

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1344**  
TO BE ANSWERED ON 30.07.2026

**Sources of air pollution in Delhi-NCR**

1344. DR. LAXMIKANT BAJPAYEE:

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

- (a) whether the Supreme Court has pulled up the CAQM for its inability to clearly identify the causes of air pollution in Delhi-NCR and their relative contribution, and directed the Statutory Body to complete a source identification and apportionment exercise;
- (b) if so, the action taken by Government on this observation of Supreme Court;
- (c) the details and clear break up of sources of pollution by various factors identified, with its percentage and WHO safe guidelines of these factors; and
- (d) the manner in which Government plans to realign its strategy to control air pollution in the light of this outcome of source identification?

**ANSWER**

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

**(a) to (d):** A Source Apportionment study for Delhi has been conducted in 2018 titled “Source Apportionment of PM<sub>2.5</sub> & PM<sub>10</sub> of Delhi NCR for identification of Major Sources”.

Hon’ble Supreme Court vide its order dated 06.01.2026 in the Writ Petition (C) No. 13029/1985 directed Commission for Air Quality Management in National Capital Region and Adjoining Areas (CAQM) to identify major causes of Air pollution in Delhi-NCR.

In pursuance to the Hon’ble Supreme Court’s directions, CAQM has published a report of the Air Quality Experts on ‘Identification of the causes for worsening AQI in Delhi-NCR’. As per the study, the following sources within NCR and beyond have been identified for contributing to PM<sub>2.5</sub> concentrations in Delhi:

| Source                                                                                                          | Winter Range (%) | Summer Range (%) |
|-----------------------------------------------------------------------------------------------------------------|------------------|------------------|
| Transport                                                                                                       | 19-24            | 18-21            |
| Industry<br>(includes TPPs)                                                                                     | 8-10             | 9-15             |
| Dust<br>(Road, Soil and Construction & Demolition activities)                                                   | 10-18            | 25-31            |
| Biomass Burning (includes Municipal Solid Waste, residential, crop-residue burning)                             | 17-23            | 11-14            |
| Secondary Particulate<br>(transformed from gaseous emissions from Transport, Industries, Biomass burning, etc.) | 24-28            | 16-19            |

World Health Organisation (WHO) Air Quality Guidelines serve as only a guidance document and these are recommended values for air pollutants to help countries achieve air quality. However, countries prepare their air quality standards based on geography, environmental factors, background levels, socio-economic status and national circumstances.

To address issue of air pollution in NCR and adjoining areas, CAQM has identified important sectors having a major contribution to air pollution in the region. All NCR States have prepared short term and long-term action plan for control of air pollution covering sectoral interventions relating to vehicular pollution, road and construction dust, industrial emissions, waste management and stubble burning. The Government regularly reviews and monitors the actions taken to address air pollution including stubble burning related issues in Delhi-NCR and adjoining areas which requires "Whole of Government" and "Whole of Society" approach.

Details of various steps taken by the Government to address air pollution in Delhi-NCR are provided at **Annexure-I**.

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## **Annexure-I**

### **Details of various steps taken by the Government to address air pollution in Delhi-NCR**

#### **Industrial pollution**

- Industries have been mandated in Delhi NCR to use only approved fuels for all the sectors w.e.f. 01.01.2023.
- NCR State Pollution Control Boards and DPCC were also directed to constitute adequate number of teams to carry out inspection of industries in NCR to ensure enforcement of CAQM directions.
- To improve the availability and reliability of electricity, all the concerned DISCOMs operating in Delhi-NCR have been directed to ensure uninterrupted reliable power supply to ensure minimization of DG Sets usage.
- Industries have been mandated to comply with revised emission norm of 50 mg/Nm<sup>3</sup> for industrial units across the National Capital Region (NCR) targeting 17 categories of highly polluting industries, red category (medium and large) air-polluting industries, food/food processing units, textile industries with boilers/thermic fluid heaters, and metal industries with furnaces, w.e.f. 01.08.2026 for large and medium industries, and w.e.f. 01.10.2026 for all other industries.

#### **Vehicular pollution**

- For mitigation of air pollution from vehicular sources, concerned State Governments and GNCTD have been advised the following measures:
  - Fast-tracking adoption of cleaner mobility services by Motor Vehicles across the sectors.
  - Effective implementation and compliance of the new PUCC regime with the Central Motor Vehicles (Amendment) Rules, 2021 dated 14.06.2021.
  - Challaning of visibly polluting/overloaded/invalid PUC in Delhi NCR.
  - Develop dedicated mechanisms to continuously monitor and take steps to ensure smooth traffic management.
  - Emphasizing use of Cleaner Fuels and Electric Mobility for Public transport. Enhancement of last-mile connectivity linked with the metro stations.
  - Setting up of EV Charging infrastructure in Delhi-NCR.

#### **Construction and demolition waste management**

- Remote monitoring of dust control measures at construction and demolition sites (construction area having 500 square meters and above) in NCR through a web-portal and installation of antismog guns, spraying of water mists and dust suppressants, dust screens at construction sites, ensuring transportation of waste through covered vehicles etc.
- Deployment of adequate numbers of anti-smog guns in proportion to the area under construction for all C&D projects in NCR.
  - At least 1 for a total construction area between 5000 – 10,000 sqm.
  - At least 2 for a total construction area between 10,001- 15,000 sqm.
  - At least 3 for a total construction area between 15,001- 20,000 sqm.
  - At least 4 for a total construction area above 20,000sqm.
- SPCBs/PCCs and local bodies have been given statutory power to file a complaint/prosecution before jurisdictional judicial magistrate, in case of gross violations of

directions / orders in respect of dust / air pollution control and mitigation measures at construction sites.

- Municipal Corporations / Development Authorities in Delhi-NCR have been mandated to establish adequate C&D waste collection, storage and processing facilities with at least one collection point per 5 km × 5 km grid.
- Building Plan approving authorities shall obtain a declaration of estimated demolition waste for projects ≥200 sq. m. where demolition is involved. Project proponents have been mandated to deposit demolition waste at designated facilities and obtain a receipt before commencing construction, and CC/OC issuing authorities shall verify such receipt prior to approval.

### **Road dust control**

- Policy Document of the CAQM outlines a comprehensive set of actions to mitigate road dust pollution and improve air quality. Actions envisaged in Policy Document of the Commission are as under:
  - Identification of hotspots of road dust
  - Paving of roads and roadsides
  - Greening of central verges and roadsides
  - Deployment of mechanized road sweeping machines(MRSMs)
  - Scientific disposal of dust in designated sites
  - Sprinkling of water on roads
  - Use of dust suppressants on roads
  - Deployment of anti-smog guns (ASGs)
  - Relaying and extensive repair of roads and potholes
- Road owning agencies have been mandated to ensure regular monitoring and enforcement of the dust mitigation measures and set up Dust Control and Management Cells (DCMCs) to implement these measures.

### **Agriculture residue management**

- For the prevention of crop residue burning in the NCR region and Punjab, CAQM has issued a framework for prevention and control of stubble burning, including measures like in-situ crop residue management, ex-situ utilization of paddy straw in various applications, enforcement and IEC activities. Based on the said framework, the State Governments of Punjab, Haryana and UP have prepared State-specific action plans.
- CAQM issued directives & advisories to establish an ecosystem and robust supply chain mechanism to boost ex-situ utilisation of straw for tackling the problem of stubble burning.
- Thermal power plants located within 300 km of Delhi have been mandated to for co-firing of biomass pellets (up to 5 to 10%). Similar direction has also been issued to coal based Captive Thermal Power Plants in the NCR.
- CAQM directed the State Governments of Punjab and Haryana to mandate use of paddy straw-based bio-mass pellets / briquettes in all brick kilns located in the districts beyond NCR, as one of the means towards elimination of the practice of open paddy stubble burning, aiming for 50% co-firing of paddy straw based pellets/ briquettes with a target of at least 20% w.e.f. 01.11.2025, 30% w.e.f. 01.11.2026, 40% w.e.f. 01.11.2027 and 50% w.e.f. 01.11.2028;
- Central Pollution Control Board (CPCB) has framed Guidelines for grant of one-time financial support under Environment Protection Charge funds for establishment of pelletization and Torrefaction plants to promote utilisation of paddy straw.

- Critical gap funding of Rs. 801.32 crore has been provided to 6 Delhi-NCR cities (Alwar, Noida, Delhi, Faridabad, Ghaziabad and Meerut) under NCAP and fund of Rs. 63.25 crore has been provided to 19 other NCR cities for air quality improvement measures.
- 32 pelletisation plants have been sanctioned so far (25 in Punjab, 07 in Haryana) at a cost of Rs. 34.72 crore. Total production capacity of 32 sanctioned plants is 137 TPH and these are expected to utilise 6.36 lakh tonnes paddy straw annually for production of 4.93 lakh tonne pellets.

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