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HIGH OZONE POLLUTION

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

Sparse traffic during the lockdown brought down the levels of particulate matter in Delhi's air.

While particulate matter and nitrous oxide levels fell during the lockdown, ozone — also a harmful pollutant — increased in several cities, according to an analysis by the Centre for Science and Environment (CSE).

Ozone is primarily a "sunny weather problem" in India, said CSE researchers, that otherwise remains highly variable during the year. It is a highly reactive gas; even short-term exposure of an hour is dangerous for those with respiratory conditions and asthma and that's why an eight-hour average is considered for ozone instead of the 24-hour average for other pollutants.

The analysis was based on Central Pollution Control Board (CPCB) data from 22 cities in 15 States in lockdown days considered from March 25 to May 31. It emerged that more than two-thirds of the lockdown days in Delhi-NCR cities and Ahmedabad had at least one observation station that exceeded the standard. In Ahmedabad, the city-wide maximum eight-hour average of ozone exceeded the standard on 43 days; in Ujjain, it exceeded on 38 days.

The city-wide maximum average of ozone in Gurugram exceeded the standard on 26 days — at least one observation station exceeded the standard on 57 days. The city-wide eight-hour maximum average in Ghaziabad exceeded the standard on 15 days, with at least one station exceeding on 56 days. In Noida, Uttar Pradesh, the city-wide maximum average exceeded the standard on 12 days; at least one station exceeded on 42 days. In Delhi, the maximum eight-hour average exceeded the standard on four days, and at least one station exceeded the standard on 67 days.

In Kolkata,the city-wide average of ozone was exceeded on eight days; at least in one station the standard was exceeded on 17 days. Chennai and Mumbai did not register a single day of excess ozone at the city-wide level, but at least one station in both exceeded the standard on 61 days and five days, respectively.

Ozone is not directly emitted by any source but is formed by photochemical reactions between oxides of nitrogen (NOx) and other volatile organic compounds (VOCs) and gases in the air under the influence of sunlight and heat. It can be curtailed only if gases from all sources are controlled.

"This pandemic-led change in air quality has helped us understand summer pollution. Normally, every year, winter pollution is what draws our attention. The characteristics of summer pollution are different: there are high winds, intermittent rains and thunderstorms, and high temperature and heat waves," Anumita Roychowdhury, executive director-research and advocacy, CSE, said.