

Topic: For 'A Breath' of Fresh Air

Thick smog has enveloped New Delhi since the Diwali festival, as the Capital witnessed the worst spell of smog in a season on Sunday. The air quality has been "severe" as pollution levels touched a new high. Levels of particulate matter finer than **2.5 micrometers (PM2.5) crossed the 900 mark** in some areas, recording **almost 15 times the safety limit**. Environmentalists said Delhi is facing an emergency situation and the AAP government has introduced a set of measures that include closing down schools for 3 days and shutting down the Badarpur power plant for 10 days.

What is smog?

A weather expert said that for a 'cloud' causing low visibility to qualify as smog, there should be enough pollution, smoke, and moisture in the air. The **smoke and other particulate matters combine with fog** when there is high humidity and low temperatures to form smog.

What is causing this pollution?

The smog, since Diwali, has been relentless due to certain weather conditions such as **low wind speed, lack of vertical wind and lower temperatures**. Winds usually blow the pollutants and particulate matter away, helping to clear up some of the smog. But with no winds, the pollutants remain stagnant in the air. This was exacerbated by a unique wind phenomenon that blew most of the smoke emanating from various parts of northern India towards New Delhi. The spike in pollutants during the festival season has primarily been attributed to **vehicular traffic, smoke from firecrackers, and the burning of post-harvest paddy stalks** in neighbouring states. "This is visibly the worst pollution spell that we have witnessed in the city so far. We will have to wait for the weather conditions to play up. The temperature is dipping and the mixing height, which means the dispersion of pollution particles in the air, is low. This is making the pollutant particles float in the air," said Anumita Roychowdhury, executive director, Centre for Science and Environment (CSE).

What is the impact of air pollution on health?

Many people said that the thick smog left **bitter taste in the mouth and eyes watering**. Hospitals have reported a rise in cases of **respiratory distress**, with elderly and children the worst hit. "There have been a large number of people in our pulmonary out-patient department with cough and breathlessness, without previous history of respiratory illness," said Professor GC Khilnani of the All-India Institute of Medical Sciences (AIIMS). Particulate matter is tiny dust particles that can be absorbed in lungs and blood tissues, and trigger respiratory and cardiac problems.

What can we do to stay safe?

As the government mulls over ways to curb pollution, Delhi residents are being forced to find ways to safeguard themselves. Wear masks. Masks -- available at prices ranging from **Rs 90 to up to Rs 2,200** -- can be meant for one-time use and the high-priced ones with air filters claim to stop over **99 per cent of the pollutants** from entering the user's nostrils. Install air purifiers. Air purifiers are expensive but an ASSOCHAM survey has said that there has been a jump of nearly 50% in the demand for air purifiers in Delhi-NCR in last four days.

Topic
Introduction

What are the measures proposed by the government?

The urgent measures announced by chief minister Arvind Kejriwal include **shutting all schools — private and public — for 3 days**, a move that the Aam Aadmi Party government was forced to take after saying it was not necessary earlier in the week.

Other steps include:

- Another round of **odd-even initiative**
- Shutting down **Badarpur coal plant for 10 days**
- **Five day ban** on all construction and demolition in the city
- **Water sprinkling** of roads
- **Five-day ban on diesel generators**, except at places such as **hospitals and cell phone towers**

The Delhi government has also asked the Centre to consider cloud seeding, a process that induces artificial rain that can help settle pollutants and clear the smog. The efficacy of the process is, however, debatable.

Are the measures enough?

A look at the pollution control measures taken by the Delhi government last year suggests that a number of steps, which otherwise should have continued at regular intervals, have only been reintroduced or re-packaged. Environmentalists too are unimpressed with the directives, saying they believed the steps are a repetition of last year's action plan. Bhargav Krishna from the Public Health Foundation of India asked why the government did not act earlier, when the situation could have been controlled. Moreover, none of the measures introduced by the government are considered **viable long-term options**.

What can we learn from other cities around the world?

China's capital Beijing too reels under heavy winter smog as the country switches to **coal-fuelled central heating and releases more pollutants in the air**. But a newspaper said China has launched a **crackdown on heavy vehicles** that failed to meet emission standards. Beijing also plans to create **ventilation corridors** by connecting the city's parks, rivers and lakes, highways with green belts and low building blocks that will allow the air to flow and blow away smog. Delhi can also learn from cities such as London and Los Angeles that have battled deadly smogs in the past, but have taken measures to combat the situation.

Read further:

<http://timesofindia.indiatimes.com/india/Crop-fires-had-70-share-in-Delhis-peak-air-pollution-says-govt-scientist-Gufran-Beig/articleshow/55301918.cms>

<http://www.firstpost.com/india/delhi-pollution-govt-ignored-iit-kanpur-study-evacuation-may-be-an-alternative-option-say-experts-3092402.html>

<http://www.thehindu.com/opinion/editorial/solutions-after-the-delhi-smog/article9316083.ece>

<http://www.thehindu.com/opinion/op-ed/delhi-and-pollution-for-a-breath-of-fresh-air/article9316090.ece>