

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**UNSTARRED QUESTION No. 835**  
**TO BE ANSWERED ON 25.11.2019**

**Air pollution due to stubble burning**

835. SHRI NEERAJ SHEKHAR:

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

- (a) whether Government is aware that due to stubble burning, air pollution has reached alarming levels in Delhi and other adjoining States;
- (b) if so, the details thereof;
- (c) whether Government has assessed the situation of stubble burning and air pollution and has taken steps in this regard;
- (d) if so, the details thereof; and
- (e) if not, the reasons therefor?

**ANSWER**

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

(a)& (b) Stubble burning in Punjab, Haryana and Uttar Pradesh is considered as one of the contributors to the poor air quality in Delhi and NCR during the months of October and November along with local sources of emissions like industrial emissions, vehicular emissions, road and soil dust, construction and demolition activities and adverse meteorological conditions during early winter months. As per System of Air Quality and Weather Forecasting and Research (SAFAR) of Indian Institute of Tropical Meteorology, Pune, the estimated impact of stubble burning in PM<sub>2.5</sub> levels of Delhi ranged between 2% (07.11.2019) to 46% (31.10.2019).

There is an overall improvement in air quality of Delhi in 2019, as per Continuous Ambient Air Quality Monitoring Stations (CAAQMS) data, in the period 1st Jan – 19th November in comparison to 2016. The number of ‘Good’ to ‘Moderate’ days has increased to 175 in 2019 in comparison to 108 days in 2016.

(c) to (e) In order to prevent stubble burning, a new 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’ for the period from 2018-19 to 2019-20 is being

implemented by Ministry of Agriculture and Farmers' Welfare with the total release from the Central funds of Rs. 1178.47 crore.

Under this Scheme, the agricultural machines and equipments for in-situ crop residue management such as Super Straw Management System (SMS) for Combine Harvesters, Happy Seeders, Hydraulically Reversible MB Plough, Paddy Straw Chopper, Mulcher, Rotary Slasher, Zero Till Seed Drill and Rotavators are provided with 50% subsidy to the individual farmers and 80% subsidy for establishment of Custom Hiring Centres(CHCs). The State Governments during 2018-19 have supplied more than 56290 machines to the individual farmers and Custom Hiring Centres on subsidy for in-situ management of crop residue. During 2019-20, it has been targeted to supply more than 46578 machines. Further, extensive Information, Education and Communication (IEC) activities for creating awareness among farmers have been undertaken.

With the efforts of the Government, overall, about 15% and 41% reduction in burning events were observed in 2018 as compared to that in 2017 and 2016, respectively. During 2019-20 season, the total burning events recorded in the three States are 19.2% less than in 2018 till 18th November. UP has recorded 36.8% reduction, Haryana recorded 25.1% reduction, and Punjab recorded 16.8% reduction, respectively, in the current season than in 2018.

The Government is taking all efforts for the mitigation of air pollution in Delhi and NCR. Central Government has taken a number of regulatory measures for prevention, control and abatement of air pollution in the country. A **Comprehensive Air Plan (CAP)** for Delhi NCR has been developed identifying the timelines and implementing agencies for actions delineated. The Central Government has notified a **Graded Response Action Plan (GRAP)** for Delhi and NCR for different levels of pollution. The nature, scope and rigor of measures to be taken are linked to levels of pollution viz. severe + or emergency, severe, very poor, moderate to poor and moderate, after due consideration by authorities concerned. Also, Ministry of Environment, Forest and Climate Change has launched **National Clean Air Programme (NCAP)** in January 2019 to tackle the problem of air pollution in a comprehensive manner with targets to achieve 20 to 30 % reduction in PM10 and PM2.5 concentrations by 2024 keeping 2017 as base year. The plan includes 102 non-attainment cities, across 23 States and Union Territories, on the basis of their ambient air quality data between 2011 and 2015 which includes Delhi, Ghaziabad and Noida of Delhi NCR.

Several initiatives taken by the Government for abatement and control of air pollution are annexed as **Annexure-1**.

\*\*\*\*\*

## **Annexure-1**

Initiatives taken by the Government for the abatement and control of air pollution are as follows.

### **Vehicular Emissions**

- BS-IV standards adopted from 1<sup>st</sup> April, 2017. Leapfrogging from BS-IV to BS-VI fuel standards since 1st April, 2018 in NCT of Delhi, in NCR since October 2019 and by 1st April, 2020 in the rest of the country for both fuel as well as vehicles. About Rs 60000 crore was spent on switching over to BS VI fuels.
- 80% reduction in particulate matter emissions in BS IV heavy duty diesel vehicles with respect to BS III and further 50 % reduction in PM due to BS VI standards with respect to BS IV.
- Operationalization of Eastern Peripheral Expressway & Western Peripheral Expressway in 2018 at a cost of about Rs 17000 crore to divert non-destined traffic from Delhi. About 60000 vehicles are diverted on these roads daily.
- Introduction of cleaner / alternate fuels like gaseous fuel (CNG, LPG etc.), ethanol blending in petrol.
- In Delhi, about 500 new CNG stations have been opened during the last 5 years.
- Use of RFID tags have been made mandatory for commercial vehicles entering Delhi. This has resulted in decrease in traffic congestion at Toll collection/Environmental Compensation Charge collection centres.
- Network of metro has expanded in Delhi NCR with total length of 377 km and 274 stations at a cost of about Rs 70000 crore. It is used by over 30 lakh people every day and due to this about 4 lakh vehicles are avoided on roads, thereby reducing pollution considerably.
- To promote electric vehicles, Faster Adoption and Manufacturing of Electric Vehicles (FAME -2) scheme has been rolled out with an outlay of Rs 10000 crore for 3 years. DHI has sanctioned 300 buses for Delhi and 100 buses for DMRC under this scheme so far.
- 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.

### **Industrial Emissions**

- Stringent emission norms for Coal based Thermal Power Plants(TPPs).
- Badarpur thermal power plant has been closed from 15th October, 2018.
- Pet coke and furnace oil have been banned as fuel in Delhi and NCR States. Import of pet coke to be done by industries using it as a feedstock/in process across the country.
- Out of about 4700 industrial units in Delhi – NCR, about 2600 units have shifted to PNG.
- Installation of on-line continuous (24x7) monitoring devices in all red category industries in Delhi and NCR. 503 industrial units in Delhi- NCR have installed it out of about 599 units.
- Revision of emission standards for industrial sectors from time to time. SO<sub>x</sub> and NO<sub>x</sub> standards for boilers have been introduced.
- About 2800 brick kilns have been shifted to zig-zag technology in Delhi and NCR. Only brick kilns with zig zag technology can operate in Delhi and NCR.

### **Crop Residue Management**

- In order to prevent stubble burning, a new 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’ for the period from 2018-19 to 2019-20 is being implemented by Ministry of Agriculture and Farmers’ Welfare with the total outgo from the Central funds of Rs. 1151.80 crore (Rs. 591.65 crore in 2018-19 and Rs. 560.15 crore in 2019-20).
- The State Governments during 2018-19 have supplied more than 56290 machines to the individual farmers and Custom Hiring Centres on subsidy for in-situ management of crop residue. During 2019-20, it has been targeted to supply more than 46578 machines.
- With the efforts of the Government, overall, about 15% and 41% reduction in burning events were observed in 2018 as compared to that in 2017 and 2016, respectively. During 2019-20 season, the total burning events recorded in the three States are 19.2% less than in 2018 till 18th November. UP has recorded 36.8% reduction, Haryana recorded 25.1% reduction, and Punjab recorded 16.8% reduction, respectively, in the current season than in 2018.

#### **Solid Waste**

- Notifications of 6 waste management rules covering solid waste, plastic waste, e-waste, bio-medical waste, C&D waste and hazardous wastes issued in 2016.
- Ban on burning of biomass/garbage.
- 3 Waste-to-Energy (W-t-E) plants are currently operational in Delhi with a total capacity of 5100 Tonnes Per Day (TPD) generating 52 MW.
- A 200 TPD waste to compost plant is also operational in Delhi.
- Bioremediation and biomining of landfill sites have also been undertaken in Delhi.
- Number of mechanised road sweeping machines has been increased significantly and presently 60 machines are deployed for cleaning of roads in Delhi.

#### **Construction and Demolition (C&D) Activities**

- SoPs and notification regarding dust mitigation measures for construction and demolition activities have been issued.
- Three C&D waste processing plants with 2650 TPD capacity are operational in Delhi. About 2 lakh ton of end products have been used this year till August.

#### **Monitoring**

- Notification of National Ambient Air Quality Standards in 2009 and launch of National Air Quality Index in 2015.
- Ambient air quality is monitored at 793 locations covering 344 cities in 28 States & 7 Union Territories (UTs) across the country under National Air Quality Monitoring Programme (NAMP). Under NAMP, PM<sub>2.5</sub> is monitored at 274 locations covering 132 cities.
- Implementation of Air Quality Early Warning System for Delhi in October, 2018 in association with Ministry of Earth Sciences (MoES). The system provides timely alerts to implementing agencies for facilitating proactive actions.

#### **Technical Interventions**

- Pilot projects were deployed in Delhi for evaluation of air pollution mitigation technologies:
- ✓ Ambient air purification through Wind Augmentation and Purification Units (WAYUs) for pollution abatement at traffic intersections and Pariyayantra filtration units on 30 buses was evaluated. Though minimal improvement in ambient air quality was observed, however, WAYU may be explored for providing improved air quality at localised levels.

- ✓ Application of dust suppressant -The effectiveness of the dust suppressant lasted up to 6 hours after which it had to be reapplied. About 30% reduction in dust concentrations was observed up to 6 hours. Advisory has been issued to State Boards to use dust suppressant.
- Research projects are being carried out by CPCB in collaboration with premier institutions like IIT, NEERI, etc. under Environment Protection Charge (EPC) funds.
- Lack of certification system of ambient air quality monitoring instruments in India was identified. A certification scheme has been established in collaboration with National Physical Laboratory (NPL).
- Regular engagements with technical bodies and experts have been undertaken for knowledge sharing.

\*\*\*\*\*

## Annexure-A

## Comparative Air Quality Index Status of DELHI and major NCR Towns for October 2019

Date	Delhi	Faridabad	Gurugram	Ghaziabad	Noida
01-Oct-19	93	46	NA	85	82
02-Oct-19	90	NA	65	82	118
03-Oct-19	136	NA	76	184	177
04-Oct-19	100	NA	83	108	116
05-Oct-19	98	117	72	109	102
06-Oct-19	127	101	81	135	136
07-Oct-19	130	NA	98	162	144
08-Oct-19	112	102	78	119	114
09-Oct-19	173	150	122	186	175
10-Oct-19	211	NA	171	225	193
11-Oct-19	216	250	190	264	262
12-Oct-19	222	248	175	263	252
13-Oct-19	270	253	198	320	310
14-Oct-19	252	263	205	277	273
15-Oct-19	270	293	240	308	297
16-Oct-19	304	300	287	339	326
17-Oct-19	284	245	279	298	283
18-Oct-19	248	214	258	270	243
19-Oct-19	161	256	219	169	167
20-Oct-19	238	243	185	269	250
21-Oct-19	249	213	201	284	260
22-Oct-19	207	161	174	236	210
23-Oct-19	242	258	195	285	246
24-Oct-19	311	NA	294	335	319
25-Oct-19	284	260	280	303	284
26-Oct-19	287	259	239	303	280
27-Oct-19	337	323	299	395	358
28-Oct-19	368	358	372	396	397
29-Oct-19	400	387	368	446	439
30-Oct-19	419	404	365	478	450
31-Oct-19	410	402	341	482	452

NA- AQI not available on that day

Category	
Good	(0-50)
Satisfactory	(51-100)
Moderate	(101-200)
Poor	(201-300)
Very Poor	(301-400)
Severe	(>401)



