



Indonesia

AT THE CROSSROADS OF MINING, CLIMATE AND HUMAN RIGHTS

Heading off climate catastrophe requires a rapid transition to clean energy, and electrifying the transportation sector is a key component of that transition. Yet electric vehicle (EV) batteries require minerals, and research indicates skyrocketing demand could incentivize irresponsible mining.

Battery-grade nickel supplies have emerged as the biggest obstacle to scaling up EV production. Demand is expected to increase six-fold by 2030, and Tesla CEO Elon Musk has promised a “[giant contract](#)” to any company able to source nickel “efficiently and in an environmentally sensitive way.”

However it's sourced, the odds are good the nickel will come from Indonesia. The country, already the world's largest nickel producer, is poised to

dramatically scale up production with a series of controversial mines and processing facilities that threaten to contaminate an area recognized internationally for its coral reefs, turtles and other endangered species.

Mining is a dirty business with a long track record of human rights abuses and ecological destruction. Unless battery producers and mineral suppliers demand responsibly-sourced minerals, we risk tarnishing the clean energy transition. In order to ensure that our clean energy economy is truly clean — as well as just and sustainable — we must develop a shared commitment to responsible mineral sourcing, recycling, substitution and materials efficiency, coupled with a reduction in overall energy and mineral demand.



INDONESIA

Submarine Tailings Disposal: Dirty, Unnecessary, and Wrong

Investors see mines that dump mine waste into the ocean as increasingly risky, while developers and governments are being forced to slow down plans. That's kept tens of millions of tonnes of mine waste out of the Coral Triangle, at least temporarily.

IN FOCUS: Morowali Industrial Park and Obi Island

Tsingshan Holding Group Co. Ltd., majority owner of the Indonesia Morowali Industrial Park (IMIP), wants to add four facilities to process nickel for electric vehicle batteries at its already massive operation. The company planned to dump up to 25 million tonnes of waste directly into Morowali coastal waters in Central Sulawesi Province every year. This would have made IMIP the largest ocean mine waste dumping site in the world. In late 2020 the submarine tailings disposal permit request was abruptly withdrawn. Harita Group's similar nickel mining project on Obi Island also withdrew plans to dump mine waste into the ocean.

The move, in response to mounting pressure from impacted communities, consumers and electric car companies, is a positive step—and puts the onus on the Indo-

nesian government to transform its informal ocean dumping ban into law. So far, Indonesia is all talk and no action as demonstrated by its passing of regulations in February 2021 allowing ocean dumping.

“We are extremely concerned about the poisonous metal content from dumping mine tailings in the sea entering the marine food chain, accumulating, and consumed by local communities.”

— Pius Ginting, Action for Ecology and People's Emancipation (AEER), Indonesia



Morowali and Obi Island lie within the biodiverse Coral Triangle, home to some of the world's most highly concentrated—and highly endangered—coral reefs. The reefs supply habitat for a number of important commercial and subsistence fisheries valued at the equivalent of nearly US\$50 million. Thousands of families rely directly on these fisheries for their livelihoods. Studies have shown that increased nickel ore in the ocean can damage coral in just four days. Fishermen are already forced to fish far from the coastline due to pollution from the coal-fired power plants used at IMIP.

THE PATH FORWARD: Making Clean Energy Clean, Just & Equitable

Pressure is mounting from consumers and investors alike to ensure that mineral sourcing for EV batteries and other low-carbon technologies is as responsible as possible. We have an opportunity to scale up renewable energy and low-carbon technologies while scaling back our dependence on dirty mining through:

- Greater transparency and due diligence throughout mineral supply chains
- Concentrated effort to reduce mineral demand

Find out more: earthworks.org/campaigns/making-clean-energy-clean

Earthworks' Making Clean Energy Clean, Just & Equitable initiative aims to ensure that the transition to renewable energy sources is built on responsibly and equitably sourced minerals that minimize the need for new extraction and moves the mining industry toward more responsible practices.

Source Minerals Responsibly: When sourcing from mining operations where communities are, purchasers must insist that those operations adhere to stringent international environmental and human rights best-practice standards (such as those developed by the multi-stakeholder Initiative for Responsible Mining Assurance) with independent, third-party assurance

of compliance. Under no circumstances should mining take place, or new operations begin, where those projects are contested by affected people.

Dramatically Scale Up Use of Recycled Minerals: Manufacturers of electric vehicles, renewable energy and battery technologies must dramatically scale up their use of recycled minerals. Policymakers must create incentives for minerals reuse and recycling and requirements for companies to take back their products at the end of their useful lives. Health, safety and protection for workers and communities must be the top priority at recycling operations.

HIGH-PRESSURE ACID LEACHING

Indonesian nickel comes from low-grade laterite ores, which are difficult to concentrate into high-quality nickel products using conventional separation or pyro-metallurgy. As a result, most laterite ore is used in the stainless steel industry. To produce battery-grade nickel from laterite ores, more and more companies are adopting a process known as high-pressure acid leaching. This process is highly toxic, polluting, energy-intensive, and leaves a massive amount of residual material needing disposal.



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