GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 83
TO BE ANSWERED ON 04.12.2023

Air Quality Index

83. SHRI ANNASAHEB SHANKAR JOLLE:
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SHRI DHAIRYASHEEL SAMBHAJIRAO MANE:
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SHRI SHRIRANG APPA BARNE:
SHRI RAVNEET SINGH BITTU:
SHRI SUDHEER GUPTA:
SHRI PRATAPRAO JADHAV:

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

(a) the steps taken by the Government since 2019 to improve the air quality of Delhi and the effectiveness of these measures;
(b) whether any studies have been conducted by the Government to find out the reasons for the worsening air quality;
(c) whether Air Quality Index(AQI) has deteriorated in the Delhi-NCR and metro cities across the country during recent time and if so, the details thereof;
(d) whether due to lackadaisical approach of various States, pollution has aggravated resulting in severe pollution and health hazards to people particularly of NCR areas and if so, the details thereof;
(e) whether the Government has issued any directives to the concerned States in this regard and if so, the details in this regard;
(f) whether the Government is aware that the AQI situation is going to worsen post Diwali and if so, the measures taken by the Government to control it; and
(g) whether the Government proposes to launch any awareness campaign among people for refraining from crackers and if so, the details thereof?

ANSWER

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

(a) :
A Commission has been constituted under the Commission for Air Quality Management in NCR and Adjoining Areas Act, 2021 up in accordance with the notification dated 23rd April, 2021 towards better coordination, research, identification and resolution of problems surrounding the air quality index in NCR and adjoining areas and for matters connected therewith or incidental thereto.

The commission for Air Quality Management in NCR & Adjoining Areas (CAQM), since its inception in 2021, undertakes action for the prevention and control of Air pollution in Delhi-NCR & Adjoining Areas which impacts the air quality of the NCT Delhi. The Commission adopting an air-shed like approach has issued a comprehensive policy to curb Air pollution NCR in July 2022 by constituting an expert group. The policy has sector-wise action plan for prevention and control of air pollution in the region by various sectors contributing to air pollution. The Commission has also issued statutory directions and advisories for control of air pollution in NCR from time to time. Since inception the Commission has so far issued 78 directions and 11 advisories, besides executive orders to various agencies concerned in the NCR including State Governments of Punjab, GNCTD, and various bodies of the Central and State Governments in the region. Due to these concerted efforts general improvements in the AQI level has been witnessed in the region.

Graded Response Action Plan (GRAP) was formulated for Delhi-NCR to tackle the issue of sudden rise in air pollution levels which was notified by MoEF&CC in January 2017 on recommendation of Central Pollution Control Board (CPCB) for implementation. A comprehensive review of actions listed under GRAP was carried out by CPCB in 2020 based on actions taken and improvement observed in air quality in recent years. Based on the inputs given by CPCB, the revised GRAP was published by CAQM and further directions were issued for its implementation.

Steps taken for control of air pollution are as following:

1. The CAQM has deputed 40 teams of CPCB officers since December 2021, 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 16037units/entities/ projects have been inspected as on November 24, 2023. Based on these inspections, CAQM has issued Closure Directions in 899 cases and out of these resumption orders have been issued in 708 cases while 132 cases are still under closure and cases of 59 balance units have been transferred to State Pollution Control Boards (SPCBs) / Delhi Pollution Control Committee (DPCC) for final decision.

2. 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 209-799 kW capacity and installation of RECDs is in progress in Delhi-NCR. In order to control DG set emissions, CPCB is also funding retrofitment/ upgradation of DG sets in Govt. hospitals in Delhi-NCR and guidelines have been issued in this regard. Under the said guidelines, 100 % funding support is provided for RECD and dual fuel kit installation while 40% funding support is provided for procurement of new gas based Generator sets.

3. CPCB has issued guidelines/ mechanism for use of anti-smog guns in Construction and Demolition projects. Also, CPCB has published guidelines for dust mitigation measures in handling construction materials and C&D waste.

4. CPCB has framed guidelines for promoting setting up of paddy straw based pelletization and torrefaction plants wherein one-time financial assistance is provided to individual entities/entrepreneurs/ companies for setting up of such plants. A corpus of Rs. 50 crores has been earmarked for utilisation through the guidelines. A total of 10 plants (1 in principle) have been sanctioned so far: 8 in Punjab, 1 in Haryana and 1 in UP.

5. CPCB has also 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.

6. Installation of VRS system at 3256 petrol pumps in Delhi-NCR in compliance with orders of Hon'ble Supreme Court and Hon'ble NGT.

7. Trial study of various new technologies for control of air pollution have been got conducted by CPCB out of which encouraging results were observed in case of Dust Suppressant for control of emissions at construction sites and road dust. Advisory have been issued for use of dust suppressant by road owning and construction agencies in Delhi-NCR.

(b)

As per TERI-ARAI Source Apportionment study of year 2016 published in 2018, contribution of various sources to PM 2.5 and PM 10 levels in Delhi is given below:

Sectors	**$PM_{2.5}$**		**PM_{10}**	
	Winters	**Summers**	**Winters**	**Summers**
Residential	10%	8%	9%	8%
Agricultural Burning*	4%	7%	4%	7%
Industry	30%	22%	27%	22%
Dust (soil, road, and const.)	17%	38%	25%	42%
Transport	28%	17%	24%	15%
Others	11%	8%	10%	7%

***Note**: Industries include power plants (stacks, flyash ponds and coal handling units), brick manufacturing, stone crushers, and other industries. Others include DG sets, refuse burning, crematoria, airport, restaurants, incinerators, landfills, etc. Dust includes sources of natural and anthropogenic origin (soil, road dust re-suspension, and construction activities). Dust is also contributed through trans-boundary atmospheric transport from international boundaries.*

** It is to be noted that the contribution of agricultural burning is not fully accounted for in this study as the monitoring and modelling periods did not include the month of October, when the burning activities are generally at their maximum. Moreover, the sectoral contributions are averaged for the whole modelling/monitoring period, and hence, do not highlight the contribution of agricultural burning, which happens during a certain number of days and cause episodically high pollutant concentrations.*

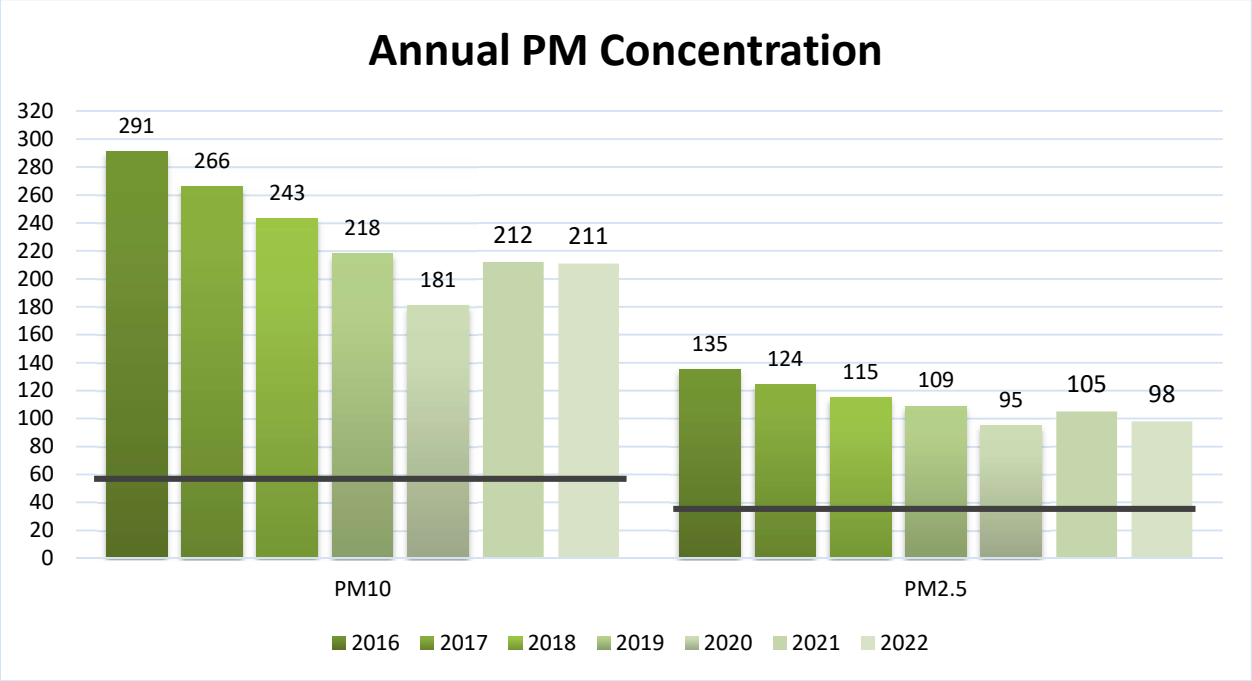
(c)

The data of AQI shows that in all Delhi - NCR cities there are more number of days in Poor, Very Poor and Severe category of AQI during recent time i.e. November month of 2023 except in 4 cities namely Mandikhera, Palwal, Alwar&Khurja as compared to other cities in Delhi - NCR. The air quality during November may be attributed to prevailing meteorological conditions and contribution from local and regional emission sources. The Air Quality Index of Delhi& NCR cities for the month of November, 2023 is presented **Annexure – I.**

However, the data of AQI of major metropolitan cities indicates there are more number of days in Good, Satisfactory & Moderate category of AQI during November month of 2023as compared to city Delhi - NCR.The Air Quality Index of major metropolitan cities for the month of November, 2023 is presented **Annexure – II.**

(d)

Gradually improvement in ambient PM concentration has been observed in Delhi over past few years (2020 was exceptional due to COVID) as indicated below due to various measures undertaken for abatement of air pollution:



(e)

The CAQM has issued statutory directions and advisories for control of air pollution in NCR from time to time. Since inception the Commission has so far issued 78 directions and 11 advisories, besides executive orders to various agencies concerned in the NCR including State Governments of Punjab, GNCTD, and various bodies of the Central and State Governments in the region. Due to these concerted efforts general improvements in the AQI level has been witnessed in the region.

CPCB on November 03, 2023 has also issued Directions under Section 5 of the Environment (Protection) Act, 1986 to Delhi-NCR 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.

(f)

During, post-monsoon and 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.

Special monitoring during Diwali was conducted through SPCBs, PCCs and CPCB Regional Directorates to monitor the ambient air quality parameters, including noise.

Dedicated media corner, Twitter and Facebook accounts have also been created for public outreach. Also, complaint redressal on social media platforms is monitored and redressal status is shared with respective agencies.

Daily AQI status is shared on social media platforms. Various campaigns as well as informative posts related to air pollution, firecrackers, vehicular pollution, stubble burning, sustainable lifestyle, etc. are also posted regularly on social media platforms.

(g)

The SPCBs and PCCs were informed to ensure the implementation of the directions issued by the Hon'ble Supreme Court in the case of WP (C) 728/2015 regarding Prohibition of manufacture, use and sale of prohibited firecrackers, in coordination with the concerned agencies.

An awareness campaign was undertaken by CPCB on social media to inform the public about the harmful effects of firecrackers.

Further, CAQM, 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.

Further, The Commission 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.

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Annexure – I

Number of days in different category of AQI during November, 2023 of Delhi & NCR Cities

S.No	City	Good (0–50)	Satisfactory (51–100)	Moderate (101–200)	Poor (201–300)	Very Poor (301–400)	Severe (>401)	Good Days	Bad Days
1	Delhi	0	0	0	4	17	9	0	30
2	Bhiwani	0	0	4	9	17	0	4	26
3	Charkhi Dadri	0	1	5	12	7	0	6	19
4	Ballabgarh	0	0	3	13	12	0	3	25
5	Manesar	0	0	3	9	18	0	3	27
6	Faridabad	0	0	2	2	17	9	2	28
7	Gurugram	0	0	3	8	16	3	3	27
8	Bahadurgarh	0	0	3	5	18	2	3	25
9	Jind	0	1	2	7	12	6	3	25
10	Karnal	0	1	10	11	6	0	11	17
11	Narnaul	0	0	5	12	10	2	5	24
12	Mandikhera	0	2	19	4	1	0	21	5
13	Palwal	0	3	17	7	1	0	20	8
14	Panipat	0	0	12	9	7	0	12	16
15	Dharuhera	0	0	6	6	18	0	6	24
16	Rohtak	0	1	2	5	20	2	3	27
17	Sonipat	0	1	5	6	12	4	6	22
18	Alwar	0	3	13	13	0	0	16	13
19	Bharatpur	0	0	2	15	12	0	2	27
20	Bhiwadi	0	0	1	8	16	5	1	29
21	Baghpat	0	0	2	10	17	0	2	27
22	Khurja	0	9	14	5	1	0	23	6
23	Bulandshahr	0	1	6	18	4	0	7	22
24	Noida	0	0	2	5	19	4	2	28
25	Greater Noida	0	0	2	5	15	8	2	28
26	Ghaziabad	0	0	2	8	18	2	2	28
27	Hapur	0	0	4	14	11	0	4	25
28	Meerut	0	0	2	5	22	1	2	28
29	Muzaffarnagar	0	0	7	21	2	0	7	23

Annexure II

Number of days in different categories of AQI of major Metropolitan cities during November, 2023

S.No	City	Good	Satisfactory	Moderate	Poor	Very Poor	Severe	Good Days	Bad Days
		(0–50)	(51–100)	(101–200)	(201–300)	(301–400)	(>401)		
1	Kolkata	2	3	14	11	0	0	19	11
2	Chennai	12	14	3	1	0	0	29	1
3	Mumbai	0	6	23	1	0	0	29	1
4	Hyderabad	0	22	8	0	0	0	30	0
5	Bengaluru	7	18	5	0	0	0	30	0