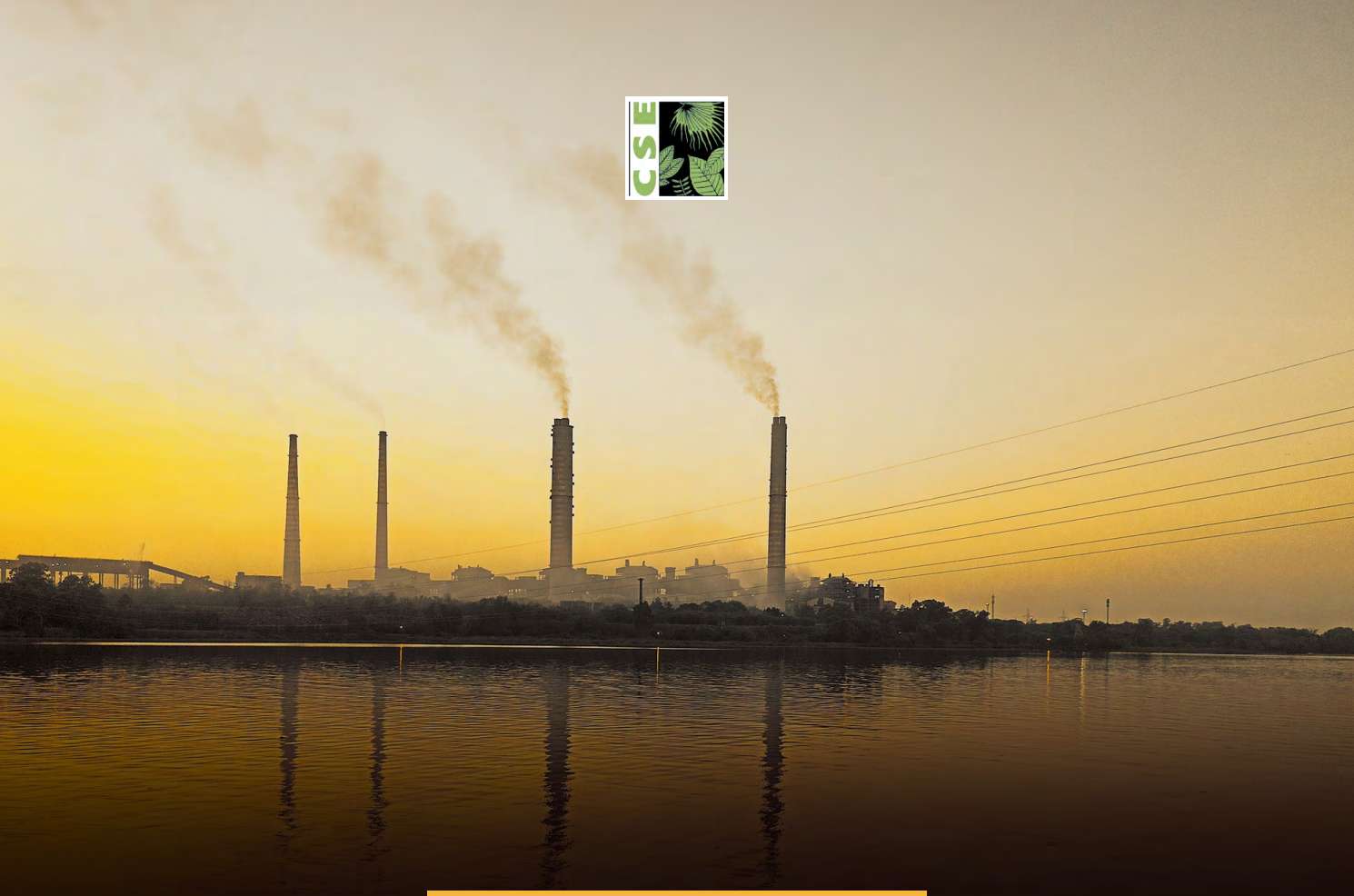


SENSITISATION WORKSHOP ON

INDUSTRIAL BLACK CARBON IN INDO-GANGETIC PLAINS

STRENGTHENING MONITORING AND BUILDING INSTITUTIONAL CAPACITY IN PUNJAB, HARYANA AND CHANDIGARH

Date: **11 December 2026**

Time: **10:00 AM – 3:00 PM**

Venue: **The Piccadily Chandigarh, Sector 22 B, Himalaya Marg, Chandigarh**

Black carbon, commonly known as soot, is increasingly recognised as a super pollutant because of its significant impacts on air quality and climate change. It is generated through the incomplete combustion of fuels such as coal, diesel and biomass, including emissions from industrial activities and open biomass burning. While it is a component of $PM_{2.5}$, black carbon remains largely absent from dedicated monitoring and regulatory frameworks. Its impacts extend beyond air pollution, contributing to climate warming, glacier melt, water insecurity and adverse public health outcomes.

Centre for Science and Environment (CSE), through its study Soot at Site: A Scoping Study of Black Carbon Emissions from Industrial Processes in Indo-Gangetic Plains, has assessed 49,594 industrial facilities across 52 industry types. The study estimates annual industrial black carbon emissions of 4.46 lakh tonnes without emission controls and 36,400 tonnes with existing controls. Punjab accounts for an estimated 44,024 tonnes (uncontrolled) and Haryana 36,986 tonnes (uncontrolled) annually.

The assessment highlights a significant gap between emission estimation and actual measurement. Black carbon is not monitored as a separate pollutant, has no dedicated national standard and is not subject to routine industrial stack measurement. These gaps make it difficult to assess emissions at the facility level and evaluate the effectiveness of mitigation measures.

WHO SHOULD ATTEND?

- Industrial associations and industry representatives
- Industrial boiler operators and MSME representatives
- Brick kiln, rice mill and paper and pulp industry representatives
- State Pollution Control Boards and Committees of Punjab, Haryana and Chandigarh
- Industry experts, consultants and researchers
- Academic, technical and air-quality monitoring institutions

FOR PARTICIPATION AND FURTHER INFORMATION

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Given the industrial significance of Punjab and Haryana, CSE is organising a sensitisation workshop for stakeholders from Punjab, Haryana and Chandigarh to discuss:

- Understanding black carbon and its implications for air quality, climate and public health
- Key findings from CSE's Soot at Site assessment and state-wise emission estimates
- Major emitting sectors, including rice mills, brick kilns, paper and pulp, and chemicals
- Biomass burning as a significant source of black carbon emissions and its implications for regional air quality
- Methods for measuring black carbon in ambient air and industrial emissions
- Emission inventories, emission factors and validation through primary measurements
- Combustion audits, monitoring SOPs and reporting formats
- Technology options, best practices and regulatory opportunities for integrating black carbon into air quality management

WHY PARTICIPATE?

- Gain insights into emerging evidence on industrial black carbon emissions
- Understand the need for dedicated black carbon monitoring
- Learn about monitoring methods, instruments and data requirements
- Identify sector-specific opportunities for emission reduction
- Engage with industry leaders, experts and policymakers
- Contribute to cleaner industrial development in the region

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