	3	4518250	3231750	7750000	2875525	2056765	4932290	0.636424516	63.64%
IDUKKI	THODUPUZHA (M)	10	9	1	11214097	5625552	16839649	4545590	20,00,638	6546228	0.388738981	124.91%
<b>TOTAL</b>		<b>16</b>	<b>12</b>	<b>4</b>	<b>15732347</b>	<b>8857302</b>	<b>24589649</b>	<b>7421115</b>	<b>4057403</b>	<b>11478518</b>	<b>0.46680284</b>	<b>88.36%</b>
ERNAKULAM	ALUVA	2	1	1	78705	56295	135000	78705	56295	135000	1	100.00%

Ongoing Projects						
Cost of Project		Cost of Project Total	Expenditure		Total Expenditure	Percentage
SBM Share	ULB Share		SBM Share	ULB Share		
7750935	8810600	16561535	2500000	0	2500000	15.10%
20923994	14999549	35923543	9170056	9182842	18352898	51.09%
24023681	16243319	40267000	5397000	5053760	10450760	25.95%
305838936	202917314	508756250	62673185	24224475	86897660	17.08%
12429133	8890135	21319268	4172312	3002400	7174712	33.65%
<b>370966679</b>	<b>251860917</b>	<b>622827596</b>	<b>83912553</b>	<b>41463477</b>	<b>125376030</b>	<b>20.13%</b>
12771465	9113535	21885000	11382729	709715	12092444	55.25%
25828735	16283425	42112160	5964892	4216458	10181350	24.18%
2936071	2186032	5122103	1881440	875754	2757194	53.83%
16382300	11717700	28100000	756000	1957544	2713544	9.66%
0	0	0	0	0	0	
<b>57918571</b>	<b>39300692</b>	<b>97219263</b>	<b>19985061</b>	<b>7759471</b>	<b>27744532</b>	<b>28.54%</b>
4064851	2907446	6972297	112839.65	80710.35	193550	2.78%
					0	
					0	
9607065	6870435	16477500	816258.3	583841.7	1400100	8.50%
<b>13671916</b>	<b>9777881</b>	<b>23449797</b>	<b>929097.95</b>	<b>664552.05</b>	<b>1593650</b>	<b>6.80%</b>
29060775	18260099	47320874	8848555	9336791	18185346	38.43%
6296400	4503600	10800000	1641900	2160000	3801900	35.20%
5676088	4059912	9736000	0	0	0	0.00%
2232864	1360845	3593709	1238992	886208	2125200	59.14%
5817874	4161327	9979201	0	738560	738560	7.40%
35,22,304	22,46,829	57,69,133	0	270000	270000	4.68%
<b>52606305</b>	<b>34592612</b>	<b>87198917</b>	<b>11729447</b>	<b>13391559</b>	<b>25121006</b>	<b>28.81%</b>
16684191	11933632	28617823	3706838	1707270	5414108	18.92%
381165	272634	653799	0	0	0	0.00%
4354776	3114823	7469599	1250000	1000000	2250000	30.12%
22730801	12042045	34772846	3199967	1617633	4817600	13.85%
1777840	1271629	3049469	0	0	0	0.00%
2332000	1668000	4000000	2332000	1668000	4000000	100.00%
<b>48260773</b>	<b>30302763</b>	<b>78563536</b>	<b>10488805</b>	<b>5992903</b>	<b>16481708</b>	<b>20.98%</b>
6647632	1067500	7715132	0	0	0	0.00%
3255377	2328373	5583750	0	0	0	0.00%
<b>9903009</b>	<b>3395873</b>	<b>13298882</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>
8430180	6029820	14460000	1809632	585968	2395600	16.57%

ERNAKULAM	ANGAMALY (M)	4	1	3	734371	525269	1259640	565265	413082	978347	0.776687784	77.67%
ERNAKULAM	ELOOR	7	4	3	5091277	2641619	7732896	2711865	625117	3336982	0.431530697	43.15%
ERNAKULAM	KALAMASSERY (M)											
ERNAKULAM	KOCHI											
ERNAKULAM	KOOTHATTUKULAM	2	2	0	1393079	996422	2389501	278616	199284	477900	0.199999916	20.00%
ERNAKULAM	KOTHAMANGALAM (M)	4	1	3	836780	598520	1435300	836254	594000	1430254	0.996484359	99.65%
ERNAKULAM	MARADU(M)	5	4	1	2463292	1761908	4225200	2190137	258540	2448677	0.579541087	57.95%
ERNAKULAM	MUVATTUPUZHA (M)	3	2	1	1339443	958057	2297500	891261	637489	1528750	0.665397171	66.54%
ERNAKULAM	PARAVUR (M)	5	1	4	437290	312779	750069	427689	305911	733600	0.978043353	97.80%
ERNAKULAM	PERUMBAVOOR (M)	4	4	0	2922870	2127755	5050625	459766	293734	753500	0.149189457	14.92%
ERNAKULAM	PIRAVOM											
ERNAKULAM	THRIKKAKARA(M)	2	0	2	728750	521250	1250000	500000	0	500000	0.4	40.00%
ERNAKULAM	THRIPPUNITHURA (M)	6	4	2	1776683	1270799	3047482	1854682	1142400	2997082	0.983461756	98.35%
	<b>TOTAL</b>	<b>44</b>	<b>24</b>	<b>20</b>	<b>17802540</b>	<b>11770673</b>	<b>29573213</b>	<b>10794240</b>	<b>4525852</b>	<b>15320092</b>	<b>0.518039484</b>	<b>51.80%</b>
THRISSUR	CHALAKUDY (M)	6	4	2	14659295	10309308	24968603	10170771	4361857	14532628	0.582036096	58.20%
THRISSUR	CHAVAKKAD (M)	5	1	4	937149	670311	1607460	0	582000	582000	0.362061886	36.21%
THRISSUR	GURUVAYOOR (M)	7	5	2	13546629	9844161	23390790	13520502	8816181	22336683	0.954934955	95.49%
THRISSUR	IRINJALAKUDA (M)	10	8	2	4957371	4176223	9133594	4158694	3126310	7285004	0.797605411	79.76%
THRISSUR	KODUNGALLUR (M)	25	21	4	24195595	16392992	40588587	23057712	14886157	37943869	0.934840846	93.48%
THRISSUR	KUNNAMKULAM (M)	5	5	0	16105165	11519477	27624642	16006466.4	11514972.6	27521439	0.996264096	99.63%
THRISSUR	THRISSUR											
THRISSUR	WADAKKANChERI	14	9	5	11951389	8446254	20397643	9848727.8	6312252.2	16160980	0.792296443	79.23%
	<b>TOTAL</b>	<b>72</b>	<b>53</b>	<b>19</b>	<b>86352594</b>	<b>61358725</b>	<b>147711319</b>	<b>76762873.2</b>	<b>49599729.8</b>	<b>126362603</b>	<b>0.855470008</b>	<b>85.55%</b>
PALAKKAD	CHERPULASSERY	7	7	0	3925339	2807661	6733000	2704562	2348601	5053163	0.750506906	75.05%
	CHITTUR-THATHAMANGALAM (M)	6	3	3	9167222	6557002	15724224	8288075	5762929	14051004	0.893589661	89.36%
PALAKKAD	MANNARKKAD	7	6	1	2377008	1700191	4077199	2151387	1413508	3564895	0.874349032	87.43%
PALAKKAD	OTTAPPALAM (M)	5	5	0	4759303	3404166	8163469	1826983	489529	2316512	0.283765639	28.38%
PALAKKAD	PALAKKAD (M)											
PALAKKAD	PATTAMBI	6	6	0	4890533	2955903	7846436	4064826	2586880	6651706	0.847735966	84.77%
PALAKKAD	SHORANUR (M)	17	17	0	7132869	5101896	12234765	4505481	3559780	8065261	0.659208493	65.92%
	<b>TOTAL</b>	<b>48</b>	<b>44</b>	<b>4</b>	<b>32252274</b>	<b>22526819</b>	<b>54779093</b>	<b>23541314</b>	<b>16161227</b>	<b>39702541</b>	<b>0.724775436</b>	<b>72.48%</b>
MALAPPURAM	KONDOTTY	9	6	3	#####	9831116.32	23575818.00	11457919	8059803	19517722	0.827870405	82.79%
MALAPPURAM	KOTTAKKAL	9	5	4	12076015	8696575	20772590	7515776	7711252	15227028	0.733034638	73.30%
MALAPPURAM	MALAPPURAM (M)	5	3	2	16702950	11947050	28650000	473859	4285629	4759488	0.166125236	16.61%
MALAPPURAM	MANJERI (M)	5	4	1	#####	#####	27208013.00	14480998.00	9725517.00	24206515.00	0.889683308	88.97%
MALAPPURAM	NILAMBUR	8	6	2	3904078.8	789710.18	4693789.01	7247264	2783367.09	10030631.1	2.137000849	213.70%
MALAPPURAM	PARAPPANANANGADI	8	8	0	6391934	2988564	9380498	9831455	3211223	13042678	1.39040358	139.04%
MALAPPURAM	PERINTHALMANNA (M)	6	6	0	16553666	11840271	28393937	10851520	10009969	20861489	0.734716323	73.47%
MALAPPURAM	PONNANI (M)	5	3	2	19684995	14073750	33758745	1611195	738744	2349939	0.069609786	6.96%
MALAPPURAM	TANUR	7	5	2	8314230	5477760	13791990	5242950	2340944	7583894	0.549876704	54.99%
MALAPPURAM	TIRUR (M)	6	5	1	10547519	6419348.5	16966867	8830475	2414822	11245297	0.662779817	66.28%
MALAPPURAM	TIRURANGADI	7	6	1	5219616	3017032	8236648	4789620	2312695	7102315	0.862282205	86.23%
MALAPPURAM	VALANCHERRY											
	<b>TOTAL</b>	<b>75</b>	<b>57</b>	<b>18</b>	<b>#####</b>	<b>#####</b>	<b>#####</b>	<b>82333031</b>	<b>53593965.1</b>	<b>135926996</b>	<b>0.630959909</b>	<b>63.10%</b>
KOZIKODE	FEROKE	11	8	3	5348529	3825617.1	9174146.1	4405688	3654042	8059730	0.878526449	87.85%
KOZIKODE	KODUVALLY	7	7	0	12742434	5516707.3	18259141.3	7201406	4900160	12101566	0.66276753	66.28%

7158324	5120106	12278430	9208725	3550893	12759618	103.92%
787050	562950	1350000	391500	0	391500	29.00%
					0	
					0	
0	0	0	0	0	0	
9038482	6464918	15503400	2741760	3545640	6287400	40.55%
2098800	1501200	3600000	600000	1200000	1800000	50.00%
489720	350280	840000	371450	121867	493317	58.73%
3258387	2330613	5589000	1732237	1012209	2744446	49.10%
0	0	0	0	0	0	
					0	
11222750	8027250	19250000	2500000	0	2500000	12.99%
927320	663280	1590600	382075	37560	419635	26.38%
<b>43411013</b>	<b>31050417</b>	<b>74461430</b>	<b>19737379</b>	<b>10054137</b>	<b>29791516</b>	<b>40.01%</b>
7341810	5372550	12714360	1069969	0	1069969	8.42%
9560417	6838240	16398657	3329848	2328820	5658668	34.51%
13287853	9504347	22792200	5802073	6464327	12266400	53.82%
4815049	3444041	8259090	2640953	0	2640953	31.98%
3436785	2458215	5895000	950116	0	950116	16.12%
0	0	0	0	0	0	
					0	
6143761	4348084	10491845	1099645	1932434	3032079	28.90%
<b>44585676</b>	<b>31965476</b>	<b>76551152</b>	<b>14892604</b>	<b>10725581</b>	<b>25618185</b>	<b>33.47%</b>
0	0	0	0	0	0	
3187430	2279860	5467290	2298452	1862671	4161123	76.11%
1175459	840766	2016225	200499	662031	862530	42.78%
0	0	0	0	0	0	
					0	
0	0	0	0	0	0	
0	0	0	0	0	0	
<b>4362889</b>	<b>3120626</b>	<b>7483515</b>	<b>2498951</b>	<b>2524702</b>	<b>5023653</b>	<b>67.13%</b>
3721694	2446187	6167881	0	0	0	0.00%
5727385	4096603	9823988	0	0	0	0.00%
19295546	13801446	33096992	0	0	0	0.00%
0	0	0	0	0	0	
9233212	6604202	15837414	0	0	0	0.00%
1091521	780727	1872248	0	0	0	0.00%
0	0	0	0	0	0	
10937080	7822920	18760000	0	0	0	0.00%
3201528	2290372	5491900	0	0	0	0.00%
0	0	0	0	0	0	
11135302	6932692	18067994	162000	425250	587250	3.25%
					0	
<b>64343268</b>	<b>44775149</b>	<b>109118417</b>	<b>162000</b>	<b>425250</b>	<b>587250</b>	<b>0.54%</b>
5075950	3630653	8706603	1928420	1586750	3515170	40.37%
0	0	0	0	0	0	





## SWM PROJECTS - Summary

Districts	SUMMARY - Completed Projects					SUMMARY - Ongoing Projects					
	Completed Projects	SM share	ULB Share	SM share	ULB Share	Ongoing Projects	SM share	ULB Share	SM share	ULB Share	SBM-(U) Total Expenditure
		Cost of Projects		Expenditure			Cost of Projects		Expenditure		
TVM	18	27710155.96	17005709.04	26722026.96	7916007.044	28	370966679	251860917	83912553	41463477	<b>110634580</b>
KLM	11	14357804	14830186	7474219	6139020	23	57918571	39300692	19985061	7759471	<b>27459280</b>
PTA	5	6418785	4591137	3826260.27	2913409.43	8	13671916	9777881	929097.95	664552.05	<b>4755358.22</b>
KTM	20	15664554	11024322	14422425	7423098	17	48260773	30302763	10488805	5992903	<b>24911230</b>
ALP	28	30557776	21723948	25120245	16091835	14	52606305	34592612	11729447	13391559	<b>36849692</b>
IDK	12	15732347	8857302	7421115	40,57,403	4	9903009	3395873	0	0	<b>7421115</b>
EKM	25	17802540	11770673	10794240	4525852	19	43411013	31050417	19737379	10054137	<b>30531619</b>
TSR	53	86352594	61358725	76762873.2	49599729.8	19	44585676	31965476.5	14892604	10725581	<b>91655477.2</b>
PKD	44	32252274	22526819	23541314	16161227	4	4362889	3120626	2498951	2524702	<b>26040265</b>
KNR	56	36408499.88	28386158.83	27703230	18083106.5	9	27500238	20659981.5	11523414	3704920	<b>39226644</b>
WYD	4	2793561.68	1998139.32	5380096	3848200	8	11576023	8160477	0	0	<b>5380096</b>
KSD	8	4110879	2940371	2832803	2326732	5	22863833	16353720	8480581	5868006	<b>11313384</b>
MLP	57	129001977.72	86426917.29	82333031	53593965.09	19	64343268	44775149	162000	425250	<b>82495031</b>
KKD	49	84113499	50608509.92	40451001	27230486	9	47096139	34974614	9913363	5136034	<b>50364364</b>
	<b>390</b>	<b>503277246.9</b>	<b>344048917.4</b>	<b>354784879.4</b>	<b>219910070.9</b>	<b>186</b>	<b>819066331</b>	<b>560291199</b>	<b>194253256</b>	<b>107710592.1</b>	<b>549038135</b>

## Annexure R2 - 3

No. 412/PPCC/AIR-SAP/Sci-II/2024/ 855  
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 **30 SEP 2024**~~To~~

The Additional Director & Divisional Head,  
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 U.T. of Puducherry - Hon'ble NGT in O.A. No.159 of  
2021- Reg.

Ref: The Hon'ble NGT order in O.A. No. 159 of 2021 dt. 03.09.2024.

\* \* \*

With reference to the subject mentioned above, it is informed that an advance copy of the State Action Plan on Air Pollution for the U.T. of Puducherry is enclosed for perusal. State Action Plan on Air Pollution for the U.T. of Puducherry has been submitted to the Chief Secretary, Govt. of Puducherry for approval.

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.

# **STATE ACTION PLAN ON AIR POLLUTION CONTROL**



**GOVERNMENT OF PUDUCHERRY  
DEPARTMENT OF SCIENCE, TECHNOLOGY & ENVIRONMENT  
PUDUCHERRY POLLUTION CONTROL COMMITTEE**

**SEPTEMBER 2024**

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## 1. INTRODUCTION

Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India (GOI) launched the National Clean Air Program (NCAP) on 10<sup>th</sup> January 2019 as a time-bound National level strategy to tackle the air pollution problem in a comprehensive manner.

The National Clean Air Programme (NCAP) is being implemented primarily in urban agglomerates and specifically in 132 non-attainment cities identified by the Central Pollution Control Board (CPCB) based on the PM<sub>10</sub> values from the 2011 to 2015. NCAP intending to reduce the Particulate Matter emission from 20 to 30% by 2024 and mandates the collaborative and participatory approaches for the formulation of State Action Plans by the State Pollution Control Boards and the State Governments.

The U.T. of Puducherry is not listed as a non-attainment city as the annual average concentration of PM<sub>10</sub> meets the National Ambient Air Quality Standards (NAAQS). The annual average concentration of PM<sub>10</sub> in the said periods was in the range at 29-50 µg/m<sup>3</sup> against the prescribed standard of 60 µg/Nm<sup>3</sup>.

The Hon'ble NGT (SZ), Chennai in the matter of OA No. 159 of 2021 directed Puducherry to formulate an action plan inline with the National Clean Air Programme template framed by the Central Pollution Control Board (Annexure – I). In compliance with the Hon'ble NGT direction, Puducherry Pollution Control Committee (PPCC) has formulated a State Action Plan (SAP) on Control of Air Pollution for the U.T. of Puducherry.

The Action plan focus on the mitigation of Industrial emissions, Vehicular emissions, Construction & Demolition activity, Road Dust, Emissions from burning of agro residues and household emissions.

This action plan has been prepared with four components. The details of the activity proposed, timelines for completion, financial requirements, fund allocated and fund utilized are given in the template (Annexure-I).

The Government of Puducherry has constituted the State Air Quality Monitoring Committee (SAQMC) under the Chairmanship of the Secretary to Government (Environment) and the Regional level Air Quality Monitoring Committee (RAQMC) under the Chairmanship of the District Collector (Puducherry, Karaikal) and the Administrator (Mahe and Yanam), to monitor the implementation of this Action Plan.

## **2. PUDUCHERRY – AN OVERVIEW**

### **2.1 Topography, Geography and Meteorology**

The Union Territory of Puducherry, a former French colony, joined with the Indian Union in 1962. Puducherry consists of four non-contiguous regions: Puducherry, Karaikal, Mahe, and Yanam with a total area of 490 Sq.km.

The Puducherry Region is bordered by the Bay of Bengal and Tamil Nadu. The town was built as a fortified coastal settlement in the late 18th century. Karaikal region is located on the fertile plains of the Kaveri River, primarily relies on agriculture and is one of the India's highest rice-producing areas. The Mahe region situated on the Malabar coast and surrounded by Kerala on three sides and the Arabian Sea on the western side. Yanam, located on the East Coast and surrounded by the Andhra Pradesh's East Godavari District, boasts rich mangrove resources. . Puducherry forest cover is 53.3 sq. km, approximately 10.88% of its total geographical area.

### **2.2 Population and urbanization**

Puducherry is one of the India's most densely populated regions, with a population density of 2,547 persons per square kilometer, significantly higher than the national average of 382 persons per square kilometer. According to the 2011 census, Puducherry total population is 12.48 lakhs, reflecting a decadal growth rate of 28.08%. Urban area houses about 68.3% of the population,

while the remaining 31.7% resides in rural areas. The sex ratio is 1,037 females per 1,000 males, surpassing the national average of 940 females per 1,000 males.

The major languages spoken in the U.T. of Puducherry are Tamil, Telugu, Malayalam, and French. The Union Territory boasts a high literacy rate of 85.85%, well above the national average of 74.04%.

## **2.3 Economic and industrial development**

### **Economic Profile**

The financial dynamics of Puducherry extend beyond the neighbouring States, impacting various parts of India through investments and services. For 2021-22, the Gross State Domestic Product (GSDP) at current prices is estimated at INR 38,285.03 Crores, reflecting a 2.9% increase from the previous year. The per capita income stands at INR 2,16,495. However, inflationary trends are evident due to rising prices of primary articles and petroleum products.

## **2.4 Industrial Scenario**

The U.T. of Puducherry has a strong industrial base in manufacturing and service sectors, supported by the Government initiatives to foster industrial growth. There are 12 Public Sector Undertakings (PSUs) under the Government of Puducherry. The New Industrial Policy of 2016 offers various incentives such as capital investment subsidy, interest, stamp duty exemption and power subsidy. There are 77 large-scale, 191 medium-scale, and 9057 small-scale industries functioning in U.T. of Puducherry. Major industries are paper, pharmaceuticals, personal care products, electronics, and plastics.

## **2.5 Energy**

Puducherry's energy sector is highly developed. Since 1972, the Government of Puducherry has been supplying electricity to all the villages and towns. The Department of Electricity serves as the nodal agency for distributing electricity in the Union Territory. In FY 2021-22, the annual per capita electricity consumption in Puducherry was 2138 kWh, significantly higher than the national average of 1255 kWh.

Puducherry's electricity demand is met through allocations from Central Generating Stations (CGS), neighbouring State electricity boards, and a 32.5 MW gas-based power plant operated by the Puducherry Power Corporation Limited an undertaking of the Government of Puducherry. The UT has effectively managed peak loads and demands, with no power shortages reported in the recent years. As of December 2022, the total installed power capacity in Puducherry is 68.03 MW.

Of this total capacity, 35.53 MW (about 52%) is intend to meet from Renewable Energy Sources (RES), aligning with India's Nationally Determined Contributions (NDCs) to achieve 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. Currently, the UT's cumulative annual power demand of 502 MW (2022-23) is predominantly (81%) met from fossil fuels or nuclear power from CGS. The remaining demand is fulfilled by renewable sources, including 35.53 MW (7% of total demand) from local solar power generation and 62 MW (12%) from Renewable Purchase Obligations (RPO) through solar and wind power purchases from other States.

## **2.6 Transport**

Puducherry, over a period of past two decades, has witnessed more-than-anticipated growth in population, urban sprawl, vehicle ownership and traffic volume. Increasing traffic has resulted in congestion, delays, rise in accidents and pollution levels, etc. which pose potential threat to the economic vitality and productive efficiency of the city.

Being one of the major tourism destination centre in south India, Puducherry region is a scattered section of land consisting of 4 taluks (Puducherry, Ozhukarai, Villianur and Bahour), 2 municipalities (Puducherry and Ozhukarai), 5 communes (Ariyankuppam, Villianur, Mannadipet, Bahour, Nettapakkam) and 3 census towns (Ariyankuppam, Manavelly, Villianur). Puducherry is served by four main roads which connects to Chennai, Tindivanam, Villupuram and Cuddalore.

The union territory has over 10 lakh registered vehicles with a total road length of 723 km. It is also the terminal of the railway line which connects Puducherry with Southern Railway broad

gauge system. The city connected with Chennai through East Coast Road (ECR) and NH 66, Villupuram by NH 45A and Cuddalore by NH 45A.

The Government of Puducherry has prepared the Comprehensive Mobility Plan for the UT to guide the urban development requirement for the future and identify transport infrastructure improvement projects to achieve sustainable development.

## **2.7 Urban Services**

### **(a) Water Supply and Sanitation**

The drinking water supply is provided by the Public Health Division of the Government of Puducherry. In urban areas, the per capita water supply is 135 liters/day, while in rural areas it is 70 LPCD. The majority of water demand, 81%, is for agricultural purposes, followed by 16% for domestic use and 3% for industrial and other purposes (Water policy, 2017). Groundwater is the primary source of water in Puducherry, meeting most of the demand, with a groundwater development level of 77.85%.

The UT generates 71 MLD of sewage, with a treatment capacity of 56 MLD across three Sequencing Batch Reactor (SBR) and two Upflow Anaerobic Sludge Blanket (UASB) facilities. The construction of STP in Puducherry (15 MLD) & Karaikal (11 MLD) was commenced and reached 50% and 35% physical progress respectively. The proposal for the construction of STP in Mahe (0.5 MLD) & Yanam (6 MLD) is under process.

### **(b) Health**

The Health and Family Welfare Department in the U.T. of Puducherry oversees the surveillance for vector-borne diseases with 5 hospitals, 4 CHCs, 39 PHCs, and 80 sub-centres. 2 malaria clinics are functional, one at Puducherry and the other at Karaikal. Laboratory facilities to diagnose malaria are available in the Office of the Assistant Director (Malaria), CHCs and in designated PHCs. In the UT of Puducherry, 5 Sentinel Surveillance Hospitals (Dengue diagnostic facility) for diagnosis of Dengue/Chikungunya are available. Besides, the modernization,

upgradation and greening of the health infrastructure is under implementation with the following initiatives: Introduction of electronic patient records in the facility to reduce the use of paper, availability of 10-30 per cent area for the herbal garden in the facility, modifications in the critical care rooms to make them functional during disaster, installation of Rainwater Harvesting System, installation of alternative energy systems and the installation of STP & ETP.

**(c) Infrastructure**

Puducherry is equipped with modern infrastructure and amenities, making it one of the more developed regions in the country. It boasts well-maintained highways, roads, railway tracks, industries, educational institutions, hospitals, and ice plants with cold storage. The UT is well-connected to Chennai and other major cities through national highways, and all the villages are linked by an extensive network of bituminous roads. As of March 2022, the total road length in Puducherry was 720.677 km. The UT also has rail connections in all four regions and is near major ports like Chennai, Tuticorin, Visakhapatnam, and Cochin.

Puducherry houses numerous colonial buildings, churches, temples, French-style avenues, industries, technical and academic institutions. It has eight industrial parks and one IT park spanning 995 acres.

**(d) Solid Waste Management**

Two Municipalities (Pondicherry and Oulgaret) and part of Ariyankuppam and Villianur Communes are brought together under the Puducherry Urban Agglomeration Area (PUAA) for the purpose of processing and managing the solid waste. Infrastructure such as resource recovery parks, and bio-methanation plants has been placed for waste processing. The status of ULB wise Management of Solid waste is as below:

Table 1: Status of ULB wise of Solid waste Management

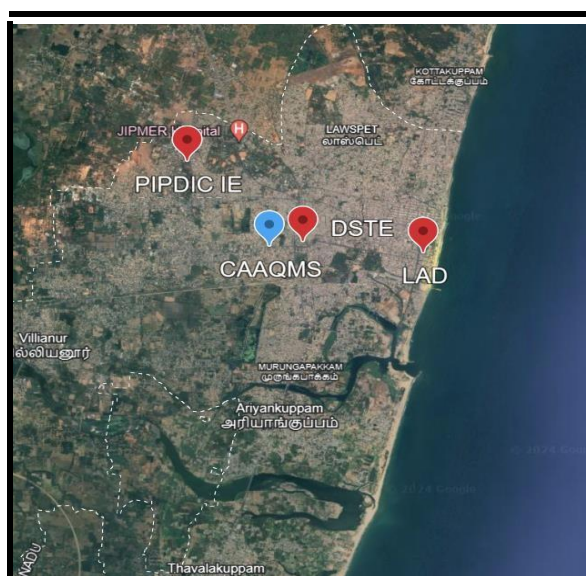
Region	Solid Waste generated (TPD)	Processed / Recovered (TPD)	Gap (TPD)
Pondicherry (Urban)	300	300	-
Pondicherry (Rural)	135	135	-
Karaikal	70	70	-
Mahe	12	12	-
Yanam	22	2	20
Total	539	519	20

### 3. AMBIENT AIR QUALITY

The Puducherry Pollution Control Committee is monitoring ambient air quality (AAQ) at six locations covering 2 regions, one in Puducherry and other in Karaikal Region under National Air Quality Monitoring Programme (NAMP). One Continuous Ambient Air Quality Monitoring Stations (CAAQMS) has been established at Jawahar Nagar Puducherry.

Fig. 1 Maps Showing the AAQ Stations in Puducherry and Karaikal

#### Puducherry



#### Karaikal

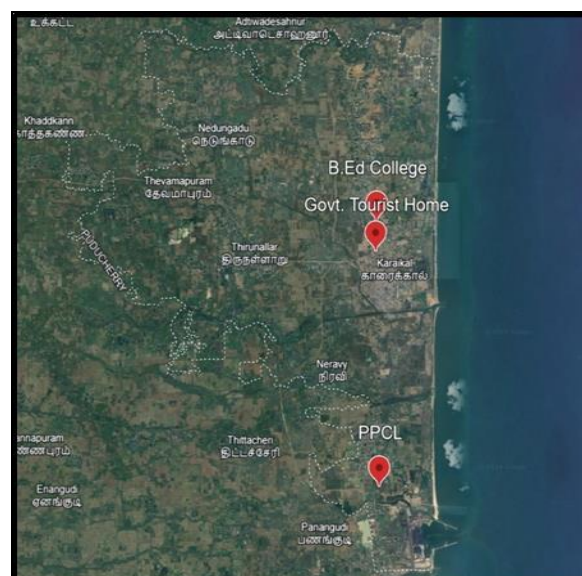


Table 2: AAQ monitoring stations operating in the U.T. of Puducherry:

Sl. No.	Location	NAMP / CAAQM	Type	Latitude	Longitude
<b>I</b>	<b>Puducherry</b>				
1.	Department of Science Technology and Environment Building (DSTE), Anna Nagar, Puducherry.	NAMP	Residential – cum-Commercial	11.931889	79.809344
2.	PIPDIC Industrial Estate, (PIPDIC IE), Mettupalayam, Puducherry	NAMP	Industrial	11.948800	79.78670
3.	Local Administrative Department (LAD), Suffren Street, Puducherry.	NAMP	Residential	11.929597	79.832867
4.	Town and Country Planning Department, Jawahar Nagar, Puducherry.	CAAQMS	Residential – cum-Commercial	11.931127	79.802742
<b>II</b>	<b>Karaikal</b>				
5.	B.Ed College (PKCE), Nehru Nagar, Karaikal	NAMP	Residential	10.940241	79.831844
6.	Govt. Tourist Home, Kovilpathu, Karaikal	NAMP	Residential – cum-Commercial	10.930487	79.831509
7.	M/s Puducherry Power Corporation Limited, Polagam, T.R. Pattinam, Karaikal	NAMP	Industrial	10.854014	79.832773

### Parameters monitored under NAMP

Particulate Matter as PM<sub>10</sub> (less than 10µm) and Sulphur Dioxide as SO<sub>2</sub> and Nitrogen Dioxide as NO<sub>2</sub>

### Parameters monitored under CAAQMS

Under CAAQMS, Particulate Matter (PM<sub>10</sub> & PM<sub>2.5</sub>), Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Ammonia (NH<sub>3</sub>), Carbon Monoxide (CO), Ozone (O<sub>3</sub>) and Benzene (C<sub>6</sub>H<sub>6</sub>) are being monitored. The CAAQMS also has sensors to measure meteorological parameters such as Wind Speed, Wind Direction, Ambient Temperature, Relative Humidity, Solar Radiation and Rainfall.

### Annual average concentration of pollutants under NAMP during the period 2019-2023:

The annual average concentration of pollutants monitored under NAMP during the period 2019-2023 is given in Table 3.

Year	Parameter ( $\mu\text{g}/\text{m}^3$ )	Locations						NAAQ Standards
		LAD	DSTE	PIPDIC IE	B.Ed. College	Govt. Tourist Home	PPCL	
2019	PM <sub>10</sub>	34	46	50	34	45	42	60
	SO <sub>2</sub>	3.8	4.6	4.8	2.2	2.0	2.1	50
	NO <sub>2</sub>	10.0	12.8	12.5	5.0	5.5	5.4	40
2020	PM <sub>10</sub>	30	35	39	32	41	32	60
	SO <sub>2</sub>	2.6	2.6	2.9	2.0	2.1	2.1	50
	NO <sub>2</sub>	7.3	7.1	7.3	4.7	5.1	5.0	40
2021	PM <sub>10</sub>	42	41	41	37	46	37	60
	SO <sub>2</sub>	2.7	3.3	3.4	2.0	2.2	2.0	50
	NO <sub>2</sub>	9.2	10.2	9.7	4.8	5.1	4.7	40
2022	PM <sub>10</sub>	53	54	40	38	50	39	60
	SO <sub>2</sub>	4.1	3.3	3.1	2.1	2.4	2.1	50
	NO <sub>2</sub>	12.8	12.3	12.2	4.8	5.1	4.8	40
2023	PM <sub>10</sub>	55	52	35	34	46	36	60
	SO <sub>2</sub>	6.9	3.3	3.3	2.3	2.5	2.2	50
	NO <sub>2</sub>	13.3	16.6	12.3	5.5	5.9	5.5	40

The ambient air quality data revealed that the annual average concentration of all the pollutants monitored in all the six locations during the year 2019-2023 are within the National Ambient Air Quality Standards.

### Annual average concentration of pollutants under CAAQM during the period 2021-2023:

The annual average concentration of pollutants monitored under CAAQMS during the period 2019-2023 is given in Table 4

Year	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	CO	NH <sub>3</sub>	Ozone
2021	44	20	8.6	11.7	0.54	8.8	37.0
2022	52	28	13.5	11.9	0.66	9.8	39.3
2023	52	24	8.3	11.0	0.73	9.3	41.8
Standard	60	40	50	40	-	100	-

The air quality data reveals that the annual average concentration of all the pollutants monitored during the year 2021-2023 are within the National Ambient Air Quality Standards.

### 3.1 Air Quality Index:

Air Quality Index is a tool for effective communication of air quality status to people in terms, which are easy to understand. It transforms complex air quality data of various pollutants into a single number (index value), nomenclature and colour. There are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. Each of these categories is decided based on ambient concentration values of air pollutants and their likely health impacts (known as health breakpoints). AQ sub-index and health breakpoints are evolved for eight pollutants (PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, NH<sub>3</sub>, and Pb) for which short-term (upto 24-hours) National Ambient Air Quality Standards are prescribed. AQI categories and health breakpoints are given in Table 5 and Table 6.

Table 5: Breakpoints for AQI Scale

AQI Category (Range)	PM <sub>10</sub> 24-hr µg/m <sup>3</sup>	PM <sub>2.5</sub> 24-hr µg/m <sup>3</sup>	NO <sub>2</sub> 24-hr µg/m <sup>3</sup>	O <sub>3</sub> 8-hr µg/m <sup>3</sup>	CO 8-hr mg/m <sup>3</sup>	SO <sub>2</sub> 24-hr µg/m <sup>3</sup>	NH <sub>3</sub> 24-hr µg/m <sup>3</sup>
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400
Moderate (101-200)	101-250	61-90	81-180	101-168	2.1-10	81-380	401-800
Poor (201-300)	251-350	91-120	181-280	169-208	10.1-17	381-800	801-1200
Very Poor (301-400)	351-430	121-250	281-400	209-748*	17.1-34	801-1600	1201-1800
Severe (401-500)	430+	250+	400+	748+*	34+	1600+	1800+

Table 6: National Air Quality Index with Possible Health Impacts

AQI	Possible Health impacts
<b>Good (0-50)</b>	Minimal Impact
<b>Satisfactory (51 - 100)</b>	Minor Breathing discomfort to sensitive people
<b>Moderate (101 - 200)</b>	Breathing discomfort to the people with lung, heart disease, children and older adults
<b>Poor (201 -300)</b>	Breathing discomfort to people on prolonged exposure
<b>Very Poor (301-400)</b>	Respiratory illness to the people on prolonged exposure
<b>Severe (&gt;400)</b>	Respiratory effects even on healthy people

Table 7: AQI monitored under CAAQM during the years 2021, 2022 &amp; 2023

AQI Category	AQI Range	Number of AQI Values in different category					
		2021		2022		2023	
		No of AQI Values	% of AQI Values	No of AQI Values	% of AQI Values	No of AQI Values	% of AQI Values
<b>Good</b>	0-50	236	66.7	176	48.2	129	35.3
<b>Satisfactory</b>	51-100	108	30.5	167	45.8	224	61.4
<b>Moderate</b>	101-200	10	2.8	17	4.7	11	3.0
<b>Poor</b>	201-300	-	-	3	0.8	-	-
<b>Very Poor</b>	301-400	-	-	2	0.5	1	0.3
Total AQI Values		354	100	365	100	365	100

It is evident that the air quality is shifting from Good to Satisfactory category from the year 2021 to 2023. The predominant pollutants are PM<sub>10</sub> and PM<sub>2.5</sub>.

### Implementation of Graded Response Action Plan (GRAP)

Graded/Emergency Response Action Plan (GRAP) has been formulated based on graded measures for each source framed according to the AQI category. GRAP shall be implemented through implementing agencies when the air quality reaches above moderate category for 48 hours or more. (Annexure-II).

## 4. STATE ACTION PLAN ON AIR POLLUTION CONTROL

It consists of the following three components:

1. Inventorisation of air pollution sources
2. Sector based Air Pollution controlled measures
3. Green belt for the Abatement of Air Pollution

### 4.1. Inventorisation of the sources of air pollution

Inventorisation of the sources of air pollution is enable to identify the major sources of air pollution, causes of air pollution and to evolve appropriate control mechanisms. Though Transport and Industries are said to be the major sources of Air Pollution, quantification has not been arrived so far. Besides, burning of wastes and construction and demolishing activity would also generate air pollution. This excise would involve primary and secondary data collection by involving research scholars and academic institutions.

**(Action: PPCC, cost: Rs. 3 lakhs, Timeline: 3 months)**

### 4.2. Sector based Air Pollution controlled measures

#### (i). Transport Sector

Many studies reported that the primary source of air pollution is the transport sector. Besides it emits particulate matter, it also contributes to sulphur dioxide, oxids of nitrogen and benzene. It is estimated that 30% of particulate matter and 50% of oxides of nitrogen are released by the transport sector.

Three factors attribute vehicular emission

- (i) Improper vehicle maintenances
- (ii) Adulterated fuel usage and
- (iii) Poor road networks

It is paramount importance to ensure valid fitness certificate, periodical checking in the fuel dispensing stations for adulteration of fuel and maintaining good road networks. Since Puducherry is a small place and boarded by other States, it is essential to ensure Pollution Under Control (PUC) certificate for all the vehicles entering to Puducherry. Setting up of more vehicular emission testing centres would pave way for all the vehicles to get PUC promptly.

**(a) Policy for scrapping old vehicles.**

In the U.T. of Puducherry 1401784 vehicles are on the road, out of which 50,6317 vehicles are above 15 years old. Because of outdated engine model, fuel efficiency has been reduced in the vehicle and it inturn release larger emission. The Transport Department has notified “Puducherry Motor Vehicle Scrapping Policy 2024” for scrapping of Non- Transport Vehicles older than 15 years of age owned by Govt./quasi-Govt./Agencies of the central and state government registered in Puducherry as per the guidelines of MoRTH.

**(Action: Transport Department, Puducherry, Cost: Nil, Timeline: 6 months)**

**(b) Policy for augment e-vehicles.**

The Transport Department is bringing out “Puducherry electric mobility policy 2024”.It is proposed various types of incentives such as Demand Incentives, Early Bird Incentives, Incentives for charging Infrastructure and Incentives for Manufacturers for augment of e-vehicles.

**(Action: Transport Department, Puducherry, Cost: 9.4 Cr/annum, Timeline: 6 months)**

**(c) Notification and enforcement of PUC norms**

Integrated software developed by NIC for testing of vehicles for emission has been implemented. The latest version developed by the said organization will be implemented soon. 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.

**(Action: Transport Department, Puducherry, Cost: Nil, Timeline: 6 months)**

**(d) 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 neighbouring States /Country is completed.

**(Action: Transport Department, Puducherry, Cost: Nil, Timeline: 3 months)**

**(e) Mechanism for centralized record maintenance of PUC checks, certification and cross check by the concerned transport authorities.**

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.

**(Action: Transport Department, Puducherry Cost: Nil, Timeline: 3 months)**

**(ii) Industrial Sector**

Industrial emissions mainly consists of Particulate Matter, Sulphur-di-oxide and Oxides of Nitrogen and limited level of Chlorine and Ammonia. It mainly consists of two types, point and fugitive/ lateral emissions. Point emission can be collected by the proper hood and duct

arrangement and controlled by the suitable air pollution control devices viz. bag filter, cyclone, scrubber etc. But collecting and controlling fugitive emissions/ lateral emissions are challenging task. It requires advance and specially designed system. Not much attention has been given by the air pollution control devices manufacturing firms in this regard.

Industrial emissions again can be classified into process emission and boiler emission. Process emissions depends on type of raw material used whereas boiler emission depends on nature of fuel used.

It is need of the hour to shift from inheritably polluted process to cleaner production mechanism. Necessary R&D and capacity building need to be put the places in this area. Dirty fuel like coal and pet coke have been banned in the U.T. of Puducherry. Air Pollution Control Devices made mandatory for any type of fuel used.

#### **(a) Monitoring Mechanism**

Robust emission monitoring system is essential to control air pollution. Frequency of emission monitoring exercise will be increased. Continuous Emission Monitoring System with display system on the main gate of the unit will be installed in all the air pollution potential units. Stringent action will be initiated against the non-compliance units including imposition of Environmental Compensation and closure of the units.

**(Action: PPCC, Cost: Nil, Timeline: 6 months)**

#### **(b) Change of fuel:**

Coal and pet coke have been banned as industrial fuel in the U.T. of Puducherry. Door to Door inspection will be carried out to trace out any banned fuel is used and suitable action will be initiated against the violator.

**(Action: PPCC, Cost: Nil, Timeline: 6 months)**

**(c) Shifting to cleaner fuel:**

In order to facilitate shifting to cleaner fuel viz. Natural gas by the industry, Government of Puducherry has formulated Petroleum and Natural Gas pipeline projects and city Gas Distribution Network Projects (CGD) in the U.T. of Puducherry. Larger fuel usage industry will be identified and pursued to shift to natural gas.

**(Action: PPCC, Cost: Nil, Timeline: 6 months)**

**(d) Ban on establishment of Air Pollution Potential Units**

Industries viz., M.S. Ingots, Ferro alloys, Calcium Carbides and Potassium Chlorate are inheritably air pollution potential units. Controlling lateral emissions from the first three units and process emissions from the fourth one is challenging task. Government of Puducherry has already taken a policy decision of not to encourage such units in the U.T. of Puducherry. Since, 2000, no such units have been permitted to establish in the U.T. of Puducherry. However Government order yet to be issued in this regard. Necessary Government order will be issued imposing ban on establishment of M.S. Ingots, Ferro alloys, Calcium Carbides and Potassium Chlorate

**(Action: DSTE, Cost: Nil, Timeline: 6 months)**

**(iii) Commercial Sector****(a) Re-filling Stations retrofitted with Vapor Recovery System.**

CPCB through its O.M., vide Lr. No. B-13011/1/2019-20/AQM/10802-10847, dated 07.01.2020, issued guidelines for setting up of new petrol pumps in compliance of Hon'ble NGT order dated 18.01.2019 in O A No. 86/2019. As per the guidelines the newly coming up petrol pumps / filling stations have to install Vapour Recovery System (VRS) to control VOC emissions.

Oil Marketing Companies (OMCs) are responsible for maintaining the installed VRS. Working of dispenser shall be interlinked with VRS functioning. Work zone monitoring for TOCs and Benzene shall be conducted by OMCs for petrol pumps selling more than 300 KL per month

and more than 10 lakhs population. List of fuel dispensing units in the U.T. of Puducherry is available for checking of installation of VRS will be carried out.

**(Action: Puducherry Pollution Control Committee, Cost: Nil, Timeline: 3 months)**

### **(b) Phasing out of older DG sets**

DG sets are widely used by Industries, Hospitals, Malls, Kalyana Mandabam and other Commercial establishments. DG Sets installed before the year 2000 are causing air and noise pollution. In compliance with the Hon'ble NGT order in O.A. No. 681 of 2018 dt. 06.08.2019, CPCB brought out guidelines regulating usage of DG Sets. PPCC has directed all the establishments to strictly adhere to the CPCB guidelines. It will be ensured by conducting periodical inspection and action will be taken against the violators.

**(Action: PPCC, Cost: Nil, Timeline: 6 months)**

## **(iv) Domestic Sector**

### **(a) Construction Activity**

Construction activity causes fugitive emission mainly dust. From site clearance to painting activity cause sporadic dust formation. Providing mesh coverage around the construction site and instant removal of the construction debris.

Puducherry Planning Authority and the Urban local bodies will be requested to incorporate a condition to provide a mesh around the construction site while issuing the building permit. Periodical inspection will be carried out in the major construction site to ensure the provision of mesh.

**(Action: PPCC, PPC & LAD: Cost: Nil, Time line: 3 months)**

**(b) Road Sweeping**

Road sweeping activity relocate the dust particles from on the road to off the road and carries by wind. Hence shifting from manual road sweeping to mechanical and sweeping is wise solution to keep the road clean, automatic road sweeping machines will be employed in urban limit.

**(Action: Urban Local Bodies, Cost: 1.6 Cr, Timeline: 6 months)**

**(c) Burning of waste**

Burning of municipal waste and garden waste are not a uncommon practice. Though Municipal Solid Waste Rules, 2016 prohibits the burning of waste but it is not adhered to especially in the dumpsite it is occasionally witnessed. Integrated waste management is in place in the U.T. of Puducherry. City garden composting system will be carried out to avoid burning of tree cut waste and litter.

**(Action: LAD, Cost: 2.5 lakhs, Timeline: 6 months)**

**(v) Agricultural Sector****Stubble Burning**

In post-harvest session farmer tends to burn paddy straw, sugarcane leaves and other grass for land clearance. This activity cause seasonal air pollution. In collaboration with the farmer Association and Agriculture department conducts awareness programme on the ill effect of the stable burning. They will be educated to carry composting process rather burning the agro wastes.

**(Action: Agriculture Department, Cost: Rs. 2 lakhs, Timeline: 3 months)**

### 4.3. Green belt for the Abatement of Air Pollution

#### (a) . Urban Plantation

Pondicherry Municipality, Oulgarate Municipality, Karaikal Municipality, Mahe Municipality and Yanam Municipality are the urban areas in the U.T. of Puducherry. The road sides, medians, parks, apartments, residential lay outs grave yard and solid waste disposal sites are suitable places for plantation. The appropriate places for road side and median plantations have been identified in consultation with the PWD. Appropriate species have been identified for roadside plantations to sequester large amounts of CO<sub>2</sub> from the city and contribute to offsetting warming and mitigating the impact of climate change. The tree guards and fencings will be provided for road side and lay out plantations respectively.

The PPA has made mandatory that 10 per cent of the total lay out area has to be allotted for the development of public utility. The total of 9106 sq.mts and 6570 sq.mts have been identified as the park development area in Pondicherry Municipality and Oulgarate Municipality respectively.

**(Action: PPCC, PWD & Local Bodies, Cost: 10 lakhs, Timeline: 6 months)**

#### b) Greening Industries

Green belt of suitable species and design around the industry would aide in controlling air pollution. Puducherry Pollution Control Committee (PPCC) has mandated all the industries to provide 20 percent of the land area for the green belt development. The industries have been directed to utilize their treated sewage/effluent for irrigating the plantation. More plantations can be raised in Large and Medium scale units. There are 70 Large scale and 190 Medium scale industries are functioning. In association with CII and Industrial

Associations, the green space of industrial area will be increased. The species having the potential to adsorb air pollution and to control noise are suitable for industrial plantations. Greenery is one of the criteria for selecting the industry for bagging the Green award conferred by the PPCC once in three years.

**(Action: PPCC, Cost: Nil, Timeline: 6 months)**

## 5. CONCLUSION

The State Air Quality Monitoring Committee and Regional Qir Quality Monitoring Committee would review the progress of the implementation of various components of this Action Plan in order to improve the air quality of the U.T. Of Puducherry.

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

**INDICATIVE TEMPLATE FOR STATE ACTION PLAN**

**1. Industrial Emissions**

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)	Responsible Department
1.	Policy for permitting new industries in Critically Polluted Areas (CPAs)	There is no Critically Polluted Areas in U.T. of Puducherry.	NA	NA	NA	NA	NA	PPCC
2.	Guidelines for laying city gas distribution network	Guidelines for city gas distribution was notified on 09 <sup>th</sup> October 2023 by Government of Puducherry.	Completed	100%	No	NA	NA	DIC
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.	Completed	100 %	It is proposed to give 10% of consent fee reduction to the unit which used minimum 50% of its fuel requirement through cleaner fuel. Hence there will be reduction of revenue to PPCC. However no fund is required to give 10 % of consent fee reduction.			PPCC
4.	Policy for restriction on usage of Pet coke for industrial use.	Fuel Policy has been formulated in the year 2021. Considering presence of higher Sulphur content in petcoke and coal, its usage as fuel is prohibited.	Already completed	100 %	No	NA	NA	PPCC

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)	Responsible Department
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).						Electricity Department
6.	Policy for use of DG sets	Guidelines framed by the CPCB and directions of the Hon'ble NGT are being adopted	December 2025	100 %	No	NA	NA	PPCC
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 install CAAQMS. Ongoing	March 2025	100 %	No	NA	NA	PPCC
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 17 Air pollution potential industries have been directed to install OCEMS	Completed	100 %	No	NA	NA	PPCC
9.	Mechanisms to control fugitive emissions sources.	Industries were directed to provide sprinkler system to control fugitive emissions.	December 2024	100 %	No	NA	NA	PPCC
		Urban Local Bodies are carrying out manual and mechanical road sweeping.	Continuous	100 %	Yes	1.6	Nil	LAD
10.	Regulations for conversion of brick kilns to clean technologies	To be started	March 2025	100 %	No	NA	NA	PPCC

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)	Responsible Department
11.	Regulations for Emission Trading Scheme (ETS)	Yet to be initiated	-	-	-	-	-	PPCC
12.	Policy to set up e-waste recycling unit in industrial areas in compliance with e-waste management rules	Draft policy has been formulated	3 months		-	-	-	<u>PPCC</u>
13.	Any other Policy / Rules/ Standards/ Guidelines pertaining to industrial emissions	Standards specified in Environmental (Protection) rules, 1986 are being adopted	Completed	100 %	No	NA	NA	PPCC
14.	Number of industries in the State complying emission standards	Industries are regularly monitored for compliance with stipulated air emission standards using both automated and manual systems.	Continuous	100 %	No	NA	NA	PPCC
15.	Inventory of fuel consumed in the industries (type and quantity)	To be started	December 2024	100 %	Yes	Rs. 3 lakhs	Nil	PPCC
16.	Shifting of industries/ commercial units to gaseous fuels (CNG/ PNG/ CBG)	On going	March 2026	80%	No	NA	NA	Ind. Dept.
17.	Number of households shifted to PNG/ LPG	LPG – 3,91,033	March 2025	100%	No	NA	NA	Civil Supplies
18.	Any other activity / project pertaining to industrial emissions	Air pollution potential industries are not encouraged. All the such type of existing industries are provided COEMS.	Completed	100%	No	NA	NA	PPCC

## 2. Vehicular Emissions

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)	Responsible Department
1.	Notification for phasing out old vehicles (Commercial: 10 years; Private: 15 years)	The Transport Department has notified Puducherry" Motor Vehicle Scrapping Policy 2024" for scrapping of Non-Transport Vehicles older than 15 years of age owned by Govt./quasi-Govt./Agencies of the central and state government registered in Puducherry as per the guidelines of MoRTH.	March 2025	Initially, 478 nos. of vehicles out of 1122 nos. of vehicles. Ie. 42.60%, have been proposed for scrapping.	Yes	Not yet	NA	Transport Department
2.	Policy for scrapping old vehicles	Completed	-	All Govt./Quasi Govt./Autonomous body	Yes	To be ascertained	To be allocated	Transport Department
3.	Policy/ Plan for Li-battery waste management from scrapped vehicles	To be started	March 2025	100 %	No	NA	NA	PPCC
4.	Policy / Scheme for Eco-Friendly Mass Rapid Transport Systems	Will be examined	-	...	...	...	...	Transport Department
5.	Policy for augment e-vehicles	The Transport Department has submitted the draft "Puducherry electric mobility policy 2023" for the approval of the Government (Ongoing)	December 2024	100%	Rs.9.40 Crores per annum	No	No	Transport Department
6.	Notification and enforcement of PUC norms	Integration of NIC software for testing of vehicles for pollution has been implemented. For enforcement of PUC	Completed	100%	No	NA	NA	Transport Department

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)	Responsible Department
		compliance, the submission of Pollution under control certificate is made mandatory for grant / renewal of certificate or renewal of certificate of Registration.						
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.	-	-	-	-	-	Transport Department
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 sata base of pollution data can be created.	-	-	-	-	-	Transport Department
9.	Construction of bypass /ring roads	Not proposed						PWD(B&R)
10.	Re-filling Stations retrofitted with Vapor Recovery System	Ongoing	December 2024	100 % wherever applicable	No	NA	NA	PPCC
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 2024"	Currently required information is not available					Transport Department
12.	Any other Policy / Rules/ Standards/ Guidelines pertaining to vehicular emissions							Transport Department

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

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)	Responsible Department
1.	Policy for development of projects/ plans for C&D waste management	Processing commenced on 01/02/2024 by the new concessionaire M/s Green Warrior, Tiruvallur 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 to a capacity of 400TPD. C&D waste processing Unit to be erected on or before June'2025 as Phase II.	Continuous	100% waste generated	Yes	Rs.21.92	Rs.12.21	LAD
2.	Policy for use of C&D waste in laying and construction of State High ways.	C & D Processing Plant yet to be commenced by the new concessionaire M/s Green Warrior, Tiruvallur on or before June'2025	Continuous	100% waste generated	Yes			LAD
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 will be set up, this will be initiated.	-	-	-	-	LAD

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)	Responsible Department
4.	Schemes for development of green belt/ open spaces and street sides greening on State highways	To be started	March 2024	30 %	Yes	Rs.05	No	PWD, Urban Local Bodies & PPCC
5.	Penalty provisions for non-compliance of C&D waste management rules at construction sites	Completed	-	100 %	No	NA	NA	LAD
6.	Maintenance, repair and paving of State highways	Completed 67.5 Km.	-	100%	Yes	39.15	23.93	PWD(B&R)
		To be started 8.5 Km	November 2024	-	Yes	4.00	-	PWD(B&R)
7.	Monitoring of road dust especially in and around hotspot areas and in the vicinity of State highways	Yes	December 2024	100%	Yes	To be allocated	To be allocated	PWD(B&R)
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 (work order issued)	December 2024	100%	Yes	2 crores (yet to be received)	No	PIPDIC
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	-	-	-	-	LAD

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)	Responsible Department
10.	C&D waste processing plants	C&D waste processing facility will be installed	Continuous	100% waste generated	Yes	Rs.3.35		LAD
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	100%	Yes	Rs 1.63 Crores	Rs 1.63 Crores	LAD
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 using existing man power and vehicles.	Continuous	NA	No	NA	NA	LAD

## 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)	Responsible Department
1.	Notification and Enforcement of municipalsolid waste (MSW) management rules	Completed	-	-	No	NA	NA	LAD
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	100%	No	No	No	LAD
3.	Policy for legacy waste management at dumpsites	Adopted SWM rules 2016	Completed	100%	Yes	Puducherry – Rs.76.64 Crores Karaikal – Rs. 9.36 Crores Yanam – Rs. 2.55 crores	Puducherry – Rs. 63.16 crores Karaikal – Rs. 8.59 crores Yanam – 0.92 Crores	LAD
		For Pondicherry and Oulgaret, around 19 acres of land out of 23.6 acres has already being reclaimed by the concessionaire for 9.10 lakh Metric Tone						
		The concessionaire commenced for Bio-mining and bio remediation in Karaikal Municipality	Completed					
		LOA issued on 31.08.2023 for Bio-mining and bio remediation of 21600 MT of legacy waste accumulated in Yanam.	Ongoing					

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)	Responsible Department
4.	Policy for implementation of ban on single use plastics	Completed	-	100 %	No	No	No	PPCC
5.	Policy for development and Construction of Waste to Energy Plants	Adopted SWM rules 2016	Completed	100%	No	NA	NA	LAD
	(a) non-recyclable / combustible dry waste							
	(b) Bio- methanation / Bio CNG							
	(c) Composting plant etc.							
6.	Any other Policy / Rules/ Standards/ Guidelines pertaining to MSW Management	Solid Waste Management Rules (SWM), 2016 E-Waste (Management) Rules, 2016 Bio-Medical Waste Management Rules, 2016 Plastic Waste Management Amendment Rules, 2022 Construction and Demolition Waste Management Rules, 2016 Guidelines for Extended Producer Responsibility National Green Tribunal Swachh Bharat Mission (Urban & Gramin) guidelines (Mission 2.0)	Already in place	NA	No	NA	NA	LAD
7.	Waste collection status in the city (%)	100% waste is being collected from all the ULBs	Continuous	100%	Yes	39 Cr	39 Cr	LAD
8.	Waste segregation status in the city (%)	100% segregation of waste to be started by the New concessionaire M/s Green Warrior, Tiruvallur from 1 <sup>st</sup> June 2025 as Phase II	June, 2025	100%	Yes	To be allocated	To be allocated	LAD

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)	Responsible Department
9.	Material Recovery Facility	Processing commenced on 01/02/2024 by the new concessionaire M/s Green Warrior, Tiruvallur 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 to a capacity of 400TPD. C&D waste processing Unit to be erected on or before June'2025 as Phase II.	Continuous	100 %	Yes	10.80 Cr	3.60 Cr	LAD
10.	Waste to Energy plants	Not adopted in U.T. of Puducherry	NA	NA	No	NA	NA	LAD
11.	Waste to compost plants	Integrated MSWM is being taken up for all types of waste. Composting technologies like Windrows method, vermi composting, Black Soldier Fly (BSF) and other aerobic technologies have been adopted.	Completed	100 %	Yes	NA	NA	LAD
12.	Remediation of dumpsites in the city	All the legacy waste in the dumpsite has been bio-mined and cleared	Completed	100%	Yes	Rs.42.6 Crores	Rs. 42.6 Crores	LAD
13.	Control open burning of MSW	Integrated MSWM is being taken up in all ULBs to prevent open burning of MSW by adopting incinerator provision	On going	-	Yes	NA	NA	LAD
14.	Any other activity/ project pertaining to MSW Management	Bio CBG plant for 180 TPD, pyrolysis method of 30 TPD, RDF pellets of 60 TPD and RDF Bailing 120 TPD are proposed in the IMSWM project in Phase II	On going	100%	Yes	NA	NA	LAD

## 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)	Responsible Department
1.	In-situ treatment of biomass residues for management of stubble burning							Dept. of Agriculture
a)	Schemes for procurement of agriculture machinery	Sub-Mission on Agricultural Mechanization (SMAM) Ongoing	Continuous	100%	Yes	2.24	2.24	Dept. of Agriculture
b)	Assistance for establishment of farm machinery banks/ custom hiring centres	To be started	March 2025	50%	Yes	0.20	0	Dept. of Agriculture
c)	Use of decomposer for in-situ Crop residue management	In-situ management of sugarcane trashes after harvest by deploying Trash cutter machineries/ Aggregating the trashes along the bunds and decompose them by spraying of urea. / use of bio decomposers.	Continuous	75 %	Yes	0.10	----	Dept. of Agriculture
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	Dept. of Agriculture
3.	Biomass projects with respect to the hotspots of crop residue burning	Burning of crop residue is not a common practice. Crop residue is being used for organic farming.						Dept. of Agriculture
4.	Policy for supply chain mechanism for in-situ and ex-situ management of stubble	Promotion of Agricultural Mechanization through subsidized distribution of equipment's such as Paddy straw balers. Chaff cutters under CSS- Sub-Mission on Agricultural Mechanization.						Dept. of Agriculture
5.	Supply chain for crop residues to cow shelters	The fresh crop residue is being supplied to decentralized cow shelters located in Puducherry.						Dept. of Agriculture

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)	Responsible Department
6.	Development of effective protocol for monitoring of fire incidents including crop area consideration and crop fire area data	To be started	November 2024	100%	No	NA	NA	Dept. of Agriculture
7.	Any other scheme/ program that may help in reducing air pollution	Awareness among farmers through training programme to restrain from burning of trashes /crop residues for popularization of use of bio-decomposers Promotion of Organic Farming in a cluster approach by making available all the organic inputs.	Continuous	600 ha	Yes	1.01	Annual Action Plan Approved by the State Level Sanctioning Committee. Funds will be utilized for capacity building and to provide compensation for yield loss due to conversion to Organic farming. Details of Organic clusters formed uploaded in the PKVY Portal.	Dept. of Agriculture

## 6. Household emissions

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)	Responsible Department
1.	Schemes for use of LPG/ PNG for cooking fuels	Ongoing	Continuous	Target - 10.000 Achieved -15,556 156%	No	No	No	Civil Supplies
2.	Any other Policy / Rules/ Standards/ Guidelines pertaining to Household emissions	To be started	December 2027	75 %	Yes	Yet to be allocated	NA	PPCC

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## GRADED/EMERGENCY RESPONSE ACTION PLAN FOR THE U.T. OF PUDUCHERRY

The Air Quality Index Categories of Puducherry is mostly from Good to Satisfactory and on few occasions falls under Moderate Category. Graded Response Action plan for implementation in the U.T. of Puducherry in case of air pollution emergencies under different Air Quality Index (AQI) categories namely, Moderate to Poor, Very Poor and Severe as per National Air Quality Index is as below:

### Schedule under GRAP for the U.T. of Puducherry

<b>Severe (Ambient PM<sub>2.5</sub> or PM<sub>10</sub> concentration value is more than 250 µg/m<sup>3</sup> or 430 µg/m<sup>3</sup> respectively persists for 48 hours or more)</b>	<b>Agency responsible/ Implementing Agency</b>
Identify road stretches with high dust generation and Increase frequency of mechanized clearing of road and sprinkling of water on paved and unpaved roads	Local Administration Department, Public Works Department (B&R) and National Highway Authority of India
Identify burning of solid waste	Local Administration Department
Strengthen and encourage public transport services to reduce the vehicular congestion.	Transport Department
<b>Very Poor (Ambient PM<sub>2.5</sub> or PM<sub>10</sub> concentration value is between 121-250 µg/m<sup>3</sup> or 351- 430 µg/m<sup>3</sup> respectively persists for 48 hours or more)</b>	<b>Agency responsible/ Implementing Agency</b>
Restrict use of diesel generator sets	Puducherry Pollution Control Committee, Local Administration Department and District administration.
Compliance to emission norms by the industries	Puducherry Pollution Control Committee
Reduction of non-point pollution emission sources such as handling of coal, transport of coal.	Puducherry Pollution Control Committee
Stop use of coal/firewood in hotels and open eateries	Local Administration Department
Alert in newspapers / TV / Radio to advise people to avoid polluted areas and restrict outdoor movement.	District Administration, Police Department, Department of Science, Technology & Environment and Puducherry Pollution Control Committee.

<b>Moderate to poor (Ambient PM<sub>2.5</sub> or PM<sub>10</sub> concentration value is between 61-120 µg/m<sup>3</sup> or 101- 350 µg/m<sup>3</sup> respectively persists for 48 hours or more)</b>	<b>Agency responsible/Implementing Agency</b>
Stringently enforce/stop garbage burning in landfills and other places and impose heavy fines on person responsible	Local Administration Department
Close / stringently enforce all pollution control regulations in industries	Puducherry Pollution Control Committee
Do periodic mechanized sweeping on roads with heavy traffic and water sprinkling also on unpaved roads	Local Administration Department
	Public Works Department (B&R) and National Highways Authority of India
Strict vigilance and no tolerance for visible emissions – stop plying of visibly polluting vehicles by impounding or fine	Transport Department, Traffic police of Puducherry
Strict vigilance and enforcement of PUC norms	Transport Department
Stringently enforce rules for dust control in construction activities and close non – compliant sites	Local Administration Department
Deploy traffic police for smooth traffic flow at identified vulnerable areas	Traffic Police
Information dissemination Social media, mobile Apps should be used to inform people about the pollution levels, contact details of control room, enable them to report polluting activities / sources to the concerned authorities, and that will be taken by government based on the level of pollution.	Puducherry Pollution Control Committee, District Administration



**केन्द्रीय प्रदूषण नियंत्रण बोर्ड**  
**CENTRAL POLLUTION CONTROL BOARD**  
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार.  
 MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA.

**EMAIL**

**CM-13013/56/2021-LAW-HO-CPCB-HO**

**18.10.2024**

To,

The Member Secretary  
 Puducherry Pollution Control Committee  
 III Floor, PHB Building, Anna Nagar, Puducherry -5

**Subject: Hon'ble NGT Order dated 03.09.2024 in the matter of OA No. 159 of 2021 (SZ) - Guidelines for preparation of State Action Plan for clean air - reg.**

**Ref.: Letter received from Puducherry PCC dated 30 09 2024.**

Sir,

This has reference to your letter no. 412/PPCC/AIR-SAP/Sci-II/2024/855 dated 30.09.2024 regarding submission of State Action Plan for clean air as per the Guidelines prepared by CPCB.

As per the guidelines, the State Action Plan is to be prepared by AQMC (please refer page no. 6 of Guidelines for Formulation of State Action Plan). Accordingly, it is requested to re-submit the copy of approved State Action Plan.

Yours faithfully,

(P. Agarwal)  
 Director & Head AQM

**Encl.: As above**

**Copy to:**

1. Deputy Conservator & Forests  
 Forestry & Wildlife  
 Mullaiyagam Forest Campus  
 Cuddalore Road, Puducherry 605004

:for kind information please

(P. Agarwal)

**‘परिवेश भवन’ पूर्वी अर्जुन नगर, दिल्ली - 110032.**  
**Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.**

दूरभाष /Tel : 43102030, 22305792, वेबसाइट /Website: www.cpcb.nic.in



केन्द्रीय प्रदूषण नियंत्रण बोर्ड  
CENTRAL POLLUTION CONTROL BOARD  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

EMAIL

**REMINDER-II**

CM-13013/56/2021-LAW-HO-CPCB-HO

18.10.2024

To,

The Member Secretaries  
State Pollution Control Boards /PCCs  
(As per list)

**Subject: Hon'ble NGT Order dated 03.09.2024 in the matter of OA No. 159 of 2021 (SZ) - Guidelines for preparation of State Action Plan for clean air - reg.**

Sir,

This has reference to CPCB letter no. CM-13013/56/2021-LAW-HO-CPCB-HO dated 13.06.2024 and 24.09.2024 regarding formulation of State Action Plan for clean air as per the Guidelines prepared by CPCB (copy enclosed for ready reference).

Further, Hon'ble NGT in its order dated 03.09.2024, directed SPCBs/PCCs "to give their response to the revised guidelines issued by the CPCB within a period of 2 (Two) weeks".

Accordingly, SPCBs/PCCs are once again requested to forward the copy of the approved SAP of the respective State/UT to CPCB at the earliest, so that CPCB may collate all the State Action Plans as per the direction of Hon'ble NGT.

Yours faithfully,

(P. Agarwal)

Director & Head AQM

Encl.: As above

Copy to:

1. Additional Secretary, CP, MoEFCC :for kind information please  
Indira Paryavaran Bhawan  
Jor Bagh, Aliganj, New Delhi- 11003
2. Principal Secretaries-Environment :for kind information please  
All States/UTs

(P. Agarwal)

**'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032**

Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032

दूरभाष/Tel: 43102030, 22305792, वेबसाइट/Website : www.cpbc.nic.in

**List:**

1. The Member Secretary,  
Andhra Pradesh Pollution Control Board  
D.No. 33-26-14 D/2, Near Sunrise Hospital,  
Pushpa Hotel Centre, Chalamalavari Street,  
Kasturibaipet, Vijayawada - 520 010
2. The Member Secretary  
Assam Pollution Control Board,  
Anuradha Cinema Complex,  
Maniram Dewan Rd, New Guwahati Railway Colony  
Bamunimaidan, Guwahati, Assam- 781021
3. The Member Secretary  
Bihar State Pollution Control Board  
Parivesh Bhawan, Plot No. NS-B/2  
Paliputra Industrial Area  
Patliputra, Patna (Bihar) – 800010
4. The Member Secretary  
Chandigarh Pollution Control Committee  
Paryavaran Bhawan, Madhya Marg,  
Ground Floor, Sector - 19 B, Chandigarh – 160019
5. The Member Secretary  
Chhattisgarh Environment Conservation Board  
Room No.-E5/10, Mahanadi Bhavan,  
Nava Raipur Atal Nagar, Dist-Raipur 492101
6. The Member Secretary  
Delhi Pollution Control Committee  
5<sup>th</sup> and 6<sup>th</sup> Floor, C-wing, ISBT Building  
Kashmere Gate, Delhi - 110 006
7. The Member Secretary  
Gujarat State Pollution Control Board  
Paryavaran Bhavan, Sector-10A,  
Gandhinagar-382010
8. The Member Secretary  
Himachal Pradesh State Pollution Control Board  
Paryavaran Bhavan, Phase III,  
New Shimla – 171009, Himachal Pradesh
9. The Member Secretary  
Haryana State Pollution Control Board  
C-11, Sector-6, Panchkula, Haryana-134109
10. The Member Secretary  
J&K State Pollution Control Board, Parivesh Bhawan,  
Forest Complex, Gladni, Narwal, transport Nagar,  
Jammu (J&K)-180006

11. The Member Secretary  
Jharkhand State Pollution Control Board  
T.A Building, HEC Campus, P.O. Dhurwa  
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12. The Member Secretary  
Karnataka State Pollution Control Board  
Parisara Bhavan, 49,4<sup>th</sup> & 5<sup>th</sup> Floor  
Church Street, Bangalore-560001
13. The Member Secretary  
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Skara yokma, near KBR Airport, UT of Ladakh- 194101
14. The Member Secretary  
Madhya Pradesh State Pollution Control Board  
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15. The Member Secretary  
Maharashtra State Pollution Control Board  
Kalpataru Point, 3<sup>rd</sup>& 4<sup>th</sup> floors  
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Mumbai 400 022
16. The Member Secretary  
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Meghalaya – 793014
17. The Member Secretary  
Nagaland State Pollution Control Board  
Signal Point, Dimapur,  
Nagaland – 797112
18. The Member Secretary  
Odisha State Pollution Control Board  
Paribesh Bhawan  
A-118, Nilakanta Nagar, Unit –VIII,  
Bhubaneshwar – Odisha – 751012
19. The Member Secretary  
Punjab State Pollution Control Board  
Vatavaran Bhawan, Nabha Road, Patiala-147001
20. The Member Secretary  
Rajasthan State Pollution Control Board  
A-4 Institutional Area, Jhalana Dungri  
Jaipur, Rajasthan – 302004
21. The Member Secretary  
Tamil Nadu State Pollution Control Board  
No. 76, Mount Salai, Guindy,  
Chennai, Tamil Nadu – 600032

22. The Member Secretary  
Telangana State Pollution Control Board  
Paryavaran Bhavan  
A-3, Industrial Estate, Sanath Nagar,  
Hyderabad, Telangana - 500 018
23. The Member Secretary  
U.P. Pollution Control Board  
3<sup>rd</sup> Floor, PICUP Bhawan, Vibhuti Khand,  
Gomti Nagar, Lucknow - 226 020
24. The Member Secretary  
Uttarakhand Pollution Control Board  
Gaura Devi Bhawan, 46 B IT Park Sahastradhara,  
Dehradun, Uttarakhand-248001
25. The Member Secretary  
West Bengal State Pollution Control Board  
Paribesh Bhavan, Building, No.10-A,  
Block -LA, Sector 3, Salt Lake City,  
Kolkata, West Bengal - 700 091
26. The Member Secretary  
Arunachal Pradesh State Pollution Control Board  
'Paryavaran Bhavan', Yupla Road,  
Pappu Nallah,  
Naharlagun - 791110
27. The Member Secretary  
Goa State Pollution Control Board, Nr. Pilerne Industrial Estate  
Opp. Saligao Seminary,  
Saligao - Bardez, Goa - 403511
28. The Member Secretary  
Kerala State Pollution Control Board  
Plamoodu Junction, Pattam Palace P.O.  
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29. The Member Secretary  
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30. The Member Secretary  
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31. The Member Secretary  
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Parivesh Bhawan, Pt. Nehru Complex,  
Gorkhabasti P.O., Kunjaban,  
Agartala, West Tripura - 799006, Tripura

32. The Member Secretary  
Andaman & Nicobar Islands Pollution Control Committee  
Department of Science & Technology  
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Port Blair-744102  
Andaman & Nicobar
33. The Member Secretary  
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Nani Daman, Daman – 396210
34. The Member Secretary  
Lakshadweep Pollution Control Committee  
Lakshadweep Administration  
Department of Science, Technology & Environment  
Kavarati – 682555, Lakshadweep
35. The Member Secretary  
Puducherry Pollution Control Committee  
Department of Science, Technology & Environment  
Housing Board Complex,  
3<sup>rd</sup> floor, Anna Nagar, Pondichery – 600 005
36. The Member Secretary  
Sikkim State Pollution Control Board  
State land Use & Environment Cell  
Govt. of Sikkim, Deorali,  
Gangtok, Sikkim-737102

**Copy to:**

1. Additional Secretary, Control of Pollution  
Ministry of Environment Forests & Climate Change  
Indira Paryavaran Bhawan,  
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2. Principal Secretary, Environment  
Govt. of Andhra Pradesh  
4th Block, Ground Floor  
A.P Secretariat Office  
Velagapudi, Andhra Pradesh – 522503
3. Additional Chief Secretary, Environment  
Government of Assam  
Secretariat, Dispur  
Assam – 781001
4. Additional Chief Secretary, Environment  
Govt. of Bihar  
Environment, Forest and Climate Change Department, Irrigation Building, Patna,  
Bihar – 800015
5. Principal Secretary, Environment  
Govt. of Chhattisgarh  
D.K.S. Bhawan, Mantralaya,  
Raipur, Chhattisgarh – 492001
6. Principal Secretary, Environment  
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4th Floor, UT Secretariat  
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7. Secretary, Environment  
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New Delhi – 110002
8. Additional Chief Secretary, Environment, Govt. of Gujarat  
Forests & Environment Department  
Block-14, 8th floor, Sachivalaya  
Gandhinagar, Gujarat- 382010
9. Additional Chief Secretary, Environment,  
Govt. of Himachal Pradesh  
A-419A, HP Secretariat, Shimla, Himachal Pradesh – 171002
10. Additional Chief Secretary,  
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Haryana, IInd Floor, Bays No. 55-58  
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11. Commissioner Secretary, Environment  
Govt. of Jammu and Kashmir  
Department of Forest, Environment & Ecology,  
2nd Floor Main Building, Civil Secretariat  
Jammu and Kashmir - 180001
12. Special Secretary, Environment  
Department of Forest, Environment & Climate Change  
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13. Principal Secretary, Environment  
Govt. of Karnataka Forest, Environment and Ecology Department  
Karnataka Government Secretariat  
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14. Principal Secretary, Environment  
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Madhya Pradesh – 462001
15. Principal Secretary, Environment  
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Environment Department  
Maharashtra Mantralaya  
Mumbai – 400032
16. Additional Chief Secretary, Environment  
Govt. of Meghalaya  
Additional Secretariat, Shillong  
Meghalaya – 793001
17. Principal Secretary, Environment  
Govt. of Nagaland  
New Secretariat, Kohima,  
Nagaland – 797001
18. Additional Chief Secretary, Environment, Govt. of Odisha  
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19. Principal Secretary, Environment  
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25. Additional Chief Secretary, Environment,  
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Kolkata – 700 106
26. Principal Secretary, Department of Forests,  
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27. PCCF and Principal Secretary (Forest)  
Department of Environment, Forest & Climate Change,  
Government of Mizoram, Secretariat, Aizawl- 796001
28. Additional Chief Secretary,  
Forest and Environment Department  
Government of Manipur, Secretariat  
Imphal- 705001
29. Director, Environment  
Department of Environment and Climate Change  
4th Floor, Dempo Towers, Panaji Goa 403001
30. Secretary, Forest and Environment Department,  
Government of Sikkim  
Forest Secretariat, Deorali – 737102  
Gangtok, East Sikkim
31. PCCF and Principal Secretary,  
Department of Environment & Forest,  
Government of Arunachal Pradesh  
Secretariat, Itanagar- 791111

32. Secretary  
Directorate of Environment & Climate Change (DoECC)  
4th Floor, K.S.R.T.C Bus Terminal  
Thampanoor, Thiruvananthapuram – 695001
33. Secretary, Environment  
Department of Sc & Technology  
HJ6M, 96 P, Kavaratti, Lakshwadeep - 682555
34. Department of Environment & Forest  
Office of the Deputy Conservator of Forest, Daman, Fort Area,  
Post Office Moti Daman  
Daman & Diu (U.T.)  
Pin 396220
35. Secretary, Environment  
Civil Secretariat, Leh, Ladakh 194101
36. Deputy Conservator & Forests  
Forestry & Wildlife  
Mullaiyagam Forest Campus  
Cuddalore Road, Puducherry 605004
37. Principal Secretary  
UT of Andaman & Nicobar Islands  
Secretariat, Port Blair, Andaman 744101

**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**