The following toolkit and resources are meant to support Indigenous leaders, investors, shareholders and other stakeholders to increase awareness of the risk the green economy poses to Indigenous Peoples without their participation and full consideration and integration of their rights in solutions towards a just transition.

The move to a low-carbon economy has been center stage for both government and business for more than a decade. As efforts to address climate change have prompted a switch from fossil fuels to clean energy, the demand for transition minerals, such as lithium, cobalt, copper, zinc, and nickel, has increased exponentially. While the end goal represents a welcome shift in energy consumption, the impact of the increased mining for these resources without the Free, Prior, and Informed Consent of Indigenous Peoples poses a threat to their rights, livelihoods, and territories, and poses great risk of material losses for companies.

Background

Transition mineral mining perpetuates the same problems of fossil fuel resource development under a new name. Operationally, this mining facilitates the energy transition centered around “clean” and “green” energy sources such as batteries, solar, and wind power. But in the pursuit of sustainable energy, companies are perpetuating the unsustainable practices which have violated the rights of Indigenous Peoples for centuries. The production of minerals through traditional mining technology like open pit mines and water-intensive extraction remains the same. It follows that the rising demand for transition minerals is accompanied by increasing reports of human rights violations that uniquely and disproportionately impact Indigenous Peoples. There is no alternative for where this mining can occur. Minerals must be produced where they exist, which is too frequently on or near the lands of Indigenous Peoples.

The impact that the extractive industry has, specifically on Indigenous Peoples, cannot be understated. The Business and Human Rights Resources Centre reported in 2021 that there had been 495 human rights allegations made against all 115 companies involved in transition mineral extraction over a period of ten years. Development occurs on unceded lands without the free, prior, and informed consent of Indigenous Peoples, and can lead to the desecration of sacred places. It also brings an influx of temporary workers leading to violence against Indigenous women and sex trafficking. Other violations include forced migration, the murder of human rights defenders protesting development, and environmental threats to the land, water, and subsistence resources of people already experiencing the frontlines of climate change.
change. These impacts are global and understood and certain to continue if not for a needed shift in the understanding of Indigenous rights.

Statistics & Talking Points

- According to the World Bank, six minerals expected to experience a significant rise in demand as the world transitions to a low-carbon economy include copper, cobalt, lithium, manganese, nickel, and zinc. Over 3 billion tons of minerals and metals will be needed to deploy wind, solar and geothermal power, as well as energy storage, required for achieving a below 2°C future.

- A new World Bank Group report finds that the production of these minerals could increase by nearly 500% by 2050.

- A report from the International Energy Agency forecasts that mineral requirements for clean energy technologies will quadruple by 2040, with electric vehicles and battery storage creating the largest industry demand.

- The rapid increase of mining increases the danger of further displacement and dispossession of Indigenous Peoples.

- Indigenous territories contain significant concentrations of untapped heavy metal reserves around the world. Data shows that in the United States, 97% of nickel, 89% of copper, 79% of lithium, and 68% of cobalt reserves and resources are located within 35 miles of Native American reservations.

- According to the Business and Human Rights Research Center, which tracks 106 companies mining transition minerals, there were 495 human rights allegations of human rights violations over a period of ten years. One-third of the allegations include attacks on human rights defenders.

- Some of the transition minerals are rare earth elements - which are primarily used for EVs and wind turbines. A few of those minerals - Gold, Tin, Tantalum, and Tungsten are also defined as conflict minerals, meaning that their extraction is connected to fueling and funding of the conflicts around the globe, in particular - the conflict in the Democratic Republic of Congo, the deadliest conflict globally since World War II.

- A just transition to a low-carbon economy will require governments, companies, and investors to observe and implement rights enshrined in the UN Declaration on the Rights of Indigenous Peoples (Declaration), including the right to Free, Prior, and Informed Consent (FPIC).

- Indigenous Peoples globally are working to ensure that a transition to a green economy does so while respecting Indigenous lands, livelihoods, and fundamental human rights. Our coalition, called SIRGE (Securing Indigenous Rights in the Green Economy), is building Indigenous power by elevating Indigenous leadership and voices to decision-makers at all levels.

- Circular economy: one of the more overlooked perspectives of this potential crisis is the fact that many of the transition minerals are highly recyclable (see table below); yet in practice - are barely
recycled. According to the International Energy Agency, “recycling can play an important role in relieving the burden on primary supply from virgin materials at a time when demand starts to surge.”

- A just transition to a net zero future must include solutions that are not only mining centered to meet rising demands, but also more sustainable solutions in order to protect the human rights of Indigenous Peoples around the world.

Global Impact Briefs

- In Russia, in May 2020, after mining nickel, copper, cobalt, and platinum without any procedures in place to mitigate the impacts on Indigenous Peoples, Nornickel was responsible for the Arctic’s largest oil spill. 20,000 tons of diesel fuel fouled local rivers and lakes that the Dolgan, Nganasan, Nenets, Evenk, and Enets peoples rely upon for fishing and herding. Furthermore, air pollution caused severe health impacts in both the Taymyr and Kola peninsulas. Elevated copper and nickel concentrations have been found in soils around Nornickel’s smelters. Nornickle did not respect the communities rights to free, prior, and informed consent.

- In northern Chile, Indigenous communities, such as the Aymara community, are threatened by projects emerging in some of the country’s salt flats, such as Maricunga and the Coipasa, by the Canadian company Lithium Chile Inc. The lithium extraction would impact agriculture and livestock, in particular the quinoa crops and llama livestock, as it would prevent access to wetlands and other water sources.

- In Papua New Guinea, the Ramu nickel and cobalt mine forcibly displaced the Indigenous Kurumbukari people from their ancestral homeland. Now, the plant is dumping tens of thousands of tons of toxic waste every day into Basamuk Bay, which is used by 30,000 fishermen for their livelihoods. The mine is owned and operated as a joint venture between the Metallurgical Corporation of China Ltd (MCC) and Conic Metals Corp., a Canadian company focused on electric vehicles and battery storage metals, including cobalt and nickel.

- In Guatemala, the Fenix Nickel Mine on the shores of Lake Izabal, Guatemala’s largest lake, has been mired in violent conflict since it was built on Indigenous land without consent in 1960 during Guatemala’s civil war. In 2007, uniformed mine personnel allegedly gang-raped at least 11 Q’eqchi women after burning their homes to evict them from their ancestral lands. Most recently, in the fall of 2021, Guatemala’s President declared martial law and suspended civil rights in response to a peaceful blockade by Indigenous Q’eqchi community members.

- In Argentina, companies started lithium mining and exploration without securing the Free, Prior, and Informed Consent of Indigenous communities. Now, 33 Kolla and Atacama communities have united in opposing any lithium exploration or extraction on their ancestral lands. Lithium mining would have an impact on their land, water, and livelihoods.
In the United States, multiple tribes are fighting against the development of mines that would cause irreparable damage to their lands and cultural heritage.

- The Menominee Indian Tribe of Wisconsin has been mobilizing against the back40 mine, which would have a detrimental impact on the culture and the long-standing history of the tribe.

- In Nevada, Indigenous community leaders with Atsa Koodakuh wyh Nuwu (People of the Red Mountain) are protesting the Thacker Pass lithium mine, citing the harm it would cause to the Fort McDermitt Paiute-Shoshone Tribe, ancestral burial sites, water resources, and local wildlife like greater sage grouse, pronghorn antelope, and sacred golden eagles.

- Rio Tinto and BHP, have been seeking to build a massive copper mine in Oak Flat, a region of the Tonto National Forest east of Phoenix that is considered sacred by the San Carlos Apache Tribe and other regional Native American tribes, and the list goes on.

**Additional Resources**

*Securing Indigenous Rights in the Green Energy Economy - Summer 2022* | Cultural Survival


*Mineral Requirements for Clean Energy Transitions* | The International Energy Agency

*Transition Minerals Tracker* | The Business & Human Rights Resource Center

*The Role of Critical Minerals in Clean Energy Transition* | The International Energy Agency

*Just Minerals* | EarthWorks

*State Policies Promoting Hybrid and Electric Vehicles* | National Conference of State Legislators

*Climate Smart Mining - Minerals For Climate Action* | The World Bank

*The energy transition needs metals. But it needs social awareness too* | The World Economic Forum

*What’s the Impact of Mining of Indigenous Peoples* | Mining People International

*The Renewable Energy Transition Has Companies Looking Out To Sea* | The Market

*Uncommon Ground: The Impact of Natural Resource Corruption on Indigenous Peoples* | Brookings

These are some of the top industries that use transition minerals and some key indicators about them (via):

| Critical mineral needs for clean energy technologies |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Solar PV        | Wind           | Hydro          | CSP            | Bioenergy      | Geothermal     | Nuclear        | Electricity networks | EVs and battery storage | Hydrogen |
|                 |                |                |                |                |                |                |                  |                             |                  |
| Copper          | Cobalt         | Nickel         | Lithium        | REEs           | Chromium       | Zinc           | PGMs            | Aluminium       |                |
|                 |                |                |                |                |                |                |                  |                             |                  |

Relative importance of minerals for a particular clean energy technology:
- High
- Moderate
- Low

Source: The International Energy Agency

One of the unique traits of transition minerals is that many of them are highly recyclable, as can be seen in the following table (via the Institute of Sustainable future at the University of Sydney):

<table>
<thead>
<tr>
<th>Materials</th>
<th>Al</th>
<th>Cu</th>
<th>Li</th>
<th>Co</th>
<th>Ni</th>
<th>Mn</th>
<th>Dy</th>
<th>Nd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current materials intensity [t/GWh]</td>
<td>220</td>
<td>220</td>
<td>113</td>
<td>124</td>
<td>415</td>
<td>406</td>
<td>0.083 kg/vehicle</td>
<td>0.695 kg/vehicle</td>
</tr>
<tr>
<td>Future technology [t/GWh]</td>
<td>220</td>
<td>220</td>
<td>411</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.083 kg/vehicle</td>
<td>0.695 kg/vehicle</td>
</tr>
<tr>
<td>Current recycling rate [%]</td>
<td>70%</td>
<td>70%</td>
<td>0%</td>
<td>90%</td>
<td>90%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Potential recycling rate [%]</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Note: Current materials intensity based on an assumed market share of a range of LIB technologies: NMC (60%), LMO (20%), NCA (15%), and LFP (5%). Future technology based on introduction of Li-S batteries. Current recycling rate based on a collection efficiency of 100% and recovery rates from various studies. Potential recycling rate based on assumption of 95%.

Via Mining Energy-Transition Metals: National Aims, Local Conflicts | MSCI

Via REPORT DETAILS FREE ENTRY MINING CONFLICTS WITH FIRST NATIONS | Intercontinental Cry
News Items & Further Background

Mining Companies Strike Gold by Destroying Public Lands | In These Times - June 2, 2022

Why indigenous peoples are key to ensuring EV revolution doesn’t run out of road | Reuters - May 31, 2022

Ecuador Court Gives Indigenous Groups a Boost in Mining and Drilling Disputes | The New York Times - Feb. 4, 2022

As Miners Chase Clean-Energy Minerals, Tribes Fear a Repeat of the Past | The New York Times - Dec. 27, 2021

Automakers Have No Unique Policy to Consider Indigenous Peoples’ Rights Despite U.S. Push to Accelerate Electric Vehicle Production | First Peoples Worldwide - Dec. 22, 2021

Tribes Claim BLM Violated Multiple Federal Laws in Permitting Thacker Pass Lithium Mine in Nevada | Native News Online Dec. - 10, 2021

‘Like putting a lithium mine on Arlington cemetery’: the fight to save sacred land in Nevada | The Guardian - Dec 2, 2021

Indigenous mine opponents targeted in raids during state of siege in Guatemala | Mongabay - Nov. 15, 2021

‘Like slave and master’: DRC miners toil for 30p an hour to fuel electric cars | The Guardian - Nov. 8, 2021
Mining holds the key to a green future – no wonder human rights activists are worried | The Guardian - June 27 2021

Mining for lithium, at a cost to Indigenous religions | Energy News Network - June 10, 2021