

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 72
TO BE ANSWERED ON 22.07.2024

Air Pollution in Metro Cities

72. DR. BHOLA SINGH:

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

- (a) whether the pollution levels are increasing day-by-day creating alarming situation in the country particularly in Delhi NCR;
- (b) if so, the reaction of the Government thereto including preventive steps being taken in anticipation especially in the winters;
- (c) the details of the present status of pollution levels including the most polluted and the least polluted State in the country;
- (d) whether the Government is planning to engage expert panel for controlling the air pollution in the metro cities of country including Delhi NCR, if so, the details thereof;
- (e) the details of the funds allocated and spent during the last three years, under National Clean Air Programme, State-wise and year-wise; and
- (f) the steps taken by Government to contain air pollution in the country including Delhi NCR?

ANSWER

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

(a) and (b):

Air pollution in Delhi - NCR is a collective result of multiple factors including high level of anthropogenic activities in the high-density populated areas in NCR, arising from various sectors viz. Vehicular Pollution, Industrial Pollution, Dust from Construction and Demolition Project activities, Road and Open Areas Dust, Biomass Burning, Municipal Solid Waste burning, Fires in Landfills, air pollution from dispersed sources, etc.

2023 has recorded the highest number of days in Good-Moderate Air Quality Index (AQI) categories since 2016, except for 2020 (COVID year).

Comparative status of AQI - Delhi from 01 January to 31 December 2016-2023																	
Category	Year	2016	2017	2018	2019	2020	2021	2022	2023	2016	2017	2018	2019	2020	2021	2022	2023
	No. of days	354	365	365	365	366	365	365	365								
Good (0-50)		0	2	0	2	4	1	3	1								
Satisfactory (51-100)		24	45	53	59	96	72	65	60	110	153	158	182	227	197	163	206
Moderate (101-200)		86	106	105	121	127	124	95	145								
Poor (201-300)		120	114	113	103	75	80	130	77								
Very Poor (301-400)		99	89	74	56	49	64	66	67	244	212	207	183	139	168	202	159
Severe (>401)		25	9	20	24	15	24	6	15								

Following a similar trend, average PM_{2.5} and PM₁₀ concentration has decreased since 2016. The comparative PM_{2.5} and PM₁₀ concentration and % reduction is depicted below:

Year	PM _{2.5}		PM ₁₀	
	Average annual concentration (µg/m ³)	Change w.r.t. 2016 (%)	Average annual concentration (µg/m ³)	Change w.r.t. 2016 (%)
2016	135	-	290	-
2017	124	-8%	258	-11%
2018	114	-16%	242	-17%
2019	108	-20%	217	-25%
2020	95	-30%	181	-38%
2021	105	-22%	211	-27%
2022	98	-28%	211	-27%
2023	100	-26%	205	-29%

During winter months, the lower temperature, lower mixing heights, inversion conditions and calm winds lead to trapping of the pollutants in the atmosphere resulting in high pollution in the region. Therefore, deterioration of 'Air Quality Index' is observed in Delhi NCR region, generally, during winter months. To address the deterioration of air quality, actions under 'Graded Response Action Plan' are also imposed based on AQI.

Besides, statutory directions have been issued to the Chief Secretaries of Punjab, Haryana, Uttar Pradesh, Rajasthan and Delhi on 12.04.2024 for "Implementation and review of the updated/revised plan of action for prevention and control of stubble burning in 2024".

Ministry of Agriculture & Farmers' Welfare in 2018 launched scheme for providing subsidy for purchase of crop residue management machinery and establishment of Custom Hiring Centres (CHCs) in NCT of Delhi and the States of Punjab, Haryana and Uttar Pradesh. 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. MoA&FW in 2023 revised guidelines under the scheme to support establishment of crop residue/paddy straw supply chain, by providing financial assistance on the capital cost of machinery and equipment required for Establishment of crop residue/paddy straw supply chain.

Central Pollution control Board (CPCB) has framed guidelines for promoting setting up of paddy straw based palletization and Torre faction 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. 15 plants sanctioned (13 in Punjab, 01 in UP and 01 in Haryana) at cost of Rs. 14.15 crore so far with total annual paddy straw utilization potential of 2.74 lakh tonne.

Commission on Air Quality Management in NCR and Adjoining Areas (CAQM) has also been closely monitoring the mandatory co-firing of stubble/ biomass/ biomass based pellets (an *ex-situ* tool for management of stubble) in Thermal Power Plants (TPPs) located within 300 Km of Delhi and in coal based captive TPPs of NCR. A High-level team comprising members from CAQM, CEA, MoP/SAMARTH also visited/ inspected the TPPs for review of ground situation in this regard.

Further, the Government from time to time has taken up the issue of firecracker bursting with the concerned NCR state Govts and GNCTD and asked to take adequate measures to ensure strict compliances of restrictions/ ban orders passed by Hon'ble Supreme Court/ NGT and State/ UT Governments, as the case may be, in this regard.

(c):

The Air Quality Index indicator in terms of Good Days and Bad Days in 2023 has been analyzed. The 10 cities in 5 States with highest percentage of bad days during 2023 are given at **Annexure – I**. There were 40 cities in 14 states in 2023 which had no bad days list enclosed at **Annexure-II**.

Cities / States are not ranked on the basis of air pollution. However, CPCB has identified Non-attainment cities (NAC) based on ambient air quality data exceeding National Ambient Air Quality Standards with respect to any one of the notified parameters consecutively for five years.

(d):

With a view to abatement and control of air pollution in Delhi / NCR, A Commission on Air Quality Management in NCR and Adjoining Areas (CAQM) has been constituted by enactment of an Act by Parliament for better co-ordination, research, identification and resolution of problems surrounding the air quality index and for matters connected therewith or incidental thereto.

(e):

The details of State and year-wise fund allocation, release and utilization during the last three years under the National Clean Air Programme (NCAP) has been enclosed as **Annexure III**.

(f):

Steps taken by the Government for air pollution abatement in the country including Delhi NCR is provided in **Annexure IV**.

Annexure-I**List of cities with highest percentage of bad days in 2023**

State/UTs	S. No.	City	Good	Satisfactory	Moderate	Poor	Very Poor	Severe	Good Days	Bad Days	Total No. of days	% of bad days
			(0-50)	(51-100)	(101-200)	(201-300)	(301-400)	(>400)				
Assam	1.	Byrnihat-Assam	1	18	71	103	74	10	90	187	277	67.51
Bihar	2.	Begusarai	1	13	53	62	57	30	67	149	216	68.98
Bihar	3.	Chhapra	4	71	78	93	71	7	153	171	324	52.78
Bihar	4.	Darbhanga	0	0	0	1	9	4	0	14	14	100.00
Bihar	5.	Saharsa	19	65	85	69	66	7	169	142	311	45.66
Odisha	6.	Angul	0	3	17	28	16	0	20	44	64	68.75
Odisha	7.	Bhubaneswar	0	13	16	34	2	0	29	36	65	55.38
Odisha	8.	Cuttack	1	11	11	33	5	0	23	38	61	62.30
Uttar Pradesh	9.	Greater Noida	3	36	148	113	52	13	187	178	365	48.77
West Bengal	10.	Barrackpore	1	1	7	17	2	0	9	19	28	67.86

Annexure-II

State/UTs	Sl. No.	City	Go od	Satisfac tory	Mode rate	Po or	Ve ry Po or	Sev ere	Go od Da ys	Ba d Da ys	Tot al No. of da ys
			(0– 50)	(51– 100)	(101– 200)	(20 1– 300)	(30 1– 400)	(>4 00)			
Andhra Pradesh	1.	Anantpur	105	174	30	0	0	0	309	0	309
Arunachal Pradesh	2.	Naharlagun	118	51	0	0	0	0	169	0	169
Assam	3.	Silchar	269	71	0	0	0	0	340	0	340
Assam	4.	Sivasagar	250	98	0	0	0	0	348	0	348
Chhattisgar h	5.	Milupara	68	143	4	0	0	0	215	0	215
Chhattisgar h	6.	Raipur	62	192	108	0	0	0	362	0	362
Karnataka	7.	Bagalkot	300	48	0	0	0	0	348	0	348
Karnataka	8.	Bengaluru	69	259	37	0	0	0	365	0	365
Karnataka	9.	Chamarajana gar	349	11	0	0	0	0	360	0	360
Karnataka	10.	Chikkaballap ur	144	136	66	0	0	0	346	0	346
Karnataka	11.	Chikkamagal uru	182	120	2	0	0	0	304	0	304
Karnataka	12.	Dharwad	40	153	27	0	0	0	220	0	220
Karnataka	13.	Hassan	46	181	10	0	0	0	237	0	237
Karnataka	14.	Hubballi	38	201	114	0	0	0	353	0	353
Karnataka	15.	Kolar	53	69	66	0	0	0	188	0	188
Karnataka	16.	Madikeri	293	46	1	0	0	0	340	0	340
Karnataka	17.	Mysuru	138	216	0	0	0	0	354	0	354
Karnataka	18.	Ramanagara	122	211	19	0	0	0	352	0	352
Karnataka	19.	Shivamogga	111	242	1	0	0	0	354	0	354
Karnataka	20.	Udupi	10	83	34	0	0	0	127	0	127
Karnataka	21.	Vijayapura	292	57	1	0	0	0	350	0	350
Kerala	22.	Eloor	40	174	0	0	0	0	214	0	214
Kerala	23.	Kannur	0	265	5	0	0	0	270	0	270
Kerala	24.	Kozhikode	0	61	1	0	0	0	62	0	62
Kerala	25.	Thiruvananth apuram	242	106	13	0	0	0	361	0	361
Kerala	26.	Thrissur	28	211	75	0	0	0	314	0	314

State/UTs	Sl. No.	City	Go od	Satisfac tory	Mode rate	Po or	Ve ry Po or	Sev ere	Go od Da ys	Ba d Da ys	Tot al No. of da ys
			(0– 50)	(51– 100)	(101– 200)	(20 1– 300)	(30 1– 400)	(>4 00)			
Madhya Pradesh	27.	Damoh	222	91	5	0	0	0	318	0	318
Madhya Pradesh	28.	Maihar	188	97	19	0	0	0	304	0	304
Maharashtra	29.	Ahmednagar	25	54	68	0	0	0	147	0	147
Mizoram	30.	Aizawl	170	75	31	0	0	0	276	0	276
Odisha	31.	Brajrajnagar	31	117	54	0	0	0	202	0	202
Tamil Nadu	32.	Ariyalur	158	112	26	0	0	0	296	0	296
Tamil Nadu	33.	Ooty	132	139	21	0	0	0	292	0	292
Tamil Nadu	34.	Palkalaiperur	49	125	1	0	0	0	175	0	175
Tamil Nadu	35.	Salem	37	124	25	0	0	0	186	0	186
Tamil Nadu	36.	Tiruchirappalli	1	4	1	0	0	0	6	0	6
Tamil Nadu	37.	Tirupur	94	118	13	0	0	0	225	0	225
Telangana	38.	Hyderabad	5	283	77	0	0	0	365	0	365
Uttar Pradesh	39.	Varanasi	130	208	27	0	0	0	365	0	365
Uttarakhand	40.	Rishikesh	160	132	11	0	0	0	303	0	303

Annexure - III**Details of State and year-wise allocation, release and utilisation during the last three years under the National Clean Air Programme****(Amount in Crore)**

S. NO	State	Fund Allocated			Fund Released			Fund Utilized		
		FY 21-22	FY 22-23	FY 23-24	FY 21-22	FY 22-23	FY 23-24	FY 21-22	FY 22-23	FY 23-24
1	Andhra Pradesh	11.48	33.64	55.35	11.48	22.56	49.81	6.27	11.25	44
2	Chandigarh	4.61	10.24	8.94	4.61	6.87	8.05	2.53	2.78	15.79
3	Chhattisgarh	0	2.16	1.88	0	1.94	1.69	6.68	1.83	3.51
4	Gujarat	0	0	0	0		0	6.61	0	0
5	Himachal Pradesh	0.48	3.99	3.54	0.48	3.59	3.19	7.39	1.71	4.21
6	Jammu & Kashmir	12.84	44.83	60.86	12.84	32.5	62.49	10.96	23.34	0
7	Jharkhand	0	0	0	0		0	0.42	0.13	2.21
8	Karnataka	7.32	29.48	30.58	7.32	19.77	27.51	1.19	2.56	8.02
9	Madhya Pradesh	5	13.46	25.72	5	9.75	26.41	8.13	4.8	8.18
10	Maharashtra	11.9	73.15	77.88	11.9	65.83	70.08	27.48	16.47	61.29
11	Odisha	3.64	42.81	22.47	3.64	38.52	20.22	3.32	20.28	34.67
12	Punjab	0	24.04	59.49	0	21.63	53.54	4.11	4.28	25.11
13	Rajasthan	0	20.29	16.76	0	18.26	17.21	11.15	3.32	13.8
14	Tamilnadu	0	4.59	6.05	0	4.13	6.22	0.59	4.68	3.31
15	Telangana	0.79	2.01	4.48	0.79	1.46	4.03	9.66	0.97	1.98
16	Uttar Pradesh	16.31	194.39	200.34	16.31	139.9	180.3	20.64	21.94	138.94
17	Uttarakhand	5.67	24.78	32.42	5.67	22.3	29.19	3.14	4.5	20.3
18	Bihar	4.4	9.78	10.54	4.4	7.09	10.82	6.87	3.26	12.31
19	Assam	0	23.56	19.6	0	24.1	34.2	1.26	10.18	16.84
20	Nagaland	0.93	3.72	6	0.93	3.95	9	1.39	1.38	3.75
21	Meghalaya	0	0.5	3	0	0.45	4.5	1.89	2.3	0.77
22	Delhi	11.25	25.01	9.95	11.25	22.5	8.94	0	7.55	5.05
23	West Bengal	0	10.19	44.15	0	9.17	39.74	3.96	9.78	6.88
	Total	96.62	596.62	700	96.62	476.27	667.14	145.64	159.29	430.92

Annexure IV

Steps taken by the Government for air pollution abatement in the country including Delhi NCR

1. 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.
2. Availability of PNG connectivity in all the 240 industrial areas in NCR. Presently, 217 industrial areas have PNG connectivity. The Commission in association with MoPNG regularly reviews the progress in PNG infrastructure/supply in the remaining 23 industrial areas, which is also likely to be completed by end of 2024.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. Implementation of a standard Schedule issued vide letter dated 06.02.2024 for imposition of Environmental Compensation (EC) Charges by enforcement agencies across all NCR States.
9. 40 teams have been deputed by CPCB since December 2021, to assist CAQM, for conducting incognito inspections of air polluting industries, C&D sites, DG sets in Delhi-NCR to check 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.
10. 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.
11. 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.
12. 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.

13. Directions issued for installation of Online Continuous Emission Monitoring System (OCEMS) in Red category air polluting industries in Delhi-NCR. A total of 572 out of 633 industries have been reported to have installed OCEMS. For remaining units, action is taken by SPCBs/ PCCs as per the provisions of Air (P&CP) Act, 1981 including levy of Environmental Compensation.
14. 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. RECDs have been developed for DG sets of 61-799 kW capacity and installation of RECDs is in progress in Delhi-NCR. In order to control DG set emissions, CPCB is funding retrofitment/ upgradation of DG sets in Govt. hospitals in Delhi-NCR under EPC (Environment Protection Charges) fund.
15. In order to control road dust emissions, CPCB is funding NCR Urban Local Bodies (ULBs) for construction/ repair of roads and procurement of anti-smog guns and Mechanical road sweepers under EPC funds.
16. Ban on 15 year old petrol and 10 year old diesel vehicles as per Hon'ble Supreme Court and Hon'ble NGT Orders.
17. Heavily polluting fuels such as pet coke and furnace oil have been banned in Delhi-NCR, other than few selected industrial sectors, as per Hon'ble Supreme Court Order.
18. Installation of Vapour Recovery System (VRS) at 3256 petrol pumps have been done in Delhi-NCR.
19. Ambient air quality network in Delhi-NCR comprises of 142 ambient air quality monitoring stations (83 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and 59 manual ambient air quality monitoring stations). In Delhi, the air quality network comprises of 40 CAAQMS and 07 manual air quality monitoring stations.
20. A centralized air quality monitoring portal is operated by CPCB wherein, tracking of various information such as hourly PM concentrations, Live Air Quality Data of Monitoring stations and Live Air Quality Index is being carried out.
21. AQI is monitored along with other parameters and is published on the website in the form of AQI Bulletin on daily basis at 4 p.m. Daily Air Quality reports are being shared with CAQM.
22. CPCB has also developed a mobile app i.e. SAMEER, where Real-time Ambient air quality data of various parameters including AQI is also given. Sameer app also facilitates the public in lodging of air pollution related complaints in NCR region and such complaints are assigned to various local agencies. The status of complaints redressal is monitored centrally on the portal.
