



Press release

## India still lacks national SO<sub>2</sub> emission standards for various steel plant stacks, compromising child health and the economy

*The Bokaro SAIL steel facility, a single plant, is alone linked to an estimated 270 low birthweight births, 280 preterm births, 170 adult deaths, and nearly USD 80 mn in economic costs per annum.*

**New Delhi, 26 February 2026** - India still has no national standards for sulfur dioxide (SO<sub>2</sub>) emissions from steel-producing facilities like sinter plants, mill zones, and refractory material plants, despite all of them being recognised as sources of SO<sub>2</sub> emissions, a major precursor gas in secondary particulate formation (PM<sub>2.5</sub>). Pollutants from steel plants can severely compromise child health in the areas surrounding the facilities and cause significant economic losses, as is indicated by a new health impact assessment (HIA) of a single plant's stack emissions in the financial year 2023 from the [Centre for Research on Energy and Clean Air \(CREA\)](#).

The steel industry is classified as one of the 17 highly polluting industries by India's Central Pollution Control Board (CPCB), with a capacity of almost 200 million tonnes of steel per year and [plans to increase this to 300 million tonnes by 2030](#). India also accounts for [57% of all coal-based steelmaking](#) capacity under development globally.

India's steel sector has also been found to be the [least transparent and most 'shy of public scrutiny'](#) in an assessment scoring 'green-ness' of different industries. In 2014, the CPCB mandated installation of Continuous Emission Monitoring Systems (CEMS) in 17 categories of highly polluting industries including integrated steel plants. However, over a decade later, the implementation of CEMS is highly incomplete, as calibration and regulation remain as major challenges. A [2020 investigative report](#) found that the CEMS data was hardly available in the public domain, several industries were found offline, and there was almost no historical data available for any meaningful analysis — and not much has changed since then.



A single case study can be seen as representative of a nationwide problem — CREA finds air pollutant emissions from the Steel Authority of India Limited (SAIL) Bokaro steel plant in Bokaro, Jharkhand are severely compromising child health in the surrounding region, leading to an estimated 270 low birthweight births, 280 preterm births, and 25 new cases of child asthma in each year of operation. In adults, the Bokaro plant emissions are linked to an estimated 170 deaths due to exposure to PM2.5 and Nitrogen Dioxide (NO2) as well as 290 asthma-related emergency room visits each year.

The plant's emissions can also be linked to approximately 123,000 days of work absences due to air pollution-related health issues. These absences represent lost productivity, disrupted workflows, and reduced economic output across multiple sectors, the costs of which are estimated at approximately USD 79 million (INR 6.4 billion) in 2023.

One of the oldest plants in India, the Bokaro plant uses highly polluting coal and coke. As reported in the plant's compliance reports, only two of the six ducts for sinter stacks have more efficient electrostatic precipitators (ESPs) installed, while the rest only have outdated cyclone dust collectors, making them far more polluting.

*'India's steel output has seen blistering growth in recent years. In the absence of effective emission controls and plans for shifting to clean production routes, this has meant surging emissions of both air pollutants and greenhouse gases. With the technological progress of the past decade, there's no reason for India to follow the model of 'pollute now, clean up later' that has saddled other countries with health and environmental burdens for decades after their industrialisation,'* said Lauri Myllyvirta, Lead Analyst at CREA.

*'Bokaro only serves as one alarming example of the environmental, health, and economic impacts of India's steel plants. The sector's weak pollution standards as well as lack of data transparency and inconsistent data reporting shield it from public scrutiny. As India moves to expand its steelmaking capacity, it is essential that we regulate the sector now before we witness more environmental deterioration and public health damage,'* said Anubha Aggarwal, Analyst at CREA.

-End-



## Contacts

Anubha Aggarwal

Analyst

Centre for Research on Energy and Clean Air (CREA)

[anubha@energyandcleanair.org](mailto:anubha@energyandcleanair.org)

## Note to editors

The publication related to this press release is available [here](#).

All CREA publications can be found here:

[energyandcleanair.org/publications](http://energyandcleanair.org/publications)

## About CREA

The Centre for Research on Energy and Clean Air (CREA) is an independent research organisation focused on revealing the trends, causes, and health impacts, as well as the solutions, to air pollution. CREA was founded in December 2019 in Helsinki and has staff in several Asian and European countries. The organisation's work is funded through philanthropic grants and revenue from commissioned research.

[www.energyandcleanair.org](http://www.energyandcleanair.org)