

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION NO. 3107
TO BE ANSWERED ON 19.03.2026

Causes of air pollution

3107. SHRI SANT BALBIR SINGH:

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

- (a) whether Government acknowledges that air pollution in major metropolitan cities and industrial clusters is largely a year-round, man-made problem driven by industrial emissions, thermal power plants, construction activities, road dust and increasing vehicular pollution rather than merely a seasonal phenomenon;
- (b) the sector-wise contribution of industries, thermal power plants, transport, construction and other sources to overall air pollution levels in major cities during the last five years; and
- (c) whether any updated source-apportionment studies have been conducted and if so, the key findings thereof?

ANSWER

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

(a) to (c): Air pollution is a collective result of multiple factors including high level of anthropogenic activities 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. Area specific geographical factors like lower temperature, lower mixing heights, inversion conditions and stagnant winds lead to trapping of pollutants also impact the intensity of pollution in the specific region.

To identify various factors contributing to air pollution and prioritise the air quality improvement measures under city action plans under NCAP, Source Apportionment (SA) studies have been carried out in major cities under National Clean Air Programme (NCAP) including Delhi. Based on the Source apportionment (SA) studies conducted across various cities, it was observed that major contributors to PM₁₀ concentrations include road dust and construction activities (14–58%), vehicular emissions (10–33%), industrial sources (8–34%), and waste/biomass burning (8–29%).

Details of Source apportionment studies and dominant sources of air pollution in major cities are enclosed at **Annexure-I**.

Annexure-I**Source apportionment studies and dominant sources of air pollution in major cities**

Cities	Dominant sources contributing to PM₁₀ levels
Ahmedabad	<ul style="list-style-type: none">• Dust (Road dust, Construction dust, Resuspended/Wind blown dust),• Residential/Domestic• Industry (including power plants),• Transport
Bangalore	<ul style="list-style-type: none">• Dust (Road dust, Construction dust, Soil)• Transport
Delhi	<ul style="list-style-type: none">• Dust (Road dust, Construction dust, Resuspended/Wind blown dust),• Transport
Mumbai	<ul style="list-style-type: none">• Dust (Resuspended Road dust/Wind blown dust),• Industrial Emission/Fossil fuel combustion
Kolkata	<ul style="list-style-type: none">• Dust (Road dust, Construction dust, Resuspended/Wind blown dust),• Residential• Transport
Surat	<ul style="list-style-type: none">• Dust (Road, Soil & Construction)• Industry/Power Plant
Hyderabad	<ul style="list-style-type: none">• Road Dust• Industries
Chennai	<ul style="list-style-type: none">• Industries including Power plants• Domestic/residential sources
Pune	<ul style="list-style-type: none">• Road Dust, Construction Dust• Fossil Fuel Combustion/Industrial Emission• Vehicular Emissions
