

## Air Pollution in Delhi

Every year during the onset of winter Delhi's air quality begins to fall.

- Air pollution in India is estimated to kill 1.5 million people every year. It is the fifth largest killer in India.
- According to air quality data compiled by the World Health Organisation (WHO), Delhi is the world's most polluted city.
- According to the WHO, India has the world's highest death rate from chronic respiratory diseases and asthma. Air pollution also impacts the environment through reduced visibility, acid rain, and formation of ozone at tropospheric level.

## Reasons for Deteriorating Air Quality of Delhi

- Stubble Burning: National capital shares its border with the states of Haryana and Uttar Pradesh.
   One of the main reasons for increasing air pollution during the month of October-November is crop burning by the farmers in these states.
  - Farmers burn rice stubbles in Punjab, Haryana and Uttar Pradesh. It is estimated that
    approximately 35 million tonnes of crop are set afire by these states. The wind carries all
    the pollutants and dust particles, which have got locked in the air.
- **Vehicular Emission:** Delhi has more than 9 million registered vehicles. The Central Pollution Control Board (CPCB) and the National Environmental Engineering Research Institute (NEERI) have declared vehicular emission as a major contributor to Delhi's increasing air pollution.
- **Weather:** During the winter season, dust particles and pollutants in the air become unable to move. Due to stagnant winds, these pollutants get locked in the air, resulting in smog.
- **High Density:** With more than 11000 people per square kilometer, Delhi is among the most densely populated cities in the world. Over-population adds up to the various types of pollution.
- Lack of Infrastructure: In India, investment in public transport and infrastructure is low which leads to congested roads, and hence air pollution.
- Construction Activities and Open waste burning: Large-scale construction in Delhi-NCR is another culprit that is increasing dust and pollution in the air. Delhi also has landfill sites for dumping of waste, burning of waste in these sites also contributes to air pollution.
- Thermal Power Plant and Industries: Industrial pollution and garbage dumps are also increasing air pollution and building-up smog in the air.
- **Firecrackers:** Despite the ban on cracker sales in 2017, firecrackers were a common sight in Diwali. It is the major reason for smog in Delhi after Diwali.
- **Diesel generators:** A large number of housing societies and businesses resort to using diesel generators as alternate for power supply during cuts. Diesel generators contribute approximately 15 percent to the city's air pollution.
- **Dust Storm from Gulf countries:** During the smog in the year 2017, the dust storm from Gulf countries was also the reason which enhanced already worse condition.

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## Steps were taken by the government to tackle pollution

- To tackle Stubble burning
  - The government is giving subsidy to farmers for buying Turbo Happy Seeder(THS) which is

- a machine mounted on a tractor that cuts and uproots the stubble and also drill wheat seeds.
- Punjab and Haryana procure stubble and straw for biofuel plants and in the waste-toenergy power generation plants.
- Graded Response Action Plan(GRAP):
  - The <u>government has implemented GRAP</u> to tackle with the rising pollution in Capital. It includes the measures like shutting down Badarpur Thermal Power Plant and a ban on construction activities.
- Recently, the government has also launched a pollution forecast system for New Delhi.
- The central government released the National Air Quality Index (AQI) for public information under the aegis of the Central Pollution Control Board.
  - AQI has been developed for eight pollutants— PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulfur dioxide, ozone, and carbon monoxide.
- The April 2020 deadline for the country to implement BS-VI (Bharat Stage-VI is the Indian equivalent to Euro VI) grade fuels was advanced for Delhi to April 1, 2018, because of the extremely high levels of air pollution in the city.
- Construction of Eastern and Western Expressways for by-passing non-destined traffic to Delhi.
- A ban on burning of leaves/ biomass in Delhi.
- Prohibition on the entry of overloaded and non-destined trucks in Delhi and imposition of 'Green Tax'
- Out of 2800 major industries, 920 industries have installed on-line continuous (24x7) air pollution monitoring devices; others are in process of installation.

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