

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 946
TO BE ANSWERED ON 02.12.2024

Air Pollution in Urban Centres

946. DR. BHOLA SINGH:
SHRI YOGENDER CHANDOLIA:
SHRI RAMVIR SINGH BIDHURI:
SMT. KAMALJEET SEHRAWAT:

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

- (a) whether the Government has taken recent initiatives to address air pollution in urban centres specially in Delhi NCR area and if so, the details thereof and the effectiveness of these measures in improving air quality;
- (b) whether the Government is considering new policies to encourage electric vehicle adoption and reduce vehicular emissions;
- (c) the steps taken by the Commission for Air Quality Management (CAQM) to improve air quality in the National Capital Region and adjoining areas;
- (d) the goals set by the Commission and the present status thereof;
- (e) the current progress of the National Clean Air Programme (NCAP) and its impact on air quality levels in major cities; and
- (f) the details of future targets and steps to strengthen environmental protection and mitigate climate change impacts across the country?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a), (e) & (f):

National Clean Air Programme (NCAP) was launched by Ministry of Environment, Forest and Climate Change (MoEFCC) in January 2019 with an aim to improve air quality in 130 cities (non-attainment cities and Million Plus Cities in 24 States/UTs through implementation of National, State and City level clean air action plans. NCAP envisages reduction in PM10 level up to 40% or achievement of national standards (60 microgram/cubic meter) by 2025-26.

In addition to this, NCAP emphasises on implementation of City Action Plans (CAPs) through the convergence of resources from various Central Government schemes such as Swachh Bharat Mission (Urban), PM e-bus Sewa, AMRUT, Smart City Mission, SATAT, and Nagar Van Yojana, as well as resources from State Govts./ UT administration and agencies like Municipal Corporations and Urban Development authorities.

06 Non-attainment cities (NACs) in Delhi NCR, namely Delhi, Alwar, Noida, Ghaziabad, Meerut and Faridabad are covered under National Clean Air Programme (NCAP) to achieve the air pollution reduction targets through implementation of city action plans. So far, an amount of Rs. 476.04 crore have been provided for implementing air quality improvement measures in these cities. Further, 19 cities which are part of NCR have also been allocated Rs. 150 crore under Environmental Protection Charge (EPC) for implementation of city action plans. All these cities have prepared city action plans.

Measures taken for improvement in air quality including CAQM in Delhi-NCR are enclosed at **Annexure I**.

India as part of updated Nationally Determined Contributions (NDCs), committed to the following for addressing the impacts of climate change:

- (i) To adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development.
- (ii) To reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level.
- (iii) To achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of transfer of technology and low-cost international finance including from Green Climate Fund (GCF).
- (iv) To create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.

India has also prepared its Long-Term Low Carbon Development Strategy (LT-LEDS) to achieve net-zero by 2070.

Apart from the steps taken by CAQM, some of the key steps taken by the Central Government are enclosed at **Annexure II**.

As per the annual performance assessment carried out for 2023-24, 97 cities out of 130 cities have shown improvement in air quality in terms of PM₁₀ concentrations in FY 2023-24 as compared to base levels of 2017-18. 55 cities have achieved reduction of 20% and above in PM₁₀ levels in 2023-24 with respect to the levels of 2017-18. Further, 18 cities conform to national ambient air quality standards in terms of Particulate Matter concentrations during FY 2023-24. Delhi has shown reduction of 14% in PM₁₀ concentrations in 2023-24 as against the levels of 2017-18. Details of air quality improvement of 130 cities are enclosed at **Annexure-III**.

(b) :

To address vehicular emission, Government of India introduced stringent fuel standards leap-frogging from BS-IV to BS-VI fuel standards since 1st April, 2018 in NCT of Delhi and 1st April, 2020 for the rest of the country.

To promote electric mobility in public transport, Ministry of Housing and Urban Affairs (MoHUA) has launched PM e-bus Sewa which provides financial support for deployment of 10,000 e-buses in 169 eligible cities including development or upgradation of bus depot infrastructure and behind-the-metre infrastructure.

Ministry of Heavy Industries (MHI) launched PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme on 29th September, 2024 for promotion of electric mobility in country with an outlay of Rs. 10,900 crore for 2 years which provides subsidies / Demand incentives for e- 2 Wheelers, e-3Wheelers, e-ambulance, e- trucks and other emerging EVs, procurement of E- buses by public transport agencies and installing fast chargers for EVs. Further, Ministry of Heavy Industries (MHI) has notified PM e-Bus Sewa-PSM (Payment Security Mechanism) Scheme through Gazette notification S.O. 4711(E) on October 28, 2024. has an allocated budget of Rs. 3,435.33 crore to support deployment of more than 38,000 electric buses in the country.

Ministry of Finance provided the exemption of Customs duty for import of specified capital goods and machinery required for manufacture of lithium-ion cells for batteries used in electric vehicles.

(c) & (d):

For air pollution abatement and control in Delhi NCR, the Commission for Air Quality Management in NCR and Adjoining Areas (CAQM), has devised a comprehensive policy for air pollution abatement in NCR in July 2022, stipulating sector-specific action points quantifying targets along with timelines and implementation plan by various agencies in NCR States. The policy framework details sector-wise interventions, quantified targets and timelines for various sectors contributing to air pollution.

Graded Response Action Plan (GRAP) for Delhi-NCR to tackle the issue of sudden rise in air pollution levels was revised and published by CAQM. Actions listed for different AQI levels under GRAP are invoked from time to time by CAQM.

In view of the incidences of parali burning and its severe impact on Delhi/NCR air quality, the Central Government has recently revised the rate of Environmental compensation for stubble burning. In this regard, the Commission for Air Quality Management in National Capital Region and Adjoining Areas (Imposition, Collection and Utilization of Environmental Compensation for Stubble Burning) Amendment Rules, 2024 have been notified vide G.S.R. 690 (E) dated 6-11-2024.

Measures taken for improvement in air quality including CAQM in Delhi-NCR

- Environment Compensation Charges introduced for commercial vehicles entering Delhi in compliance of Hon'ble Supreme Court order
- Operationalization of Eastern and Western Peripheral Expressways to divert non-destined traffic from entering Delhi
- Ban on 15-year-old petrol and 10-year-old diesel vehicles as per Hon'ble Supreme Court and Hon'ble NGT orders.
- Installation of VRS system at 3256 petrol pumps in Delhi-NCR in compliance with orders of Hon'ble Supreme Court and Hon'ble NGT.
- 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.
- Directions issued for conversion of brick kilns to zig-zag technology in Delhi and NCR. A total of 3003 out of 4608 brick kilns have converted to zig-zag technology including 1762 kilns in Haryana, 1024 kilns in U.P. and 217 kilns in Rajasthan. Brick kilns not converted to zig-zag technology are not permitted to operate.
- In order to control DG set emissions, CPCB provided funds for retrofitment/ upgradation of DG sets in Govt. hospitals in Delhi-NCR and guidelines have been issued in this regard.
- Ban on use of pet coke and furnace oil as fuel in NCR States since October 24, 2017.
- An approved fuel list is in force in Delhi-NCR w.e.f. 01.01.2023. Industries operating on only PNG or biomass are permitted in NCR, except for specific requirement of other fuels by specific industries owing to technical, technological and process requirements. Out of 7759 fuel based industries in NCR, 7449 have been shifted to approved fuels, with the balance 310 industries under closure.
- Stringent PM emission norms for biomass based boilers have been prescribed for compliance in NCR.
- Ministry of Agriculture & Farmers' Welfare (MoA&FW) in 2018 launched scheme for providing subsidy for purchase of crop residue management machinery and establishment of custom hiring centers (CHCs) in NCT of Delhi and the States of Punjab, Haryana and Uttar Pradesh. Under the said scheme, financial assistance is provided to the farmers for purchase of crop residue management machinery and establishment of custom hiring centers. During 2018-2024, total fund released to Delhi and other states under the said scheme is Rs. 3398.56 crores using which, over 2.7 lakh crop residue machineries have been delivered to individual farmers and CHCs, and over 39,000 CHCs have been established.
- CPCB has framed guidelines for promoting setting up of paddy straw based palletization and Torre faction plants to address the supply chain issues. CPCB has sanctioned 15 plants with capacity of 57.5 TPH.
- Directions issued to DPCC and NCR SPCBs to enforce installation of anti-smog guns and other dust control measures at C&D sites.
- Directions issued for setting up of a "Dust Control and Management Cell" by road owning/maintaining/ construction agencies for monitoring and effective implementation of dust control measures in the NCR.

- Online monitoring mechanism (through web portal) introduced for monitoring compliance of dust mitigation measures for construction sites.
- Directions under Section 5 of the Environment (Protection) Act, 1986 have been issued by CPCB to SPCBs/ PCCs for strict implementation of actions prescribed under stages of GRAP invoked from time to time in view of the deteriorated air quality situation in Delhi-NCR. CPCB has also issued directions under Section 18 (1)(b) of the Air (Prevention & Control of Pollution) Act, 1981 on 18.10.2024 to NCR SPCBs & DPCC for implementation of actions prescribed under GRAP, pertaining to them and other agencies, and submit Action taken report to CPCB.
- Monitoring and enforcement of regulated use of DG sets in Delhi-NCR, only with stipulated emission control devices/systems, as per CAQM's Direction No. 76 dated 29.09.2023 read with addendum dated 22.02.2024. Constant vigil on use of only approved fuels in Delhi-NCR across all sectors, including monitoring & enforcement of compliance of emission norms through inspections and monitoring by CPCB and NCR State PCBs/ DPCC.
- An approved fuel list is in force in Delhi-NCR w.e.f. 01.01.2023. Industries operating on only PNG or biomass are permitted in NCR, except for specific requirement of other fuels by specific industries owing to technical, technological and process requirements.
- Implementation of CAQM's Direction No. 78 dated 19.10.2023 for migration of public transport services especially intercity bus services, to Delhi-NCR, to cleaner modes.
- Completely phasing out diesel auto-rickshaws from the districts of Faridabad, Gurugram, Ghaziabad and GB Nagar latest by 31.12.2024 and to ensure plying of only CNG/ E-Auto in such areas.
- CAQM's Direction No. 79 dated 13.02.2024 was issued to all agencies for issuance of completion certificates / occupancy certificates for C&D projects only after ensuring that no closure order has been issued or in force for the site so as to ensure compliance of dust control/ abatement measures.
- CAQM's Advisory No. 12 dated 14.02.2024 has been issued to all Municipal bodies/ ULBs and all related departments / bodies of the NCR State Govts. / NCT of Delhi to ensure that all prescribed measures towards effective mitigation of dust from C&D projects, which are highly vulnerable to the dust emissions, are incorporated in all the contract documents, agreements etc., including in road construction and maintenance projects.
- Strict implementation of directions related to mandatory registration of construction / demolition projects on plot area >500 sq mtr. on the respective web-portal of the NCR State, besides deployment of anti-smog guns in proportion to the site/area. Punitive measures, including closure directions for non-compliances in this regard.
- CAQM has deputed 40 teams of CPCB officers since December 2021 to conduct incognito inspections of air-polluting industries, C&D sites, DG sets in Delhi-NCR to check the implementation status of pollution control measures and compliance of other provisions of the Air (P&CP) Act, 1981. A total of 17824 units/ entities/ projects have been inspected. Based on these inspections, CAQM has issued Closure Directions in 977 cases and out of these resumption orders have been issued in 769 cases while 116 cases are still under closure and cases of 92 balance units have been transferred to SPCBs / DPCC for final decision
- Since October 2023, Flying Squads are conducting inspection of DG sets in Commercial/Industrial/Residential areas in compliance of CAQM Direction no. 76. As on

07.06.2024, directions for sealing of DG-Sets have been issued for 390 entities against a total of 602 DG sets.

- Directions 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.
- Directions issued by CAQM to Government of NCT of Delhi and State Governments of Haryana, Rajasthan and Uttar Pradesh for migration of public transport services, especially buses in NCR to cleaner modes. All state Govt. bus services between Delhi and any city/town in the states of Haryana, Rajasthan and Uttar Pradesh to be operated only through EV /CNG/BS-VI diesel w.e.f. 01.11.2023.
- During stubble burning season of 2024, 26 teams of CPCB have been deployed as flying squads for assisting CAQM in NCR and adjoining areas for intensifying monitoring and enforcement actions towards prevention of paddy stubble burning incidents Punjab and Haryana.
- CAQM has issued directions for co-firing of 5-10% biomass with coal in thermal power plants located within 300 kms of Delhi, and, in captive power plants of industrial units located in NCR.
- Directions issued by CAQM to State governments of Punjab, Haryana and Uttar Pradesh to strictly and effectively implement revised action plan to eliminate and control stubble burning.

Key steps taken by the Central Government to control pollution:

- i. Emission standards for more than 80 industries have been notified under Environment (Protection) Rules, 1986
- ii. Emission standards recently notified/revised:
 - a) Thermal power plants
 - b) Diesel/petrol/CNG generator sets
 - c) Industrial boilers
 - d) Lime Kilns
 - e) Brick kilns and conversion of zig-zag technology
 - f) Calcinated petcoke industry
 - g) Hot mix plants
- iii. Leapfrogging to Bharat Stage-VI (BS-VI) emissions norms from 1st April 2020
- iv. Vehicle Scrapping Policy, Rules for Registered Vehicle Scrapping Facilities and Automated Testing Stations by MoRTH
- v. Waste management rules for solid waste, plastic waste, hazardous waste, e-waste, battery waste, biomedical waste, 100% ash utilisation by Thermal Power Plants
- vi. Market-based Extended Producer Responsibility (EPR) regulations introduced for waste categories, viz. plastic packaging, e-waste, battery waste, waste tyres & used oil
- vii. 12 identified Single-Use Plastics (SUP) having high littering potential and low utility were banned from 1st July, 2022
- viii. Mandate for utilisation of minimum 5% of crop residue along with coal (pellets/briquettes) in thermal power plants in NCR and adjoining areas
- ix. Categorization of industrial areas as Critically and Severely Polluted Areas (CPAs/SPAs) based on Comprehensive Environmental Pollution Index (CEPI).

Improvement in PM₁₀ concentrations of 130 Cities in FY 2023-24 w.r.t. FY 2017-18				
S. No.	Cities	PM₁₀ concentrations in 2017-18 (µg/m³) (Annual Avg.)	PM₁₀ concentrations in 2023-24 (µg/m³) (Annual Avg.)	Percentage reduction in PM₁₀ concentrations in 2023-24 with respect to the year 2017-18 (%)
1.	Varanasi*	230	73	68
2.	Bareilly	207	80	61
3.	Firozabad	247	102	59
4.	Dehradun	250	109	56
5.	Dhanbad*	315	138	56
6.	Thoothukudi	123	57	54
7.	Nalagarh	146	68	53
8.	Moradabad	222	115	48
9.	Khurja	195	104	47
10.	Trichy*	88	47	47
11.	Kohima	127	68	46
12.	Lucknow*	253	137	46
13.	Kanpur*	227	125	45
14.	Kadapa	75	42	44
15.	Sibsagar	73	41	44
16.	Sunder Nagar	78	44	44
17.	Agra*	202	116	43
18.	Mumbai*	161	94	42
19.	Rishikesh	129	76	41
20.	Parwanoo	66	39	41
21.	Byrnihat	175	104	41
22.	Ahmedabad*	164	98	40
23.	Ghaziabad*	285	172	40
24.	Rajkot*	150	92	39
25.	Jalandhar	178	111	38
26.	Raebareli	145	91	37
27.	Amritsar*	189	119	37
28.	Baddi	174	111	36
29.	Kolkata*	147	94	36
30.	Jammu	157	101	36
31.	Silchar	49	32	35
32.	Jodhpur*	189	124	34

33.	Vijayawada*	91	61	33
34.	Naya Nangal	87	59	32
35.	Dimapur	142	97	32
36.	Khanna	142	100	30
37.	Durgapur	150	106	29
38.	Kurnool	79	56	29
39.	Pathankot/Dera Baba	79	56	29
40.	Vadodara*	133	95	29
41.	Allahabad*	169	124	27
42.	Asansol*	147	108	27
43.	Srinagar	132**	96	27
44.	Hyderabad*	110	81	26
45.	Gorakhpur	150	111	26
46.	Anantapur	78	59	24
47.	Ranchi*	141	107	24
48.	Bangalore*	92	70	24
49.	Akola	111	85	23
50.	Bhilai*	86	68	21
51.	Surat*	130	103	21
52.	Noida	229	182	21
53.	Howrah	139	111	20
54.	Thane	138	111	20
55.	Latur	82	66	20
56.	Nellore	64	52	19
57.	Gajraula	204	167	18
58.	Faridabad*	229**	190	17
59.	Alwar	152	127	16
60.	Chittoor	70	59	16
61.	Kala Amb	118	100	15
62.	Gobindgarh	148	126	15
63.	Amravati	102	87	15
64.	Patiala	106	91	14
65.	Jaipur*	172	148	14
66.	Ongole	65	56	14
67.	Delhi	241	208	14
68.	Chandrapur	118	102	14
69.	Nashik*	82	72	12
70.	Jhansi	109	96	12
71.	Sangli	87	77	11
72.	Devanagere	74	66	11
73.	Kota*	139	124	11

74.	Rajahmundry	85	76	11
75.	Hubli-Dharwad	79	71	10
76.	Jabalpur*	101	91	10
77.	Ujjain	93	84	10
78.	Guntur	66	61	8
79.	Kalinga Nagar	109	101	7
80.	Meerut*	159	149	6
81.	Nagpur*	100	94	6
82.	Eluru	72	68	6
83.	Madurai*	72	68	6
84.	Damtal	55	52	5
85.	Haldia	92	87	5
86.	Anpara	175	166	5
87.	Badlapur	160	152	5
88.	Udaipur	127	121	5
89.	Sangareddy	85	81	5
90.	Chennai*	66	63	5
91.	Ludhiana*	168	161	4
92.	Pune*	102	98	4
93.	Jamshedpur*	135	130	4
94.	Kolhapur	89	86	3
95.	Ulhasnagar	153	149	3
96.	Srikakulam	69	68	1
97.	Kashipur	99	98	1
98.	Talcher	113	113	0
99.	Nalgonda	59	59	0
100.	Bhopal*	112	113	-1
101.	Sagar	73	74	-1
102.	Vizianagaram	72	73	-1
103.	Chandigarh	114	116	-2
104.	Gulburga	55	56	-2
105.	Jalna	99	102	-3
106.	Patna*	172	178	-3
107.	Korba	57	59	-4
108.	Paonta Sahib	84	90	-7
109.	Gwalior*	126	136	-8
110.	Raipur*	70	76	-9
111.	Navi Mumbai	88	98	-11
112.	Rourkela	99	111	-12
113.	Muzaffarpur	147	168	-14
114.	Barrackpore	86	99	-15
115.	Guwahati	103	119	-16

116.	Dera Bassi	88	102	-16
117.	Solapur	81	96	-19
118.	Dewas	83	99	-19
119.	Indore*	82	99	-21
120.	Vasai-Virar*	99	125	-26
121.	Nagaon	82	107	-30
122.	Aurangabad*	75	98	-31
123.	Gaya	79	104	-32
124.	Bhubaneswar	85	114	-34
125.	Jalgaon	70	97	-39
126.	Cuttack	93	129	-39
127.	Nalbari	87	127	-46
128.	Balasore	84	124	-48
129.	Visakhapatnam*	76	120	-58
130.	Angul	97	167	-72

* Cities are funded under XVth Finance Commission air quality grant (Million Plus City Challenge Fund)

** PM₁₀ levels in the FY 2017-18 for Faridabad and Srinagar are not available. PM₁₀ levels of FY 2020-21 for Faridabad and PM₁₀ levels of FY 2018-19 for Srinagar have been considered as a baseline.

Note: Patancheru non-attainment city has been merged with Hyderabad Urban Agglomeration and accordingly revised number of cities covered under NCAP is 130.
