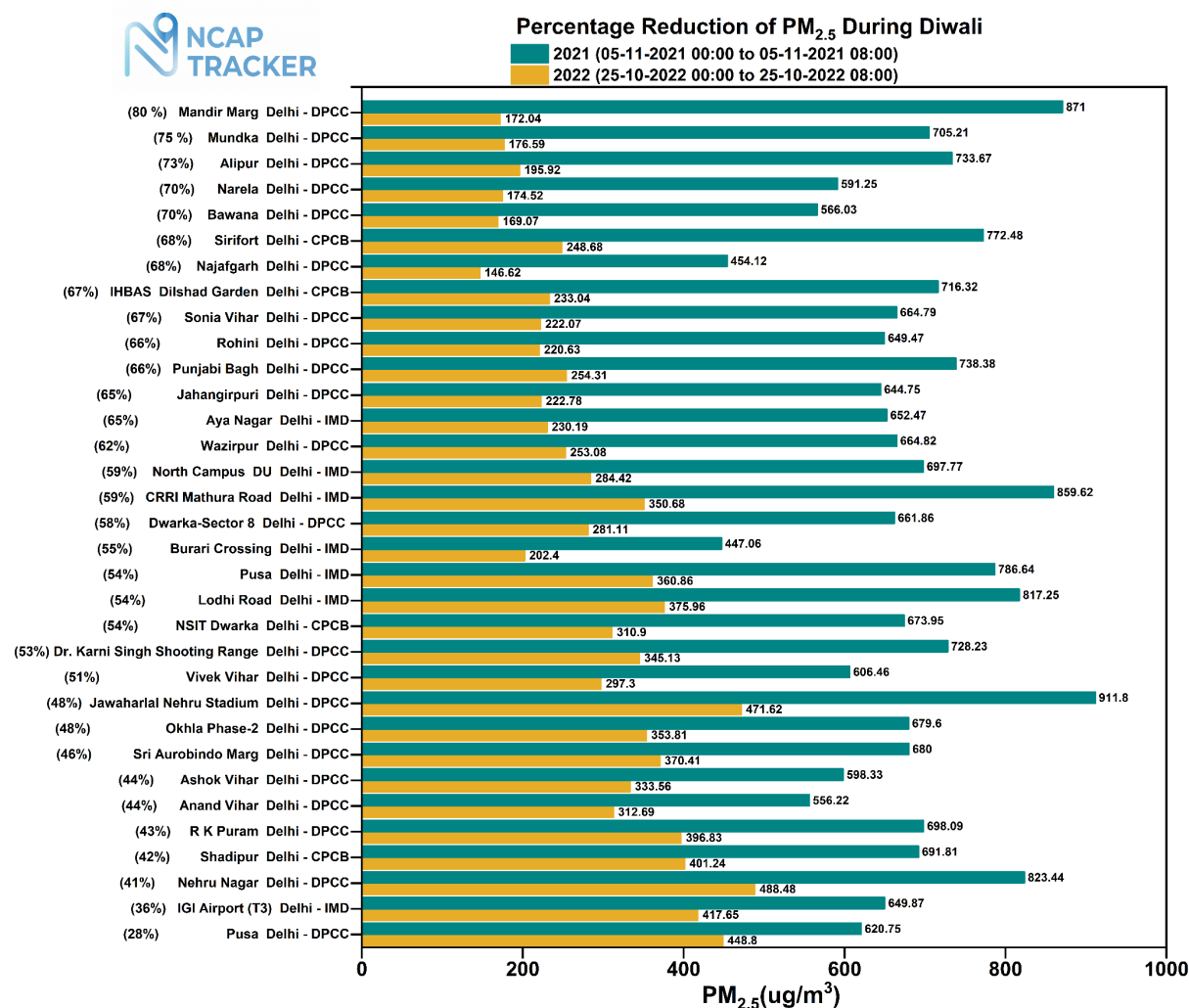


## Delhi records lower PM 2.5 levels on the day after Diwali, but it continues to be above safe limits: CPCB data

*'Meteorological factors play a key role in helping city breathe easy this year'*

**October 25, 2022:** Each year, air pollution levels spike in the Indo-Gangetic Plain on the day after Diwali with grey skies and hard-to-breathe air. This results from several meteorological factors, the stubble burning in neighbouring states and increased local emissions due to the firecracker use.

Analysis by the [NCAP Tracker](#) of data from CPCB's 33 monitors in Delhi showed that PM 2.5 levels in the capital city this year were lower than in 2021 but continued to be above the daily safe limits of 60 ug/m<sup>3</sup>. Data for four monitors was missing and hence has been excluded from the analysis. The highest PM 2.5 levels of 448.8 ug/m<sup>3</sup> in the city were recorded at Pusa, Delhi.

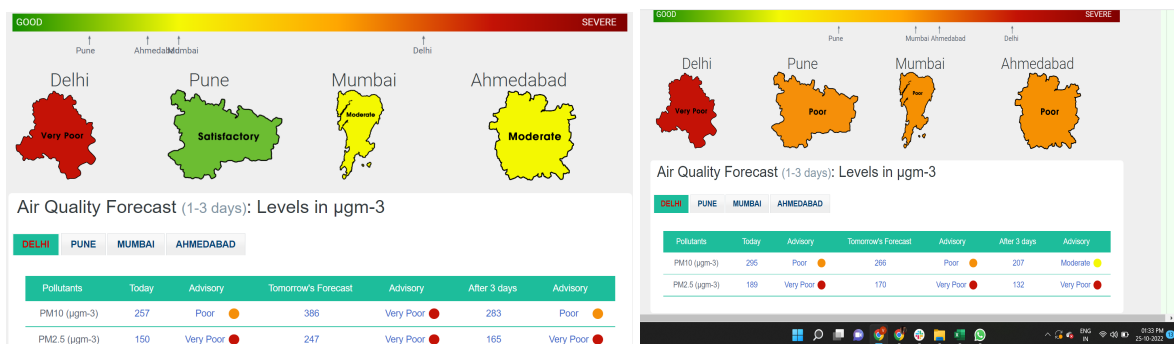


Source: CPCB

However, the air quality index at 8 am on October 25 was higher than its corresponding day and time last year. According to the CPCB, the average AQI (of all monitoring stations in Delhi) Air Quality Index on the morning after Diwali (October 25) spiked as compared to the morning of Diwali (October 24). The city's AQI was 301 at 8 am on October 24. This deteriorated to 326 at the same time on October 25.

This was higher in comparison to the same days in 2021. On November 4, 2021 (Diwali day), the AQI for Delhi was 320. This improved to 317 on the morning of November 5, 2021. **Please find attached the station-wise AQI at 8 am for Delhi on Diwali day and the day after Diwali in 2021 and 2022.**

According to The System of Air Quality and Weather Forecasting And Research (SAFAR), the PM 10 and PM 2.5 concentration in the city was 257 ug/m<sup>3</sup> and 150 ug/m<sup>3</sup> around 10 am. Around 1.30 pm, this deteriorated to 295 ug/m<sup>3</sup> and 189 ug/m<sup>3</sup>, respectively. **According to the Central Pollution Control Board, daily average safe limits for PM 10 and PM 2.5 are 100 ug/m<sup>3</sup> and 60 ug/m<sup>3</sup>, respectively.**



Source: SAFAR at 10 am and 1.30 pm on October 25, 2022

### PM2.5 levels on the day after Diwali

**2021:** 402 ug/m<sup>3</sup>

**2020:** 300 ug/m<sup>3</sup>

**2019:** 353 ug/m<sup>3</sup>

(Source: SAFAR)

**SAFAR's observations for Delhi around 1 pm on October 25 stated that** the Overall AQI today indicates 'Very Poor' air quality. Fine particles (size < 2.5 micrometer) contribute ~ 64% to PM10. AQI last night did not deteriorate to 'Severe' but remained within 'Very Poor'. Fire counts/emissions over the northwest region (share in PM2.5 ~ 5-6%) and Diwali firecracker emissions appear to have not affected much Delhi's air quality. Local surface winds are moderate today 8-16 km/h, and on 26th, and 27th, calm to 6 km/h (Max Temperature 31-32 deg C; Min 15 deg C) that cause moderate to weak dispersion of pollutants. Peak 'Mixing layer height' during daytime (~1.5 km) leads to moderate vertical dispersion of pollutants. Air quality is likely to further improve on 26th, 27th to Poor.

**Gufran Beig, project director at SAFAR said,** "Around 10 am, the Air Quality Index is hovering between 330 and 360. This is the relatively cleanest Diwali week since 2015. There are four specific

reasons why the Air Quality remained in check and didn't go as bad as in the past five years. The first reason is that the wind direction over the stubble fires, which is northwesterly during this period, changed to southwesterly yesterday. This region doesn't have fires, and hence the contribution of the farm fires is minimal at 5-8%. Because Diwali is earlier in the winter season, the temperatures are warmer, and wind speeds are high at around 9 kmph, the accumulation never reaches the saturation level. The accumulation remained equal to the ventilation, and hence the worse was over at 2 am. During mornings when winds usually become stagnant, it continued to be above 9 kmph so the ventilation was good. The firecrackers, too, seem to be lesser this year."

Meteorologists said the conditions were favourable for the pollution levels to remain in check.

**Mahesh Palawat, Vice President- of Meteorology and Climate Change, Skymet Weather**, said, "We usually see hazardous levels of pollution on the day after Diwali, but this year it hasn't been that bad. While firecrackers contribute to the city's air pollution, the major factor is the weather. This year, the winds and temperatures were favourable. The winds will continue from the northwest over the next few days, and the pollution levels will lower. It will, however, remain in the poor or very poor category."

While the lower levels are welcome, there is a need to reduce the use of firecrackers. **Aarti Khosla, Director, Climate Trends** said, "It's good news from Delhi with significantly lower pollution levels. The crackers ban went up in smoke, but it was the combination of factors - late withdrawal of rains leading to subsequent cleaner air, delayed crop burning and better wind conditions that led to this seemingly improved air quality which we haven't seen in the last 5-6 years. The levels, however, remained above safe limits. If we as citizens reduce use of fire crackers we are not only part of solution but also part of living our civilisational legacy."

### **Factors at play during Diwali this year**

- With rains extending into September and October, the Indo-Gangetic Plains started this winter season with lower pollution levels
- The prolonged rains have delayed crop burning, and a [recent report](#) by the Indian Agricultural Research Institute forecasts that farm fires will increase from October 25, coinciding with Diwali.
- Diwali, however, is in the warmer part of the season, and higher temperatures aid the dispersion of pollutants that are added on Diwali night.
- While NCR has banned the use of firecrackers, Haryana and West Bengal have allowed the sale of green crackers. Punjab and Jharkhand too will allow the use of crackers for two hours on October 24. Bihar has banned the use of firecrackers in some cities, including Patna. The Uttar Pradesh government has not issued any directions.

### **About NCAP Tracker**

NCAP Tracker is a joint project by [Climate Trends](#) and [Respirer Living Sciences](#) to create an online hub for the latest updates on India's clean air policy, the National Clean Air Programme (NCAP). It is designed to track India's progress in achieving the 2024 clean air targets set under the NCAP. The



NCAP Tracker enables this by compiling and evaluating various levels of air quality data and closely tracking the effectiveness of the clean air policy. The tracker compiles and analyses information on air quality and budget allocation that is publicly available or provided by the government of India.