

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION No. 3944**  
TO BE ANSWERED ON 19.03.2021

**Rise in levels of particulate matter**

3944. SHRI PASUNOORI DAYAKAR:  
SHRI VISHNU DATT SHARMA:  
SHRIMATI VANGA GEETHA VISWANATH:  
SHRI MANNE SRINIVAS REDDY:  
SHRI KOMATI REDDY VENKAT REDDY:

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

- (a) whether the particulate matter 2.5 levels in various cities of the country has increased substantially in the recent years and if so, the details thereof;
- (b) whether the particulate matter 2.5 levels worsened in forty three out of ninety nine cities in winter period of 2020 and if so, the details thereof along with the reasons therefor;
- (c) whether the pollution level in such cities showed improvements during the Covid 19 pandemic lockdown period but returned to its previous levels once the lockdown was lifted and if so, the details thereof;
- (d) whether the Government has made any assessment of the contribution of local and regional factors to a city's pollution levels during the last five years and the current year and if so, the details thereof, State/UT-wise including Telangana and Andhra Pradesh;
- (e) the steps taken to reduce pollution and the funds sanctioned/spent for the purpose along with the action taken against violators of pollution norms by residential, commercial and industrial establishments in such cities during the said period?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**  
**(SHRI BABUL SUPRIYO)**

(a) and (b)

Ambient air quality in the country is monitored through a network of manual and continuous ambient air quality monitoring stations. The Ambient air quality trend of PM<sub>2.5</sub> in 5 years (2015-2019) is as follows: 11 cities showed decreasing trend; 79 cities show a fluctuating trend & 9 cities showed an increasing trend.

Air Quality of a city depends on multiple factors, which include meteorology, geography, local sources such as vehicles, industries, etc. and contribution from other regional sources. It is observed that meteorology plays very important role in air pollution. Especially, Northern

part of India, during winters, experiences low wind speeds, low temperatures which results in limited mixing area for dilution and thus contributing towards higher pollution levels.

(c)

It has been reported that COVID-19 related lockdown has resulted in temporary improvement of air quality in many cities due to closure of industries, reduction in number of vehicles plying, lack of construction activities and absence of human activities. The details of the air quality for major cities in India is at **Annexure-I**. However, the improvement in air quality due to widespread restrictions on operation of major activities was an extraordinary situation and, once normality is attained, pollution levels trend, is observed in business as usual scenario.

(d)

As per the several studies conducted across the country the major sources of particulate matter are road dust suspension, vehicles, biomass/garbage burning, construction, industries, etc and the specific details of study is at **Annexure –II**.

(e)

Government of India launched National Clean Air Programme (NCAP), which is very comprehensive plan to tackle air pollution problem across the country in a focussed manner to achieve 20 % to 30 % reduction in PM<sub>10</sub> and PM<sub>2.5</sub> levels by 2024 from 2017 levels. The concerned ministries, State Governments, Research Institutes, Industries, etc. are partner in this effort. Under NCAP, a National Knowledge Network (NKN) has been constituted with a group of experts from IITs and Institutes of Repute as an advisory board for providing capacity building, State of art technologies, suggestions, advisories regarding air pollution mitigation and abatement to CPCB, SPCB and ULBS.

Further, on 15<sup>th</sup> August 2020, the Hon'ble Prime Minister also announced to improve air quality in more than 100 cities. Hon'ble Prime Minister has also launched Air Quality Index (AQI) in 2015, which provides air pollution information and health effect in simple form, which can be understood even by common persons. National Air Quality Standards are also based on health consideration.

Government has taken several steps for mitigation of air pollution such as introduction of BS-VI, expansion of Metro, operationalization of Eastern and Western peripheral expressways, shifting of industries to PNG, waste processing plants, online round the clock monitoring of red category industries, etc. The details of initiatives taken by government to combat air pollution is at **Annexure –III**.

While the Government is making concerted efforts to mitigate air pollution, the citizens should also extend support for the following activities such as:

- Renew your Pollution Under Control Certificate timely.
- Avoid idling of engines.
- Plan your errands to reduce travel time and trips.
- Adopt clean modes of transport.
- Prefer cycles/ e-bikes for short trips.
- Adopt public transportation wherever feasible.
- Avoid Congested routes. Segregate household waste
- Never burn waste
- Take recyclable waste to collection centres & earn from waste too

- Compost leaves and garden waste
- Avoid vigorous sweeping of leaves in gardens/ parks – use wide rakes
- Dispose e-waste responsibly.
- Adopt green good deeds and encourage others too.
- Use public grievance redressal apps to inform air polluting activities to authorities
- Share about ongoing clean initiatives with others

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**Annexure-I**

**Comparative AQI during 25<sup>th</sup> March to 3<sup>rd</sup> May 2019 and 2020 (first two phases of lockdown during 2020) for major cities in India**

City name	No. Of days in Good- Satisfactory AQI during 25 <sup>th</sup> March to 3 <sup>rd</sup> May	
	2019	2020
<b>Delhi</b>	1	22
<b>Faridabad</b>	0	13
<b>Ghaziabad</b>	0	16
<b>Gurugram</b>	2	19
<b>Noida</b>	2	25
<b>Mumbai</b>	34	40
<b>Kolkata</b>	30	31
<b>Bengaluru</b>	5	40
<b>Patna</b>	5	17
<b>Chennai</b>	35	40

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**Sources of Air Pollution**

Source Apportionment - % Contribution to Particulate Matter - TERI ARAI 2018 Study:

Delhi

<b>PM2.5</b>		
<b>Sectors</b>	<b>Winters</b>	<b>Summers</b>
<b>Residential</b>	10%	8%
<b>Agri. Burning</b>	4%	7%
<b>Industry</b>	30%	22%
<b>Dust (soil, road, and const.)</b>	17%	38%
<b>Transport</b>	28%	17%
<b>Others</b>	11%	8%
<b>PM10</b>		
<b>Sectors</b>	<b>Winters</b>	<b>Summers</b>
<b>Residential</b>	9%	8%
<b>Agri. Burning</b>	4%	7%
<b>Industry</b>	27%	22%
<b>Dust (soil, road, const.)</b>	25%	42%
<b>Transport</b>	24%	15%
<b>Others</b>	10%	7%

Other NCR Towns:

PM2.5												
Sectors	Ghaziabad		Noida		Faridabad		Gurugram		Panipat		Bahadurgarh	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
<b>Biomass</b>	18	14	12	13	18	18	15	14	18	17	12	15
<b>Industry</b>	39	34	28	20	34	17	30	13	35	23	27	19
<b>Dust (soil, road, const.)</b>	19	37	20	46	13	46	20	49	12	33	26	39
<b>Transport</b>	18	10	30	15	24	10	27	16	27	22	28	22
<b>Others</b>	6	5	10	6	11	9	8	8	8	5	7	5
PM10												
Sectors	Ghaziabad		Noida		Faridabad		Gurugram		Panipat		Bahadurgarh	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
<b>Biomass</b>	16	12	12	12	18	18	14	13	16	18	11	13
<b>Industry</b>	35	35	25	22	32	18	26	13	31	25	22	16
<b>Dust (soil, road, const.)</b>	31	41	29	47	19	46	30	52	25	31	40	49
<b>Transport</b>	13	8	25	13	21	9	23	14	22	21	21	17
<b>Others</b>	5	4	9	6	10	9	7	8	6	5	6	5

## Annexure-III

### CENTRAL GOVERNMENT INITIATIVES TO COMBAT AIR POLLUTION

Based on air quality data, 122 non-attainment cities (NACs) have been identified under NCAP and City Specific Clean Air Action Plans have been prepared and approved for 111NACs. The other measures taken by the Government includes:

#### i. Vehicular Pollution Control

- Leapfrogging from BS-IV to BS-VI norms for fuel and vehicles since April, 2020.
- Network of Metro rails for public transport are enhanced and more cities are covered.
- Development of Expressway and Highways are also reducing the fuel consumption and pollution.
- Introduction of cleaner/alternate fuels like CNG, LPG, ethanol blending in petrol.
- Faster Adoption and Manufacturing of Electric Vehicles (FAME) -2 scheme has been rolled out
- 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.

#### ii. Industrial Pollution Control

- Stringent emission norms for Coal based Thermal Power Plants (TPPs).
- Pet coke and furnace oil have been banned as fuel in Delhi and NCR States.
- Industrial units shifting to PNG.
- Installation of on-line continuous monitoring devices in highly polluting industries.
- Shifting of Brick kilns to zig-zag technology for reduction of pollution

#### iii. Waste Management

- Notifications of 6 waste management rules covering solid waste, plastic waste, e-waste, bio-medical waste, C&D waste and hazardous waste.
- Setting up infrastructure such as waste processing plants.
- Extended Producer Responsibility (EPR) for plastic and e-waste management.
- Ban on burning of biomass/garbage.

#### iv. Crop Residue Management

- 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 Centres.

##### i. Monitoring of Air Quality

- Expansion of air quality monitoring network under National Air Quality Monitoring Programme (NAMP)

- Implementation of Air Quality Early Warning System for Delhi. The system provides alerts for taking timely actions.

#### **v. Allocation of funds**

- ₹ 336.8 crores have been sanctioned to non-attainment cities under NCAP for initiating actions such as expansion of monitoring network, construction and demolition waste management facilities, non-motorised transport infrastructure, green buffers, mechanical street sweepers, composting units etc.
- ₹2200 crores have been released in the Budget of FY 2020-21 to tackle the burgeoning problem of air pollution. Further, an amount of 2,217 crores has been allocated for 42 urban centres with a million-plus population in this budget for improvement of air quality.
- Rs. 7365.82 Crores was allocated for Solid Waste Management under Urban Swachh Bharat Mission from 2014-2019.
- Under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme Rs. 1436 Crore have been allocated for non-motorised urban transport and Rs. 1768 Crores for green spaces and parks for five years from FY2015-16 to FY2019-20.
- A provision of 1,41,678 crores over a period of 5 years from 2021-2026 has been made for Urban Swachh Bharat Mission 2.0 with a focus on air pollution reduction by effectively managing waste from construction-and-demolition activities and bio-remediation of all legacy dump sites.
- ₹ 1726.67 crores have been released for crop residue management in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi, during the year 2018-21.

#### **vi. Public Participation**

- This Ministry has an ongoing Environment Education, Awareness and among all sections of the society, especially school and college level students and to mobilize people's participation for conservation of environment.
- The Green Good Deeds (GGDs), a social movement, is one of the components of the scheme aimed to inculcate green good habits and behaviour among all sections of the society to take green social responsibility such as minimizing the use of single-use plastic, celebrating Green Diwali, use of public transport, avoid personal car and promoting car pool, regular check-ups to get Pollution Control Certificate (PUC), save electricity, save water, avoid congested lanes etc. The detailed suggestive list of good deeds is available at <http://164.100.160.232/sbhb/GoodDeeds.aspx>