

Despite drop in emissions, India still world's highest sulphur dioxide producer

Data from NASA places Russia and China next on polluters' list.

October 08, 2020 04:52 pm | Updated October 09, 2020 01:03 am IST - New Delhi

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In 2019, India emitted 21% of global anthropogenic (human-made) SO₂ emissions, nearly double that of second-ranked global emitter, Russia. File (representational image)

For the first time in four years India's sulphur dioxide (SO₂) emissions recorded a significant decline of approximately 6% in 2019 compared to 2018, the steepest drop in four years, according to a report from Greenpeace India and the Centre for Research on Energy and Clean Air (CREA).

However, India continues to occupy the top spot among emitters for the fifth consecutive year.

The report ranks the world's biggest emitters of SO₂, a poisonous air pollutant that increases the risk of stroke, heart disease, lung cancer, and premature death.

In 2019, India emitted 21% of global anthropogenic (human-made) SO₂ emissions — or about 5,953 kilotons a year — nearly double that of second-

ranked global emitter, Russia at 3,362 kt/year. China occupied the third position at 2,156 kt per annum.

Thermal plants

As per the report, the biggest emission hotspots in India, are thermal power stations (or clusters of power stations) at Singrauli, Neyveli, Sipat, Mundra, Korba, Bonda, Tamnar, Talcher, Jharsuguda, Kutch, Surat, Chennai, Ramagundam, Chandrapur, Visakhapatnam and Koradi.

Renewable energy capacity has been increasing in India's power sector, delivering more than two-thirds of the subcontinent's new capacity additions during the FY 2019-20. But most coal plants in India are lacking in flue-gas desulfurization (FGD) technology, which is necessary to scrub emissions clean off sulphur.

“We are seeing a reduction in SO₂ emissions in the top three emitter countries. In India, we're getting a glimpse of how reduction in coal usage can impact air quality and health. In 2019, renewable energy capacity expanded, coal dependency decreased and we saw a corresponding improvement in air quality,” said Avinash Chanchal, Climate Campaigner, Greenpeace India, said in a statement.

“But our air is still far from safe. We must speed up the energy transition away from coal and towards renewables, for our health and economy. While ensuring just transition of energy, with the help of decentralized renewable sources, we need to prioritise access to electricity for the poor,” he added.

Deadlines missed

In 2015, the Ministry of Environment, Forest and Climate Change (MoEF&CC) introduced SO₂ emission limits for coal power stations. But power plants missed the initial deadline of December 2017 for the installation of FGD units. Though the deadline was extended till 2022, as of June 2020 most of the power plants are operating without compliance.

The data on sulphur emissions was sourced from the NASA Ozone Monitoring Instrument (OMI), a satellite-based device, that has been monitoring air quality from space since 2004. The device provides the geographical location and rates of emissions for hotspots for each calendar year. The catalogue is used to group the detected sources into four categories: one natural category (volcanoes) and three anthropogenic categories: power plants, oil and gas, and smelters.