

Backgrounder

Mapping community resistance to the impacts and discourses of mining for the energy transition in the Americas

A report by Environmental Justice Atlas and MiningWatch Canada

Highlights

- The World Bank estimates that more than 3 billion tons of metals and minerals could be required over the next 30 years to power the technologies for the global energy transition. Key critical metals and minerals include copper, lithium, graphite, cobalt, nickel, and rare earths.
- The global mining industry, often supported by host governments, is positioning mining as a “green solution” to the climate crisis. This “green mining boom” is rapidly expanding into culturally and ecologically sensitive areas, increasingly affecting Indigenous and human rights, community livelihoods and the environment.
- Communities, academics, and activists say that an energy transition that heavily depends on mining new materials without considering materials and energy for what, for whom, and at what socio-environmental costs will only reinforce injustices and lack of sustainability that have deepened the climate crisis in the first place.
- Mobilized communities affected by the growing pressure for strategic metals in nine countries of the Americas – Argentina, Chile, Bolivia, Peru, Ecuador, Panama, Mexico, USA, and Canada – have come together with the teams at Environmental Justice Atlas and MiningWatch Canada to document 25 individual cases – mostly related to Canadian and Australian companies – and identify regional trends as mining for the energy transition accelerates.

Photos top to bottom: 1. Indigenous People of the Red Mountain in a prayer walk, Nevada, USA (Credit: Protect Thacker Pass); 2. Protest beside the Esker de Saint-Mathieu-Berry, in front of the Sayona-Authier mine (Credit: CCPE); 3. Pucará Pueblos Catamarqueños in Resistance and for Self-Determination in Antofagasta de la Sierra in Argentina (Credit: Asamblea Pucará); 4. A 2021 protest in Panama City, a sign reads “Sustainable open-pit mining doesn't exist” (Credit: CIAM Panama); 5. Protests in Chumbivilvas, Peru, against Hudbay Minerals (Credit: Derechos Humanos Sin Fronteras - DHSF).



The context

The World Bank estimates that over the next 30 years, more than three billion tons of metals and minerals will need to be mined to power the energy transition. Six key minerals (lithium, copper, graphite, cobalt, nickel, and rare earth metals) will be required in significant quantities to build wind turbines and solar panels and the electric grids that sustain them, as well as electric vehicles and the batteries necessary to decarbonize the transportation sector. Proponents of mining position the industry as a key player in the fight against the climate crisis, claiming that without the metals and minerals that make renewable energy possible, our world has no hope of limiting global warming to even 2 °C. And, proponents say, with technological advances in the mining industry, it's now possible to limit environmental impacts and essentially make mining "green."

Within this narrative, mining is seen as both unavoidable and urgent. However, communities across the world are sounding alarm bells, concerned about the well-documented human rights and environmental costs of mining. Communities are forging alliances to share stories and strategies to push for a just energy transition — one that doesn't further entrench the same extractivist practices that have caused the climate emergency in the first place, nor one in which the health of certain communities is sacrificed to allow for continued over-consumption, largely driven by the Global North.

The map and report

Mobilized communities affected by the growing pressure for strategic metals in nine countries of the Americas — Argentina, Chile, Bolivia, Peru, Ecuador, Panama, Mexico, USA, and Canada — have come together with the teams at Environmental Justice Atlas and MiningWatch Canada to document 25 individual cases and identify regional trends as mining for the energy transition accelerates. A report and an interactive map highlighting these cases is just the beginning of a collective process with communities from around the world and will be in continuous expansion to include additional experiences as mining for the energy transition intensifies.



Protest against lithium mining in Salinas Grandes, Argentina. The sign says "lithium for today, hunger for tomorrow", "respect our territory! lithium mining, get out!" Credit: Fundación Ambiente y Recursos Naturales (FARN)

KEY FINDINGS

A. Metals and minerals for what? From where?

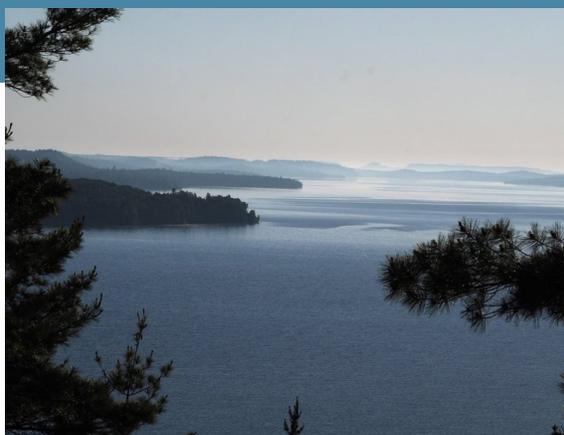
After the construction of electricity grids, replacing conventional cars with electric cars — which require six times the amount of metals and minerals — and an overall decarbonization of the transportation sector will require the largest amounts of metals and minerals of the energy transition. Renewable energies (solar and wind) follow in the material requirements. Mining is itself very energy-intensive. While many metals are required, the six key ones are: rare earth metals, cobalt, graphite, nickel, copper, and lithium. Copper will be the most highly in demand mineral for the energy transition, with approximately 76% of total copper demand (estimated for 2040) going towards the electric grids to support renewable energy.

To better understand where these minerals are currently being mined and where they will likely be mined in the future, it is important to take into account both current production and reserves. The Americas are an important source for all six critical minerals, but especially lithium (a third of actual production and over 70% of world's reserves and resources) and copper (over half of the world's production and reserves). The Americas also hold a significant proportion of the world's known reserves of rare earth metals (about 19%), graphite (about 23%), and nickel (about 26%). Congo and Australia contain over 70% of the world reserves for cobalt.

B. The greenwashing discourse

Myths of “green,” “sustainable” and “climate smart” mining are gaining traction across the world. Companies are painting their mining activities as being part of the solution to the climate crisis, attracting investors by promoting their own Environmental Social and Governance (ESG) factors and promising massive profitability of their projects due to the urgency of transitioning to renewable energy. Companies point to an undersupply of these critical minerals in an effort to show the strategic role they play in filling the gap. Some companies, like Teck Resources, have even signed on to the Paris Agreements, committing themselves to be carbon-neutral by 2050.

Likewise, national governments are rushing to position their countries as sources for these critical minerals, promoting massive investments in mining; many governments from both North and South are emphasizing that these investments in strategic minerals are a key component of their post-COVID-19 economic recovery plan.



The Sayona-Tansim mine threatens Lake Simard, and the animals, vegetation, and ways of life for the Indigenous people of Long Point (Quebec, Canada). Credit: Steeve Mathias.



Mining concessions for the Falchani (lithium) and Macusani (uranium) projects around and on top of the Quelccaya glacier in Puno, Peru. Credit: Derechos Humanos y Medio Ambiente (DHUMA) Puno.

C. Key social and environmental impacts of mining

Large scale mining generates intense socio-environmental impacts and, according to Global Witness, is linked with the highest number of killings of environmental defenders worldwide. Mining projects are encroaching on more and more fragile and biodiverse ecosystems like the Amazon and the Salares, without recognition of the rights of local communities who inhabit these territories — many of whom have lived in these regions for hundreds, if not thousands of years. While companies are marketing these mines as “green,” many mines are the same size and use the same techniques to extract minerals as the large-scale gold, silver, and copper mines that already exist on the continent.

Some additional impacts include:

Impacts on fragile and (un)protected ecosystems that regulate our global climate

Many of the current and proposed mining projects are built in recognized protected areas and biodiversity hotspots. Projects are quickly expanding into the Ecuadorian Amazon and rainforests, glacial areas in Peru, the salt flats in Chile and other Ramsar-designated wetlands in Argentina and connected river systems — areas that play important roles providing fresh water and sustaining flora and fauna. The environmental impacts of mining are felt much beyond the immediate area of the project, affecting entire regions through watersheds, placing biodiversity and species at risk of extreme harm and, in some cases, even extinction. Furthermore, resource extraction can harm the ecosystems that play an important role regulating our global climate, such as the case with the Amazon.

Impacts on water

Mining — particularly for lithium — is a water-intensive activity that can endanger the quality and quantity of water available to communities. In some arid areas, like in Argentina, water shortages are already a reality. While communities face water emergencies, mining operations can exceed the daily water usage of the inhabitants of the region, putting further pressure on already-arid regions and putting at risk the availability of drinking water. Mining is also a source of water pollution. To produce one ton of lithium in the salt flats in Atacama (Chile), 2,000 tons of water are evaporated, causing significant harm to both the availability of water and the quality of underground fresh water reserves

What's left? Waste

Only a small portion of what is mined is valuable metal; the remainder is left behind as mine tailings and waste rock. Worldwide and in the Americas, there is a sustained decrease in the ore grades of mining deposits, which implies that increasing amounts of resources are used to obtain small amounts of metals, leaving an enormous environmental impact including toxic chemicals that have to be treated in perpetuity. The proposed Authier lithium project in Quebec (Canada) seeks to build a 1km long, 225m-deep open-pit mine and generate 60 million tons of mining waste. The proposed Sonora open-pit lithium mine in Mexico will generate 131 million tons of waste over the course of 20 years of production, with 25 million tons of wet tailings.

“The current proposal for an ‘energy transition’ is not a paradigm shift. It repeats the same structures of colonialism and capital accumulation that the mining industry replicates around the world.”

Statement by the Mexican Network of People Affected by Mining (REMA)

Impacts on traditional livelihoods

In places like Salar de Olaroz (Argentina) and Salar de Atacama (Chile), lithium mining is already impacting agricultural lands and local economies. In Bolivia, near the salt flat of Uyuni, local communities are concerned about the negative effects mining may have on tourism and other agricultural activities that sustain their livelihoods, such as the production of quinoa, the raising of llamas, and the harvesting of roots, plants, and other herbs.

Impacts on traditional knowledge and cultural heritage / sacred places

Many of the current and proposed mines are operating in Indigenous territories across the Americas, putting at risk sacred sites and burial grounds, as well as other culturally important areas where communities hunt and gather traditional medicines.

Lack of information and public consultation

Across the documented cases, companies provided little to no information about their projects, preventing meaningful community participation and, in the case of Indigenous communities, violating their rights to free, prior and informed consent. At the same time, many companies and governments are using tactics to divide and intimidate communities to prevent cohesive organizing.

Violence and criminalization

Three quarters of the attacks reported by Global Witness in 2020 were against environmental defenders in Latin America – many of whom were defending their communities from mining projects. Common issues include: a lack of recognition of the rights of communities, their livelihoods and worldviews, as well as other forms of violence, such as direct threats, intimidation, and false charges filed against environmental defenders. Communities also report attempts by the mining industry to co-opt and divide communities. In some cases, the police or military have been deployed to support mining development.

“We understand that all of us must be committed to fighting climate change. Fighting climate change, however, cannot be used as yet another excuse to destroy native land. We cannot protect the environment by destroying it.”

Statement by the Atsa koodakuh wyh Nuwu (the People of Red Mountain)

We need a different kind of energy transition

The voices of grassroots communities, experts, academics, and activists are being ignored in the plans for a global energy transition. A transition that heavily depends on mining new materials without considering materials and energy for what, for whom, and at what socio-environmental costs will only reinforce the injustices and unsustainability that have led us to the climate crisis in the first place. Improved efficiency and recycling of materials are necessary components in the transition, but these strategies alone will not address the growing demand for these materials. Significant reductions in material and energy consumption, particularly in the Global North, are a key component to a just transition.