

Biomass Carbon Emissions from Nickel Mining Have Significant Implications for Climate Action

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Global nickel demand is projected to double by 2050 to support low-carbon technologies and renewable energy production. However, biomass carbon emissions from clearing vegetation for nickel mining are rarely included in corporate sustainability reports or considered in mineral sourcing decisions. Here, we compiled data for 481 nickel mines and undeveloped deposits to show that the footprint of nickel mining could be 4 to 500 times greater than previously reported (depending on the mine site), and thus the environmental impacts of nickel products, including batteries, have been underestimated to date. We found large variation in biomass losses among mines, and, in many cases, these unaccounted carbon emissions were significant relative to other Scope 1 and Scope 2 emissions from nickel extraction and processing. Reporting emissions from biomass losses from mining is key for strategic decision making on where to source nickel needed for effective climate action.