

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION No. 524
TO BE ANSWERED ON 24.07.2023

Steps to Check Air Pollution

524. SHRI D.M. KATHIR ANAND:
SHRI GAJENDRA SINGH PATEL:

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

- (a) whether the Government is aware of the deteriorating condition of air quality in major cities and industrial areas in the country, if so, the details thereof and the amount of Particulate Matter found in industrial areas of major cities;
- (b) the effective measures taken/schemes implemented by the Government to curb the prevailing issues and problems pertaining to air quality;
- (c) the total funds allocated during the last five years to combat air pollution, State-wise and year-wise; and
- (d) the details of the schemes being implemented by the Government to prevent air pollution in the country especially in Madhya Pradesh?

ANSWER

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

(a), (b), (c) & (d):

Ministry has identified 123 non-attainment cities where PM10 concentrations have exceeded the National Ambient Air Quality Standards (NAAQS) for 5 consecutive years. To address air pollution, MoEF&CC has launched a National Clean Air Programme (NCAP) which is a time-bound, national level strategy to address the air pollution in 131 cities (89 non-attainment cities; 34 non-attainment cities & million-plus cities, and 8 Million-plus cities) of the country. It includes implementation of Clean Air Action Plans at National, State and City levels for source specific mitigation and coordinated actions by Union Ministries, State Governments and their agencies.

Further, a Comprehensive Environmental Pollution Index (CEPI) methodology has been developed to categorise the industrial areas into Critically Polluted Areas and Severely Polluted Areas to improve environmental quality in these areas. 69 Industrial Areas have been identified as Critically/ Severely Polluted Areas. Action plans in respect of these industrial areas have been prepared and concerned State Pollution Control Boards/Pollution Control Committees have been mandated for implementation of CEPI Action Plans.

Details of PM 10 concentrations of 131 cities covered under NCAP for the financial year 2022-23 are enclosed at **Annexure-I**.

The measures taken by the Government to address air pollution are placed at **Annexure - II**.

Details of State-wise and year-wise funds allocated during the last 5 years to address air pollution are provided at **Annexure - III**.

The details of various Schemes and initiatives launched by the Government to improve air quality are provided at **Annexure-IV**. Details of schemes implemented in Madhya Pradesh are placed at **Annexure-V**.

**Details of air quality in 131 NCAP cities interms of PM10 concentrations during FY
2022-23**

States	S. No.	Cities	2022-2023
			Average concentration (F.Y.) of PM10 ($\mu\text{g}/\text{m}^3$)
Andhra Pradesh	1	Anantpur	57
	2	Chittur	52
	3	Eluru	66
	4	Guntur	60
	5	Kadapa	57
	6	Kurnool	64
	7	Nellore	56
	8	Ongole	51
	9	Rajamahendravaram	68
	10	Srikakulam	71
	11	Vijayawada	90
	12	Visakhapatnam	116
	13	Vizhianagaram	75
Assam	14	Guwahati	106
	15	Nagaon	121
	16	Nalbari	128
	17	Silchar	49
	18	Sivasagar	42
Bihar	19	Patna	193
	20	Gaya	150
	21	Muzafarpur	175
Chandigarh	22	Chandigarh	116
Chattisgarh	23	Korba	70
	24	Durg Bhilainagar	70
	25	Raipur	78
Delhi	26	Delhi	209
Gujarat	27	Ahmedabad	91
	28	Rajkot	92

	29	Surat	118
	30	Vadodara	104
Haryana	31	Faridabad	212
Himachal Pradesh	32	Baddi	145
	33	Damtal	64
	34	Kala Amb	93
	35	Nalagarh	78
	36	Paonta Sahib	103
	37	Parwanoo	47
Jammu & Kashmir	38	Sunder Nagar	46
	39	Jammu	158
Jharkhand	40	Srinagar	88
	41	Dhanbad	203
	42	Jamshedpur	126
Karnataka	43	Ranchi	107
	44	Bengaluru	68
	45	Devanagere	61
	46	Gulbarga / Kalaburgi	74
Madhya Pradesh	47	Hubli-Dharwad	76
	48	Bhopal	124
	49	Dewas	105
	50	Gwalior	145
	51	Indore	109
	52	Jabalpur	125
	53	Sagar	83
Maharashtra	54	Ujjain	111
	55	Aurangabad	107
	56	Akola	62
	57	Amravati	68
	58	Badlapur	146
	59	Chandrapur	121
	60	Greater Mumbai	116
61	Jalgaon	66	

	62	Jalna	93
	63	Kolhapur	80
	64	Latur	53
	65	Nagpur	97
	66	Nashik	62
	67	Navi Mumbai	102
	68	Pune	96
	69	Sangli	69
	70	Solapur	76
	71	Thane	115
	72	Ulhasnagar	128
	73	Vasai virar	155
Meghalaya	74	Byrnihat	131
Nagaland	75	Dimapur	91
	76	Kohima	72
Odisha	77	Angul	98
	78	Balasore	82
	79	Bhubneshwar	118
	80	Cuttack	105
	81	Kalinga Nagar	104
	82	Rourkela	126
Punjab	83	Talcher	93
	84	Amritsar	120
	85	Dera Baba Nanak	58
	86	DeraBassi	104
	87	Jalandhar	126
	88	Khanna	103
	89	Ludhiana	163
	90	MandiGobindgarh	131
	91	NayaNangal	63
Rajasthan	92	Patiala	103
	93	Jaipur	143
	94	Alwar	116

	95	Jodhpur	146
	96	Kota	128
	97	Udaipur	128
Tamil Nadu	98	Chennai	66
	99	Madurai	68
	100	Trichy	47
	101	Tuticorin	54
Telangana	102	Hyderabad	83
	103	Nalgonda	55
	104	Patencheru	80
	105	Sangareddy	86
Uttar Pradesh	106	Agra	118
	107	Allahabad	125
	108	Ghaziabad	198
	109	Kanpur	143
	110	Lucknow	149
	111	Meerut	177
	112	Varanasi	94
	113	Anpara	166
	114	Bareilly	110
	115	Firozabad	106
	116	Gajraula	194
	117	Gorakpur	102
	118	Jhansi	118
	119	Khurja	150
120	Moradabad	116	
121	Noida	202	
122	Raebareli	102	
Uttarakhand	123	Dehradun	117
	124	Kashipur	112
	125	Rishikesh	103
West Bengal	126	Asansol	147
	127	Barrackpore	84

	128	Durgapur	139
	129	Haldia	91
	130	Howrah	125
	131	Kolkata	97

Measures taken by the Government for Air Quality Management

i. Vehicular Emissions:

- Leapfrogging from BS-IV to BS-VI norms for fuel and vehicles since April, 2018 in NCT of Delhi and from 1st April, 2020 for rest of the country.
- Network of metro rails for public transport are enhanced and more cities are covered.
- Development of Expressways and Highways are also reducing the fuel consumption and pollution.
- Eastern Peripheral Expressway & Western Peripheral Expressway has been operationalized to divert non destined traffic from Delhi.
- Ban on all diesel vehicles older than 10 years and all petrol vehicles older than 15 years, in Delhi and NCR. (Hon'ble SC order dated 29.10.2018).
- Environment protection charges (EPC) have been imposed on diesel vehicles with engine capacity of 2000cc and above in Delhi NCR.
- Introduction of cleaner/alternate fuels like CNG, LPG, ethanol blending in petrol.
- Permit requirement for electric vehicles has been exempted.
- Promotion of public transport and improvements in roads and building of more bridges to ease congestion on roads.
- 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.
- 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.
- Subsidy on e-vehicles under Faster Adoption and Manufacture of (Hybrid &) Electric Vehicles in India (FAME -II India) scheme of Ministry of Heavy Industries is provided.
- 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.

ii. Industrial Emissions:

- Notification regarding SO₂ and NO_x 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 (processes in cement plants, lime kilns and calcium carbide manufacturing units).
- Shifting of industrial units to PNG.
- Installation of online continuous emission monitoring devices in highly polluting industries.
- Brick kilns shifting to zig-zag technology or vertical shaft or use Piped Natural Gas as fuel in brick making to reduce pollution.
- 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 developed.
- Development of low carbon strategies across sectors such as phasing out older coal based power plants, compliance of standards, City Gas Distribution (CGD) network, emphasis on improved power reliability in urban areas, etc.
- Developing an eco-system for processing biomass/agriculture residue as fuel in industrial applications in Delhi-NCR.
- Uniform and affordable PNG pricing policy for aggravating use PNG as fuel in industrial applications in Delhi-NCR.

iii. Air Pollution due to dust and burning of waste:

- Notification of eight waste management rules covering solid waste, plastic waste, e-waste, waste tyres, bio-medical waste, C&D waste, hazardous waste and battery waste.
- Setting up infrastructure such as waste processing plants.
- Extended Producer Responsibility (EPR) for plastic and e-waste management has been mandated on producers.
- Ban on burning of biomass/garbage.
- Bio-mining of three dumpsites at Bhalswa, Okhla and Ghazipur is being carried out.
- 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.
- 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%).
- Guidelines prepared for providing one-time financial assistance for establishment of paddy straw based pelletisation and torrefaction plants, under which individuals /entrepreneurs / companies, interested in setting up pelletisation and torrefaction plants, using only paddy straw generated in the NCT of Delhi, States of Punjab & Haryana, and NCR districts of Rajasthan & Uttar Pradesh can submit an application for obtaining a one-time grant on capital investment.
- Guidelines issued for supporting Municipal Corporations 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 paddy straw based briquettes for cremation purpose only.
- Daily monitoring of Active Fire Events (AFEs) 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.

iv. Monitoring of Ambient Air Quality:

- Expansion of air quality monitoring network in the country under National Air Monitoring Programme (NAMP).
- Initiation of pilot projects to assess alternate ambient monitoring technologies such as satellite-based monitoring.

v. National Clean Air Programme:

- With the prime objective of abating Air Pollution, the Ministry, in 2019 launched a National Clean Air Programme (NCAP) as a National-level Strategy outlining the actions for reducing the levels of air pollution at city and regional scales in India.
- NCAP targets to achieve upto 40% reduction in Particulate Matter concentrations by 2026 or achievement of National Ambient Air Quality Standard in 131 NACs & MPCs.
- Under NCAP, 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.
- Activities in these cities include strengthening of ambient air quality network, source apportionment studies, dust mitigation measures, composting units, infrastructure for non-motorized transport, shifting to clean energy in unorganized sectors, etc.
- The NCAP focuses on multi-sectoral sources of pollution including power plants, industries, vehicles, open burning of waste, construction & demolition activities, etc.; inter-Ministerial coordination for convergence of actions and interventions; and partnership with Institutes of National repute and International Agencies as Knowledge Partners
- Public Grievances and Response System (PGRS) is developed under NCAP.
- Emergency Response System (ERS) has been prepared in NCAP cities.

- Air quality monitoring cell has been constituted across the country in NCAP Cities.
- PRANA a portal for monitoring implementation of NCAP has been launched.
- Introduction of new modules within PRANA
 - Mission LiFE Module
 - Ranking Module
 - State Action Plan Module
 - IoR &NKN Module
 - International Agencies Module
- Implementing Swachh Vayu Survekshan (SVS) 2022- Evaluation of self-assessment reports of NCAP cities and awarded top 9 best performing cities under SVS-2022.

vi. Other Steps:

- Public Complaints regarding air pollution issues in Delhi NCR are taken through ‘Sameer App’, ‘Emails’ (Aircomplaints.cpcb@gov.in) and ‘Social Media Networks’ (Facebook and Twitter).
- Introduction of green crackers with low emission and noise levels. Green Crackers have 30% potential reduction of PM and gaseous emissions compared to conventional firework.
- Ministry is promoting people’s participation and awareness building among citizens for environmental conservation through Mission Life activities and Green Good Deeds that focus on promotion of cycling, saving water and electricity, growing trees, proper maintenance of vehicles, following of lane discipline and reducing congestion on roads by car-pooling etc.
- Extension of Ujawala Yojana to ensure shifting to cleaner fuel.
- Swachh Bharat Mission and Waste Management initiatives.
- The Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) has come out with a policy to curb air pollution in NCR, along with a standard list of approved fuels for NCR for industrial and other applications.

Annexure – III**Details of State-wise and year-wise funds allocated to address air pollution during last 05 years**

S. No.	State	Fund allocated during the Year (amount in ₹ crores)					
		FY 18-19*	FY 19-20	FY 20-21	FY 21-22	FY 22-23	Total
1	Andhra Pradesh	-	6.36	152.28	77.58	75.06	311.28
2	Arunachal Pradesh	1.09	-	-	-	-	1.09
3	Assam	2.63	0.36	12.00	0.00	24.10	39.09
4	Bihar	-	10.20	211.00	88.97	7.09	317.26
5	Chandigarh	-	8.28	5.00	4.61	6.87	24.76
6	Chhattisgarh	-	12.06	108.00	68.70	57.94	246.70
7	Delhi	-	0.00	0.00	11.25	22.50	33.75
8	Gujarat	-	12.00	405.00	217.71	173.29	808.00
9	Haryana	-	-	48.00	6.25	19.28	73.53
10	Himachal Pradesh	-	0.24	10.00	0.48	3.59	14.31
11	Jammu & Kashmi	2.56	0.12	8.00	12.84	32.50	56.02
12	Jharkhand	-	6.00	159.00	72.44	42.00	279.44
13	Karnataka	-	6.30	280.52	154.67	128.52	570.01
14	Madhya Pradesh	-	20.60	300.52	151.20	135.04	607.36
15	Maharashtra	-	39.85	804.40	453.24	386.83	1684.32
16	Meghalaya	1.61	0.00	3.00	0.00	0.45	5.06
17	Mizoram	1.32	-	-	-	-	1.32
18	Manipur	1.93	-	-	-	-	1.93
19	Nagaland	0.35	0.12	6.00	0.93	3.95	11.35
20	Odisha	-	6.18	6.04	3.64	38.52	54.38
21	Punjab	-	12.48	105.04	33.75	56.88	208.15
22	Puducherry	0.42	-	-	-	-	0.42
23	Rajasthan	-	18.12	284.80	122.89	103.76	529.57
24	Sikkim	0.84	-	-	-	-	0.84
25	Tamil Nadu	-	0.06	236.00	131.70	129.22	496.98
26	Telangana	-	11.00	236.76	118.79	92.96	459.51
27	Tripura	1.26	-	-	-	-	1.26
28	Uttar Pradesh	-	48.47	726.16	218.63	672.83	1666.09
29	Uttarakhand	-	0.12	11.00	5.67	22.30	39.09
30	West Bengal	-	6.00	432.00	165.60	173.42	777.02
Total		14.01	224.92	4550.52	2121.54	2408.90	9319.90

- The funds were provided to SPCB/PCC for taking up pollution abatement measures.
- Funds provided during FY 2020-21 till 2022-23 include Rs 8357.55 crore under XV Finance Commission air quality grant for 49 million plus cities and Rs 948.33 crore provided by MoEFCC for taking measures for improvement of air quality in 82 non-attainment cities

Details of various Schemes and initiatives launched by the Government for improvement of air quality

Sl. No.	Ministry	Scheme	Activities
1.	Ministry of Housing and Urban Affairs	i. Swachh Bharat Mission 2.0 (Urban) ii. Smart City Mission iii. AMRUT 2.0 iv. Urban Transport	<ul style="list-style-type: none"> ➤ Setting up of solid waste management processing facilities ➤ Procurement of mechanical road sweepers in 131 NCAP cities & 21 cities >5 lakh population ➤ C&D waste management in 131 NCAP cities & 21 cities >5 lakh population ➤ Remediation of all legacy waste dumpsites in all cities • Urban mobility-Smart parking, intelligent traffic management and integrated multi-modal transport • Waste Management & Water Management ❖ Green Spaces & Parks and Non-Motorized urban Transport (NMT) ❖ Rejuvenation of water bodies and creation of green spaces • Metro rail projects- augment public transport network in cities and thereby improvement in air quality.
2.	Ministry of Heavy Industries	Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) Scheme (Phase II)	<ul style="list-style-type: none"> ➤ Providing subsidies for electric vehicles
3.	Ministry of Petroleum and Natural Gas	Sustainable Alternative Towards Affordable Transportation (SATAT)	<ul style="list-style-type: none"> ➤ Set up 5,000 Compressed Bio-Gas (CBG) production plants ➤ CBG for use in automotive fuels
4.	Ministry of Petroleum and Natural Gas	Pradhan Mantri Ujjwala Yojana (PMUY)	<ul style="list-style-type: none"> ➤ Target of providing 8 crore LPG connections has been achieved ➤ To further increase the LPG coverage, with an additional 1 crore LPG connections. ➤ Reduced emissions from households due to cooking ➤ City Gas Distribution Network- adoption of cleaner fuels in the country

5.	Department of Agriculture & Farmer's Welfare	Promotion of Agricultural Mechanization for in-situ management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi	<ul style="list-style-type: none"> ➤ Crop residue management in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi ➤ Machines for in-situ crop residue management are promoted ➤ Subsidies are provided for establishment of Custom Hiring Centres.
6.	Ministry of Road Transport and Highways (MoRTH)	<ul style="list-style-type: none"> i. Voluntary-Vehicle Fleet Modernization Program (V-VMP) ii. Implementation of BSVI emission standards 	<ul style="list-style-type: none"> ➤ Focusing on phasing out older vehicular through the vehicle scrapping policy ➤ Reduce pollution by scrapping vehicles with invalid registration certificates / fitness certificates and improve road safety ➤ Improve fuel efficiency and reduce maintenance cost for vehicle owners ➤ Formalize the informal vehicle scrapping industry and boost availability of low-cost raw materials
7.	Ministry of New and Renewable Energy	Schemes for renewable energy and MSW projects	<ul style="list-style-type: none"> ➤ Promotion of solar power ➤ Focused schemes on bio-gas/ bio-methanation plants for managing organic wastes, Waste to energy plants, etc. ➤ Provide financial incentives for renewable projects.
8.	Ministry of Environment Forest and Climate Change	<ul style="list-style-type: none"> i. National Mission for Green India ii. Nagar Van Yojana 	<ul style="list-style-type: none"> ● Increase forest/ tree cover on forest/ non-forest lands and improve quality of forest cover.
9.	Ministry of Power	<ul style="list-style-type: none"> i. National Mission on use of Biomass in coal based thermal power plants ii. Implementation of revised emission norms for Thermal Power Plants iii. Phasing out old coal based power plants 	<ul style="list-style-type: none"> ● Address air pollution due to farm stubble burning ● Reduce carbon footprints of thermal power generation ● Uninterrupted electric power supply ● Implementation of FGD in thermal power plants, etc.

Details of schemes implemented in Madhya Pradesh

- (i) National Clean Air Programme for improvement of air quality in non-attainment cities;
- (ii) XVth Finance Commission air quality performance grant in Million-plus cities;
- (iii) Nagar Van Yojana for greening of urban spaces;
- (iv) National Mission for a Green India (GIM);
- (v) Swachh Bharat Mission 2.0 (Urban) for solid waste processing including C&D waste, cleaning of roads and legacy waste remediation;
- (vi) Smart Cities Mission;
- (vii) Atal Mission for Rejuvenation and Urban Transformation (AMRUT 2.0) for creation of green spaces;
- (viii) Urban Transport for promotion of EVs;
- (ix) Faster Adoption and Manufacturing of Hybrid & Electric Vehicles (FAME II) Scheme for promotion of EVs;
- (x) Scheme for 'Special Assistance to States for Capital Investment' for incentivizing State Government to implement Voluntary-Vehicle Fleet Modernization Program;
- (xi) GOBARdhan for converting organic waste to bio gas and fertilizer for use in rural areas.