

Illustration: Ragini Singhal, AIS Gurugram 43, X B



# SMOG STORY

**O**bscuring our vision, causing numerous respiratory problems, while also contributing to soil and water pollution, the devil named 'smog' has been a looming threat to both human health and our natural environment, enveloping our city and casting its darkest-ever shadow over us. **Yashvi Goyal, X B & Rajbir Singh, XI A, AIS Gur 43, bring you the once-upon-a-time of this not-so-happily-after.**

## THE CHOKING REALITY

Delhi's AQI has persisted in the 'severe' category, occasionally steering to 'very poor'. Recent readings went as high as 400. NASA's alarming images of toxic smog blanketing New Delhi and adjoining areas have been doing rounds on the internet, showing a thick, gray layer of smog that is visible from outer space.

Schools in New Delhi had to be closed down for nearly two weeks owing to the increase in pollution levels.

A recent study suggests that residents of Delhi may lose up to eight years of their lives as a result of inhaling toxic smog.

Paediatric departments in the city have witnessed a 30-40% spike owing to respiratory illnesses alone.

## THE HAZY CAUSES

Stubble burning has been attributed as one of the most significant causes of the smog. The Indo Gangetic Plane witnesses burning of paddy stubble to make way for sowing of wheat, a major Rabi crop. Given the tight window between the two crops, farmers often resort to this harmful yet expeditious method of stubble removal. SAFAR's estimates reveal that stubble burning contributed as high as 25% to the

pollution levels in the week following November 2, 2023. In previous years, this number has skyrocketed, going as high as 40%.

The transport sector is yet another significant contributor to Delhi smog. Nitrogen dioxide – a key component of smog is mostly released by vehicular emission. The average nitrogen dioxide levels are up by 60% when compared to the same period last year. In fact, certain high traffic locations have witnessed a four time jump.

## THE GOVT STEPS IN

Latest in Delhi government's arsenal to fight smog is anti-smog guns. Featuring the largest water tank capacity yet, with 17,000 litres, it can operate seamlessly for 3-4 hours, minimising downtime. Further, it comes backed with accelerated movements that allow the cannon to ensure maximum coverage. And that's not all, these anti smog guns are equipped with 30 nozzles, each discharging 1.5 litres of water per minute, resulting in coverage of



70 km in two shifts.

A smog tower to the tune of 25 crore INR was installed in Connaught Place last year. Howbeit, most studies have found them to be ineffective. A recent report by IIT Kanpur suggests that in the best case scenario, the smog tower can bring down the pollutants by

18%, and this impact too is limited to the adjoining areas. The farther away one is from the tower, the lesser the impact. Besides, high maintenance costs of these towers make them a less viable solution.

Cloud seeding or the phenomenon of inducing artificial rain has been deployed by the authorities to provide relief from the hazy situation. The technology involves use of substances like silver iodine to induce precipitation. However, this move too has limited impact given the fleeting relief it offers and high costs involved. Several reports suggest that the cost of seeding 100 square kilometres could be as high as 10 million INR.

The city has been witnessing extensive water sprinkling, whereby, 18 water tankers/trolleys with capacities ranging from 5,000 to 10,000 liters of

**WHAT:** Smog is when descending heated air traps the cooler air below, in the process creating a stagnant layer, where all the pollutants accumulate.

**WHEN:** Witnessed every year at the onset of winter months. It extends usually between the months of October to mid February.

**WHERE:** Northern India, mostly the Indo Gangetic plain. Worst affected states include Delhi, Uttar Pradesh and Haryana.

water have been deployed. As they sprinkle water along the roads, they tend to bring down heavy particulate matter floating in the air. These tankers make use of STP (sewage treatment plant) water.

Comprehensive awareness campaigns have been educating the common people about the health risks caused by air pollution and the precautionary measures they could follow to stay safe. It also includes the promotion of green transport systems, conservation of energy, and endorsement of appropriate waste management practices. Several programs have been launched to sensitise the masses. The SA-MEER app provides live air quality data and allows the public to submit complaints against air pollution incidents. Centralised air quality data collection provides real-time status updates, and the CPCB website facilitates the crowd-sourcing of ideas and proposals, fostering a collective effort to enhance air quality in Delhi-NCR.

## THE ME FIRST SOLUTIONS

Wear masks at all times. Experts suggest wearing a three layered mask, with two layers of cotton mask and a silk layer in the middle for additional protection.

Health professional recommend sipping on tea, in particularly green tea as it comes packed with antioxidants that can strengthen the lining of the lungs. Ginger tea, kahwa and chamomile tea are some suggestions to boost immunity.

Getting adequate amount of sleep further strengthens the immune system, enabling it to fight various chronic respiratory issues caused by the toxins present in smog.

