

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 38**  
TO BE ANSWERED ON 04.12.2023

**Increasing levles of Pollution**

38. DR. RAM SHANKAR KATHERIA:  
MS. RAMYA HARIDAS:  
SHRI RAMCHARAN BOHRA:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether the Government has taken any steps to deal with the problem of pollution which is becoming serious on a day to day basis in the country including State of Rajasthan;
- (b) if so, the details of action plans implemented by the Government to overcome the problem of pollution in the country including the State of Rajasthan;
- (c) the extent to which success has been achieved as a result thereof; and
- (d) the details of the precautionary measures taken/being taken by the Government keeping in view the fact that children are more vulnerable to air pollution and around 6 lakh children die prematurely every year beacuse of polluted air?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI ASHWINI KUMAR CHOUBEY)

**(a) to (c)**

Government has launched National Clean Air Programme (NCAP) in 2019 as a national level strategy to reduce air pollution levels across the country including Rajasthan. Non-attainment cities have been identified based on ambient air quality levels exceeding National Ambient Air Quality Standards (NAAQS) which were notified to protect human health. City Specific Clean Air Action Plans have been prepared and rolled out for implementation in 131 non-attainment and million plus cities including 5 cities of Rajasthan (Alwar, Udaipur Jodhpur, Jaipur and Kota). The city specific clean air action plans target city specific air polluting sources like Soil & Road Dust, Vehicles, Domestic Fuel, MSW Burning, Construction Material and Industries.

Further, Steps taken by Govt. for air quality improvement in India including Rajasthan is attached at **Annexure – I**.

90 cities out of 131 cities have shown improvement in air quality in terms of annual PM10 concentrations in FY 2022-23 with respect to the baseline of FY 2017-18. 15 cities have met National Ambient Air Quality Standards (NAAQS) for PM10 (60 µg/m3) in FY 2022-23. Details of air quality of 131 cities are enclosed at **Annexure-II**.

(d) Many studies by different Organizations have been published from time to time, estimating mortality, morbidity, life expectancy, etc. attributable to air pollution based on models and simulations. Also these studies are based on secondary data and extrapolation of findings based on small sample size to a larger population. These estimates do not depict the actual status as there are no conclusive data available in the country to establish direct correlation of death/disease exclusively due to pollution. Health effects of pollution, including air pollution, are synergistic manifestation of factors which include food habits, occupational habits, socio-economic status, medical history, immunity, heredity, etc., of the individuals.

National Clean Air Programme (NCAP) is launched as a national level strategy to reduce air pollution levels and other steps taken by Govt. for air quality improvement in India including Rajasthan is attached at Annexure – I.

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**List of Steps taken for improvement of air quality**  
**ACTIONS TAKEN BY THE CENTRAL GOVERNMENT**

**1.0 National Clean Air Programme:**

- National Clean Air Programme (NCAP) has been launched by Ministry of Environment, Forest and Climate Change (MoEFCC) in January 2019 with an aim to improve air quality in 131 cities (non-attainment cities and Million Plus Cities) in 24 States by engaging all stakeholders.
- NCAP envisages reduction by 20-30% in PM 10 concentration over baseline in year 2017 by 2024. Target has been revised to achieve reduction in PM10 level up to 40% or achievement of national standards (60 µg/m<sup>3</sup>) by 2025-26.
- City Action Plans (CAPs) have been prepared by all 131 cities and being implemented by Urban Local Bodies.
- The city specific clean air action plans target city specific air polluting sources like Soil & Road Dust, Vehicles, Domestic Fuel, MSW Burning, Construction Material and **Industries**
- Performance based financial support is being provided to these 131 cities for implementation of activities of City Action Plan.
- Further, funding for implementation of CAPs is being mobilised through convergence of resources from various schemes of Central Government such as Swachh Bharat Mission SBM (Urban), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart City Mission, Sustainable Alternative towards Affordable Transportation (SATAT), Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME-II), Nagar Van Yojna, etc. and resources from State/UT Governments and its agencies such as Municipal Corporation, Urban Development authorities and Industrial development authorities etc.
- Public Grievance Redressal Portal (PGRP)/helpline have been developed by all 131 cities to address public complaints of air pollution in timely manner.
- Emergency Response System (ERS/ GRAP) have been developed by all 131 cities for taking action in air emergencies
- 88 cities out of 131 cities have shown improvement in air quality in terms of annual PM10 concentrations in FY 2022-23 with respect to the baseline of FY 2017-18.

**2.0 Measures for control of vehicular emissions:**

- **Leapfrogging from BS-IV to BS-VI fuel standards** since 1st April, 2018 in NCT of Delhi and from 1<sup>st</sup> April, 2020 for the rest of the country.
- **RFID (radio-frequency identity)** system implemented by South Delhi Municipal Corporation (SDMC) for collection of toll and Environment Compensation Charges from commercial vehicles entering Delhi.
- Introduction of **BS VI compliant vehicles** across the country since April, 2020.
- Department of Heavy Industry is providing subsidy on e-vehicles under **Faster Adoption and Manufacture of (Hybrid &) Electric Vehicles in India (FAME -II India)** scheme.
- **Sustainable Alternative Towards Affordable Transportation (SATAT)** has been launched as an initiative to set up Compressed Bio-Gas (CBG) production plants and make CBG available in the market for use in automotive fuels.
- Operationalization of Expressways & Highways to divert non-destined traffic

**3.0 Measures for control of industrial emission:**

- **Notification regarding SO<sub>2</sub> and NO<sub>x</sub> emission standards** have been issued for Thermal Power Plants.
- **Ban on use of pet coke and furnace oil** as fuel in NCR States since October 24, 2017 and ban on use of imported pet coke in the country since July 26, 2018, with exception for use in permitted processes.

#### 4.0 Measures for control of emissions from Stubble Burning:

- Under Central Sector Scheme on ‘Promotion of Agricultural Mechanization for in-situ management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi’, agricultural machines and equipment for in-situ crop residue management are promoted with 50% subsidy to the individual farmers and 80% subsidy for establishment of Custom Hiring Centers. In 2022, the Scheme has been merged with Sub-Mission on Agricultural Mechanization (SMAM) and SMAM has been merged with RashtriyaKrishiVikasYojana (RKVY).
- The Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) on 17.09.2021 directed the coal-based Thermal Power plants situated up to a radius of 300 Km of Delhi to co-fire biomass based Pellets, Torrefied Pellets/Briquettes (with focus on paddy straw) with Coal (up to 5-10%).
- Coal based captive Thermal Power Plants in NCR and adjoining areas directed to co-fire at least 5% biomass pellets by 30.09.2023 and at least 10% biomass pellets by 31.12.2023.

### Actions taken by Central Pollution Control Board (CPCB)

#### 1.0 Air Quality Monitoring and Network

- **National Air Quality Index (AQI)** was launched in 2015. Information is being disseminated to public through daily air quality bulletins.
- **Ambient Air Quality Network:** The country has a network of 1447 ambient air quality monitoring stations (516 continuous and 931 manual) covering 516 cities in 28 states and 7 UTs.
- **A Central Control Room** is operated by Central Pollution Control Board wherein, hour to hour tracking of various information such as **PM concentrations, Live Air Quality Data of Monitoring stations, Live Air Quality Index is available. Further, Air Quality Forecast is also available for Delhi-NCR.**
- AQI is monitored along with other parameters and is published on the website in the form of **AQI Bulletin** after analysis. The links for the same have been made available to CAQM for consideration and deciding on urgent actions for control of pollution in Delhi-NCR.

#### 2.0 Measures for control of vehicular refueling emissions

- Installation of Vapour Recovery System (VRS) in new and existing petrol pumps selling gasoline >100kl per month in million plus cities and those selling >300kl per month in cities with population between 1 lakh to 1 million.
- Directions issued to M/s IOCL, M/s BPCL, M/s HPCL, M/s RIL, M/s Shell and M/s Nayara for installation of VRS as per above mentioned criteria

#### 3.0 Measures for control of industrial emission

- For strengthening monitoring mechanism and effective compliance through self-regulatory mechanism, CPCB directed all 17 categories of highly polluting industries to install OCEMS. There are 4,315 units under 17 categories of industries, out of which 3,734 units have installed OCEMS and closure directions are still in-force for 581 units.
- The Ministry of Environment Forest and Climate Change (MoEF&CC), Government of India notifies industry specific discharge standards under Schedule-I: 'Standards for Emission or Discharge of Environmental Pollutants from various Industries' of Environment Protection Act, 1986. So far, industry specific environmental standards, for 79 industrial sectors (including emission standards for 56 sectors) have been notified. Industrial sectors, for which specific standards are not available, general standards as notified under Schedule-VI of Environment Protection Rules, 1986 shall be applicable.
- Installation of **Online Continuous Emission Monitoring System (OCEMS) in red category air polluting industries** in Delhi-NCR
- Industrial units in Delhi have shifted to PNG/cleaner fuels and, operational units in NCR have shifted to PNG/Biomass.
- Shifting of all operational **brick kilns to zig-zag technology** in Delhi and NCR.
- CPCB has come out with System and Procedure for Emission Compliance Testing of Retro-fit Emission Control Devices (RECD) for Diesel Power Generating Set Engines up to Gross Mechanical Power 800 kW.

#### 4.0 Measures for Control of Emissions from Stubble Burning

- CPCB framed **guidelines for promoting setting up of paddy straw based pelletization and Torrefaction plants** which may help in addressing the supply chain issues. Scheme will address the issue of open burning of paddy straw in agriculture fields in Northern Region. A corpus of Rs. 50 crore has been sanctioned from EPC funds. Assuming complete utilization of the corpus, over 0.5 million metric tonnes of paddy straw based pellets are expected to be generated every year.
- CPCB has issued an addendum under which one-time financial assistance is provided to Municipal Corporations, Municipal Councils and ZillaParishads of the states of Punjab, Haryana, NCT of Delhi and NCR districts of Uttar Pradesh and Rajasthan, for establishing paddy straw based briquetting plants for use of briquettes for cremation purpose only.
- **Daily monitoring of Active Fire Events (AFE)** is done during stubble burning period and reports are shared with Commission on Air Quality Management in National Capital Region and Adjoining areas for suitable action.

#### 5.0 MSW and C&D Waste:

- CPCB published guidelines (available on
  1. Environmental Management of Construction & Demolition (C & D) Wastes' in March, 2017
  2. 'Guidelines on DUST Mitigation Measures in Handling Construction Material & C&D Wastes' in November 2017.
  3. Disposal of legacy waste by bio-mining and bio-remediation to address open burning and landfill fires
- CPCB has issued direction to all SPCBs/ PCCs for deployment of Anti-Smog Gun and implementation of adequate dust mitigation measures at construction projects/ sites having area more than 20,000 sq. meters.

- CPCB has issued directions under Section 5 of E(P) Act to all SPCBs/PCCs for implementation of SWM Rules, 2016 with reference to fire incidents at MSW dumpsites.
- All these guidelines and Directions are available on CPCB website to be implemented by SPCBs/PCCs

## 6.0 Technical Interventions

- Research projects are being carried out by CPCB in collaboration with premier institutions like IIT, NEERI, etc. under Environment Protection Charge (EPC) funds which provide scientific inputs for taking focused action towards improvement in air quality of Delhi NCR. Based on the results of one such project, advisory has been issued to State Boards to use **dust suppressant**, along with water to control dust at unpaved roads, roads with heavy traffic and construction sites, as about 30% reduction in dust concentration was observed up to 6 hours after application of dust suppressant.
- CPCB issues a daily report comprising of AQI of Delhi and NCR towns, comparative AQI status, year-wise trends of PM concentration, hotspots for the day, AFE counts, contribution of stubble burning and meteorological forecast. This report is prepared based on the inputs available from various sources such as IMD, SAFAR, IARI, etc., and disseminated through CPCB website.

## 6.0 Close Monitoring & Ground level implementation

- Central Pollution Control Board has been continuously deploying **dedicated CPCB's teams on the field during the winter season** from 2017 onwards to check on-ground scenario of air pollution related activities and refer these to implementing agencies for necessary action.
- 03.12.2021 onwards **40 officers of CPCB have been deployed as flying squads**, for conducting incognito inspection of industries, construction sites etc. in various areas of Delhi NCR. Based on CPCB reports, further action is taken by Commission on Air Quality Management in National Capital Region and Adjoining areas (CAQM) including issuance of closure directions.

## 7.0 Regular Stakeholder Consultation, Public & Media Outreach

- Continuous interactions and coordination with government bodies, public agencies, urban local bodies for assessment of mitigation measures and to combat air pollution through review meetings for air quality management in Delhi-NCR. 41 review meetings convened as on date.
- **Twitter and Facebook accounts have been created for public outreach and complaint redressal** is closely monitoring the complaints on SAMEER app and social media platforms (Twitter & Facebook). Sameer and social media complaints are resolved through enforcement agencies and redressal status are being shared with respective agencies.
- **Dedicated media corner** on CPCB website informs latest developments and actions taken.

## 8.0 Regulatory Actions

- Directions prescribing measures for control of pollution from various sources such as implementation of RECD system/ dual fuel kits in DG sets, use of cleaner fuels in industries, shift to EV/ CNG/ BS VI diesel fuel in transport sector, implementation of dust control measures at C&D sites etc., have been issued by CAQM, wherein CPCB is

also a member and provided technical inputs to CAQM. Further, policy to curb air pollution in NCR has also been formulated.

- **Graded Response Action Plan (GRAP) was prepared for implementation under different Air Quality Index (AQI) categories** in pursuant to the Hon'ble Supreme Court's Order dated December 02, 2016.
- CPCB prepared a revised GRAP, based on which, a revised GRAP has been published by CAQM on 05.08.2022, which has come into effect from 01.10.2022. GRAP revised again on 06.10.2023. CPCB is also a member of the sub-committee responsible for invoking various provisions under GRAP.

#### 10.0 Other actions

- In order to control road dust emissions, CPCB is funding NCR ULBs for construction/ repair of roads and procurement of anti-smog guns and Mechanical road sweepers under EPC funds,
- In order to control DG set emissions, CPCB is funding retrofitment/ upgradation of DG sets in Govt. hospitals in Delhi-NCR under EPC funds.

#### Actions taken in Rajasthan under NCAP

- There are total 05 non-attainment cities in Rajasthan, out of which 02 cities – **Alwar and Udaipur** are funded under National Clean Air Programme (NCAP) and 03 cities - **Jodhpur, Jaipur and Kota** are funded under Fifteenth Finance Commission (XV-FC).
- City Action Plans for improvement in air quality have been rolled out for implementation in all the 05 identified cities.
- Public Grievance Redressal System (PGRS) and Emergency Response System (ERS) have been developed for all NACs.
- Source Apportionment (SA) study is completed in one city i.e. Jaipur and in other four cities it is in progress. The study will help in identifying the sources and extent of their contribution in the air.
- State Action Plan (SAP) is submitted by Rajasthan State, CPCB reviewed it and sent its comments, revised SAP is awaited.
- It has been observed that annual average concentration of **PM<sub>10</sub> has been reduced in all 5 cities of Rajasthan State in FY 2022-23 as compared to FY 2017-18, but increased in comparison to previous FY 21-22.**
- Under NCAP, a total amount of Rs. 47.72 Cr has been released to Rajasthan Pollution Control Board till FY 2022-23 and total Rs. 19.20 Cr have been utilized (40.2%) for implementation of City action plan in 5 NAC's of Rajasthan.
- Under 15th Finance Commission (XV-FC) grant, a total amount of Rs 489.44 Cr has been released to Jaipur, Kota and Jodhpur for air quality improvement in FY 2020-21, FY 2021-22 & FY 2022-23 and total Rs. 145.04 Cr have been utilized (29.6%).
- Thus, so far total about Rs 529.57 Cr have been released under NCAP and XV-FC grant to NACs of Rajasthan for improvement of air quality and out of it, Rs 164.25 Cr have been utilized (about 31%).
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#### The major significant work done for the improvement of Air Quality from Approved City Action Plan (CAP) of cities are as follows:

- a. End-to-end paving of roads along with black-topping and maintaining potholes free roads.

- b. Greening of traffic corridors, open areas, gardens, community places, schools and housing societies.
- c. Creation of public awareness on pollution source and control measures.
- d. To create multiple separate space/zones to handle C&D waste in the city and specify waste collection capacity in TPD.
- e. Lifting of solid waste generated from disilting and cleaning of municipal drains for its disposal.
- f. Regular cleaning of street surfaces and spraying of water to suppress dust.
- g. Regular collection, segregation and scientific disposal of waste
- h. Remove road dust/silt regularly by using mechanical sweepers.



**Annexure-II****Air quality data of 131 cities covered under National Clean Air Programme (NCAP)**

States	S. No.	Cities	2017-2018	2022-2023	Percentage improvement in PM10 concentrations with respect to base year 2017 – 18 (%)
			Average concentration (F.Y.) of PM10 ( $\mu\text{g}/\text{m}^3$ )	Average concentration (F.Y.) of PM10 ( $\mu\text{g}/\text{m}^3$ )	
Andhra Pradesh	1	Anantpur	78	57	26.92
	2	Chittur	70	52	25.71
	3	Eluru	72	66	8.33
	4	Guntur	66	60	9.09
	5	Kadapa	75	57	24.00
	6	Kurnool	79	64	18.99
	7	Nellore	64	56	12.50
	8	Ongole	65	51	21.54
	9	Rajamahendravaram	85	68	20.00
	10	Srikakulam	69	71	-2.90
	11	Vijayawada	91	90	1.10
	12	Visakhapatnam	76	116	-52.63
	13	Vizhianagaram	72	75	-4.17
Assam	14	Guwahati	103	106	-2.91
	15	Nagaon	82	121	-47.56
	16	Nalbari	87	128	-47.13
	17	Silchar	49	49	0.00
	18	Sivasagar	73	42	42.47
Bihar	19	Patna	172	193	-12.21
	20	Gaya	79	150	-89.87
	21	Muzaffarpur	147	175	-19.05
Chandi-garh	22	Chandigarh	114	116	-1.75
Chhattis-garh	23	Korba	57	70	-22.81
	24	Durg Bhilainagar	86	70	18.60
	25	Raipur	70	78	-11.43
Delhi	26	Delhi	241	209	13.28
Gujarat	27	Ahmedabad	164	91	44.51
	28	Rajkot	150	92	38.67
	29	Surat	130	118	9.23
	30	Vadodara	133	104	21.80
Haryana	31	Faridabad*	229	212	7.42
Himachal Pradesh	32	Baddi	174	145	16.67
	33	Damtal	55	64	-16.36
	34	Kala Amb	118	93	21.19

States	S. No.	Cities	2017-2018	2022-2023	Percentage improvement in PM10 concentrations with respect to base year 2017 – 18 (%)
			Average concentration (F.Y.) of PM10 (µg/m3)	Average concentration (F.Y.) of PM10 (µg/m3)	
	35	Nalagarh	146	78	46.58
	36	Paonta Sahib	84	103	-22.62
	37	Parwanoo	66	47	28.79
	38	Sunder Nagar	78	46	41.03
Jammu & Kashmir	39	Jammu	157	158	-0.64
	40	Srinagar*	132	88	33.33
Jhar-khand	41	Dhanbad	315	203	35.56
	42	Jamshedpur	135	126	6.67
	43	Ranchi	141	107	24.11
Karna-taka	44	Bengaluru	92	68	26.09
	45	Devangere	74	61	17.57
	46	Gulburga / Kalaburgi	55	74	-34.55
	47	Hubli-Dharwad	79	76	3.80
Madhya Pradesh	48	Bhopal	112	124	-10.71
	49	Dewas	83	105	-26.51
	50	Gwalior	126	145	-15.08
	51	Indore	82	109	-32.93
	52	Jabalpur	101	125	-23.76
	53	Sagar	73	83	-13.70
	54	Ujjain	93	111	-19.35
Maha-rashtra	55	Aurangabad	75	107	-42.67
	56	Akola	111	62	44.14
	57	Amravati	102	68	33.33
	58	Badlapur	160	146	8.75
	59	Chandrapur	118	121	-2.54
	60	Greater Mumbai	161	116	27.95
	61	Jalgaon	70	66	5.71
	62	Jalna	99	93	6.06
	63	Kolhapur	89	80	10.11
	64	Latur	82	53	35.37
	65	Nagpur	100	97	3.00
	66	Nashik	82	62	24.39
	67	Navi Mumbai	88	102	-15.91
	68	Pune	102	96	5.88
	69	Sangli	87	69	20.69

States	S. No.	Cities	2017-2018	2022-2023	Percentage improvement in PM10 concentrations with respect to base year 2017 – 18 (%)
			Average concentration (F.Y.) of PM10 (µg/m3)	Average concentration (F.Y.) of PM10 (µg/m3)	
	70	Solapur	81	76	6.17
	71	Thane	138	115	16.67
	72	Ulhasnagar	153	128	16.34
	73	Vasai virar*	99	155	-56.57
Megha-laya	74	Byrnihat	175	131	25.14
Nagaland	75	Dimapur	142	91	35.92
	76	Kohima	127	72	43.31
Odisha	77	Angul	97	98	-1.03
	78	Balasore	84	82	2.38
	79	Bhubneshwar	85	118	-38.82
	80	Cuttack	93	105	-12.90
	81	Kalinga Nagar	109	104	4.59
	82	Rourkela	99	126	-27.27
	83	Talcher	113	93	17.70
Punjab	84	Amritsar	189	120	36.51
	85	Dera Baba Nanak	79	58	26.58
	86	DeraBassi	88	104	-18.18
	87	Jalandhar	178	126	29.21
	88	Khanna	142	103	27.46
	89	Ludhiana	168	163	2.98
	90	MandiGobindgarh	148	131	11.49
	91	NayaNangal	87	63	27.59
	92	Patiala	106	103	2.83
Rajasthan	93	Jaipur	172	143	16.86
	94	Alwar	152	116	23.68
	95	Jodhpur	189	146	22.75
	96	Kota	139	128	7.91
	97	Udaipur	127	128	-0.79
Tamil Nadu	98	Chennai	66	66	0.00
	99	Madurai	72	68	5.56
	100	Trichy	88	47	46.59
	101	Tuticorin	123	54	56.10
Telan-gana	102	Hyderabad	110	83	24.55
	103	Nalgonda	59	55	6.78
	104	Patencheru	74	80	-8.11
	105	Sangareddy	85	86	-1.18

States	S. No.	Cities	2017-2018	2022-2023	Percentage improvement in PM10 concentrations with respect to base year 2017 – 18 (%)
			Average concentration (F.Y.) of PM10 (µg/m3)	Average concentration (F.Y.) of PM10 (µg/m3)	
Uttar Pradesh	106	Agra	202	118	41.58
	107	Allahabad	169	125	26.04
	108	Ghaziabad	285	198	30.53
	109	Kanpur	227	143	37.00
	110	Lucknow	253	149	41.11
	111	Meerut	159	177	-11.32
	112	Varanasi	230	94	59.13
	113	Anpara	175	166	5.14
	114	Bareilly	207	110	46.86
	115	Firozabad	247	106	57.09
	116	Gajraula	204	194	4.90
	117	Gorakpur	150	102	32.00
	118	Jhansi	109	118	-8.26
	119	Khurja	195	150	23.08
	Uttarakhand	120	Moradabad	222	116
121		Noida	229	202	11.79
122		Raebareli	145	102	29.66
Uttarakhand	123	Dehradun	250	117	53.20
	124	Kashipur	99	112	-13.13
West Bengal	125	Rishikesh	129	103	20.16
	126	Asansol	147	147	0.00
	127	Barrackpore	86	84	2.33
	128	Durgapur	150	139	7.33
	129	Haldia	92	91	1.09
	130	Howrah	139	125	10.07
	131	Kolkata	147	97	34.01

Note: \* For air quality data of Faridabad, baseline data of FY 2020-21 was considered as baseline data for FY 2017-18 was not collected.

\*For air quality data of Srinagar, baseline data of FY 2018-19 was considered as baseline data for FY 2017-18 was not collected

\* For air quality data of Vasai-verar, baseline is FY 2019-20 was considered as baseline data for FY 2017-18 was not collected.