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WORKING PAPER

**NET SOCIAL COST OF GHG EMISSIONS BY
LARGE MANUFACTURING FIRMS OF INDIA:
An Approximate Estimation**

Swati Verma

March 2026

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An Approximate Estimation**

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March 2026

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NET SOCIAL COST OF GHG EMISSIONS BY LARGE MANUFACTURING FIRMS OF INDIA: An Approximate Estimation

*Swati Verma**

Abstract: Assessment of social cost of Green House Gas (GHG) emissions using cost-benefit analysis is a complex process, as it is based on various uncertain assumptions. Valuation of social cost of GHG emissions in India is ambiguous presently, and only few studies have calculated SCC for India at country level. This study uses country-level SCC estimates for India estimated by Ricke et al. (2018) and few others to approximately estimate the probable net social cost of GHG emissions for 200 largest manufacturing corporations of India in a recent year 2022-23. GHG emission value of a company is converted to monetary value using country-level SCC value for India to measure its 'total social cost' of GHG emissions. This value is subtracted from 'net private value' created in terms of profit generated by same company to roughly estimate its value of 'net social cost of GHG emissions'. A pre-dominant share of sample had reported GHG emission levels at higher than 10,000 tCO₂e in 2022-23. A majority of sample reported net negative SCC emission value when GHG emissions under Scope 1, 2 and 3 were considered together, with many reporting net negative SCC value of Rs. 1000 crore or higher. The study provides significant insights on probable net environmental impact of largest manufacturing corporations of India in terms of social cost of GHG emissions.

Keywords: Social Cost of Carbon, Social Cost of Greenhouse Gases, Carbon Emission, Manufacturing Sector, Green Transition, Cost-Benefit Analysis, Climate Change

JEL Classification: Q510, Q54, Q580

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Disclaimer: The author shall remain solely responsible for any errors in the study. This paper was presented at the Third National Conference on India's Industrial Transformation: Towards a Manufacturing Strategy to Navigate Global Shifts organized by ISID, New Delhi held from October 29th to 31st, 2025.

For the complete working paper, please contact the author at swati@isid.org.in

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