

Resource Nationalism in Battery Metals: Risks and Mitigation

With continued warfare in Ukraine, conflict in Sudan and tensions between the U.S. and China, the state of international relations appears increasingly volatile. This fractious landscape sits abreast two further global challenges: the climate crisis, and the economy. Extreme weather and high inflation in many countries have exacerbated concerns over energy and resource security and supply-chain resilience, prompting consumer nations to act to secure supplies of minerals that are essential for the energy transition. Meanwhile, a resurgence of resource nationalism has seen a number of key producing nations take steps to secure a greater share of the value from their mineral reserves. In this article, we consider the effect of these trends on battery minerals, notably lithium, nickel and cobalt, and consider some steps that investors in this sector can take to mitigate these risks.

Lithium, Cobalt and Nickel

While commodities markets are notoriously volatile, demand for battery metals is expected to grow significantly, mainly as a function of the exponential growth of electric vehicles and energy storage solutions required to accommodate a greater participation of intermittent renewables in the energy matrix.

Battery minerals include lithium, nickel, cobalt, graphite, manganese, vanadium and copper. However, this article will focus on lithium, nickel and cobalt, where new supply is currently expected to be most critical. Brazilian mining company Vale predicts global demand for nickel increasing 44% by 2030 compared to 2022, while McKinsey predicts that the growth of lithium-ion batteries will increase at an annual compound rate of 30% and the Cobalt Institute predicts that cobalt production will increase by 13% annually for the next five years.¹

¹ Vale sees 44% increase in global nickel demand by 2030 | Reuters

[;] How lithium mining is fueling the EV revolution | McKinsey; Cobalt Market Report 2021 | Cobalt Institute

Lithium

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Although it has other uses, the vast majority of lithium demand is for use in rechargeable batteries found in electric vehicles, grid-scale energy storage and consumer electronics. Lithium metal oxides are contained within the anode and cathode of a battery and the commonly dubbed "Li-ion" batteries have become a fundamental component in the electrification of transport and the energy transition. This importance has seen lithium dubbed as "white gold", and gained the attention of investors globally, as well as governments with lithium reserves.

Lithium is found in Latin America, some parts of Africa, Western Europe, Australia and China. However, different locations contain different forms of lithium and require various methods of extraction. Latin America's "lithium triangle" – Argentina, Bolivia and Chile - held roughly 58% of the world's identified lithium resources in 2021.² The deposits located within the lithium triangle are mostly found at the bottom of crusted salt lakes at high altitudes. To mine the lithium, brine is pumped into evaporation ponds. The water slowly evaporates and salts separate out, leaving an ever-increasing concentration of lithium.

In comparison, lithium in Australia, the world's largest producer of commercial lithium³, is found in hard rock deposits, which are produced by scraping away the earth, blasting the rock, crushing and roasting. It is then shipped, normally to China, to be refined. Hard rock lithium mining and processing is more energy and carbon intensive than recovery from brine, and it is estimated that hard-rock lithium mining will be responsible for 10 million tonnes of CO2 emissions in total by 2030, or the equivalent of running 2 million cars for a year.⁴ Hard rock mining is also normally significantly more expensive.

The relative advantages of lithium brine extraction strengthen the hand of the relatively few nations with significant reserves of this type, particularly those in the lithium triangle. A number of left-leaning governments in Latin America have announced measures to raise taxes on mining and increase state participation in the mineral resources supply chain. In Chile, lithium was declared a strategic resource back in 1979, and their new National Lithium Strategy, released in April 2023, set out (i) plans for a new National Lithium Company, (ii) state participation alongside private partners in new lithium projects and (iii) an increased say from the state on how lithium will be extracted (such as state control of key salt flats, while fostering more environmentally friendly technologies such as direct extraction). This new policy is an important step in regulating the industry and providing clarity for investors, but there is concern regarding the scope for protectionism and state interference. However, it is yet to be seen how the policy will be implemented in practice, and the impact that this will have on Chile's attractiveness as a destination for lithium investments.

The National Lithium Strategy detailed above follows Mexico's nationalisation of lithium reserves in 2022, which outlawed direct private investment into the extraction of Mexico's lithium. There have also been reports that Chile, Argentina, Bolivia and Brazil have been discussing the creation of a lithium cartel of sorts, dubbed a "Lithium OPEC", potentially restricting exports of the raw material and prioritising industrialisation and the manufacture of batteries within the region.

Many African countries are also taking protectionist measures. Zimbabwe banned exports of raw lithium ore in December 2022 to combat informal mining and promote local processing capability (with exceptions for companies that were already developing mines). The government hopes to encourage investment in local processing facilities. However, apparent stockpiling of lithium has led to calls for the ban to be lifted.

² South America's Lithium Triangle: Opportunities for the Biden Administration (csis.org) according to the 2021 USGS *Mineral Commodity* Summary.

³ South America's Lithium Triangle: Opportunities for the Biden Administration (csis.org)

⁴ How Australia became the world's greatest lithium supplier - BBC Future

These measures have been taken against the backdrop of increasing waves of investment, particularly from Chinese companies. In March 2023, Chinese battery minerals producer Zhejiang Huayou Cobalt announced trial production of lithium concentrates at its Arcadia Mine in Zimbabwe, which it bought in 2021 for \$422m. In the same month, Huayou made a \$2.5m investment into Askari, an Australian firm exploring for Lithium in Namibia. Most recently, a Chinese consortium led by the world's largest battery producer, CATL, committed US\$1.4 billion to build two direct lithium extraction plants in Bolivia to tap the world's largest lithium resource.

China has also invested into the development and use of lithium in Indonesia, through its involvement in the construction of a lithium refinery in Morowali⁵ to complement Indonesia's nickel-based battery materials industry, and the building of Indonesia's first electric bus and lorry assembly facility (a partnership between Indonesia's electric vehicle supplier (VKTR Teknologi Mobilitas) and China's leading electric vehicle manufacturer and lithium ion phosphate battery producer (BYD Automobile))⁶. Eager to become an electric vehicle manufacturing hub, Indonesia has also signed a memorandum of understanding with Australia to explore partnership opportunities in critical minerals such as lithium.⁷

Nickel



Use of nickel is not so concentrated in battery applications. The majority is consumed in the production of stainless steel. It is also used in coins, wires, gas turbines and rocket engines because it can strengthen alloys and is non-corrosive while a small percentage of nickel its currently used as a cathode in batteries. With good storage capacity and high energy density properties, it can increase driving range in EV batteries. Most Li-ion batteries use nickel in their cathodes. Two of the most common are Nickel Cobalt Aluminium and Nickel Manganese Cobalt, which are composed of 80% and 33% nickel respectively.⁸

Nickel is largely located in Indonesia (estimated in 2023 to account for roughly 39% of the world's production)⁹, but the Philippines, Russia, China, Brazil and Australia are also significant producers. It has been reported that Indonesia is touting a producer's cartel for this mineral too, although divergences between the main producers may be a significant obstacle to such a move. Indonesia banned the export of raw mineral ore in 2019 (also banning export of bauxite ore in June 2023), which the WTO ruled as being in breach of international trade rules, although Indonesia is appealing this decision. However these moves do not yet seem to have quelled investors' appetites. Harita Nickel's \$5.5bn debut in March 2023 was Indonesia's biggest IPO of the year as of the date of publication. With nickel manganese cobalt (NMC) batteries being the most common batteries used in electric vehicles, Indonesia's (and foreign investors') appetite for nickel will only grow as the country looks to expand its electric vehicle market. Indonesia launched its first electric vehicle battery holding in 2021 and Indonesia's Coordinating Minister for Maritime Affairs and Investment Luhut Pandjaitan has stated that the government expects to see more than US\$30 billion in investment in electric vehicle battery supply chains by 2026.¹⁰

⁵ <u>https://www.thejakartapost.com/news/2021/09/24/chinas-chengxin-tsingshan-team-up-for-350-million-indonesia-lithium-project.html</u>, <u>https://www.reuters.com/markets/commodities/indonesia-says-lithium-anode-plants-are-being-built-support-ev-ambitions-2022-11-29/</u>

 $[\]underline{https://www.straitstimes.com/asia/se-asia/indonesia-set-to-become-ev-battery-battleground$

⁷ https://kemlu.go.id/portal/en/read/4468/berita/mou-between-kadin-and-western-australia-emphasizes-the-importance-of-collaboration-to-startbuilding-the-ev-battery-industry

⁸ <u>Nickel in batteries (nickelinstitute.org)</u>

⁹ https://www.mining-technology.com/data-insights/nickel-in-

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¹⁰ https://www.straitstimes.com/asia/se-asia/indonesia-set-to-become-ev-battery-battleground

Cobalt



Another important battery metal is cobalt. Although it is also used in magnets, heatresistant alloys and electroplating, recent growth in demand largely results from its use in lithium-ion batteries. For cobalt production, the world is largely reliant on the Democratic Republic of Congo (DRC) – which accounted for about 73% of global production in 2022¹¹ (with Indonesia in second place).¹² This predominance presents significant challenges, particularly considering security risks and human rights concerns in this central African nation.

Like other dominant countries in battery metals, the DRC is looking to toughen fiscal and other regulations in the mining of key resources. Moves toward resource nationalism were already seen and in 2018, when the DRC modified its mining code to double the nation's free-carry equity interest in mining companies to 10% and added a further 5% on each licence renewal.

Concerns have also been raised over single-state dominance of cobalt processing. China is responsible for refining around 77% of the world's cobalt¹³, and has moved to consolidate control of the supply chain. China Molybdenum, the world's largest cobalt producer, is majority owner of the Tenke Fungurume Mining project in the DRC and last year announced plans to invest \$1.8 billion in the first phase of the Kisanfu project in the DRC – which is expected to deliver an average of 90,000 tons of copper and 30,000 tons of cobalt once at full output and further increase China's dominance of the worldwide cobalt supply market. With this and other investments, China is expected to increase its share of global production to around 50% over the next couple of years, up from around 44% now¹⁴.

The landscape | emerging trends and alliances

Critical raw materials continue to attract significant investment from investors around the world along all parts of the supply chain. Encouragingly, there has also been increasing international cooperation in the trading and investment of minerals. Optimists may attribute this to healthy signs of globalism, while pessimists might argue that this is a tactical foreign policy response to resource nationalism. For example, the Minerals Security Partnership, a transnational alliance first announced in June 2022 aims to promote global cooperation in ensuring that "*critical minerals are produced, processed, and recycled in a manner that supports the ability of countries to realize the full economic development benefit of their geological endowments*". It currently comprises 13 members including the U.S., Canada, Australia, several European countries, the European Commission, Korea and Japan with membership continuing to grow. On 6 March 2023, European Commission President Ursula von der Leyen visited Canada in part to promote the EU-Canada Critical Raw Materials Partnership which was initially developed on 14 June 2021. Similarly, on 28 March 2023, an agreement was reached between Japan and the US to strengthen and diversify their critical minerals supply chains and promote the adoption of electric vehicle battery technologies. Countries worldwide are starting to wake up to the challenges that are being brought by resource nationalism and over-reliance on a limited number of suppliers, and their potential impact on the energy transition.

¹⁴ Ibid.

¹¹ DR Congo sounds alarm about cobalt prospects | Financial Times (ft.com)

¹² https://www.ft.com/content/aae97af3-02ac-4723-a6fd-dbb0e5de55ff

¹³ China to increase control over global cobalt supply — report - MINING.COM

Meeting the challenge: supply chain resilience

The mining industry is well versed in the challenges associated with resource nationalism, which tends to increase towards the peak of the commodity cycle and ease when supply outstrips demand. However, recent market volatility and the intense international competition to secure supplies of critical minerals mean it is now more important than ever to ensure supply chain resilience and to "future proof" investments. In that vein, a number of protective measures may be considered when structuring investments in the battery metals sector.



Due diligence

As in any significant transaction, due diligence is fundamental. Breaches of local laws and regulations can be used to justify, or as a pretext for, expropriation. Historical compliance should be checked, alongside the regulations that will impact project development going forward. Investors should also scan the horizon for likely policy changes and emerging risks.

Even where it appears that adequate legal protections and policies are in place, attention should be given to whether rules are enforced in practice and the ability and willingness of the host states (and particular parties in question) to police those rules.

ESG factors are particularly important, as they underpin a mining company's licence to operate, and failings can result in local resistance to project implementation, and hamper the obtaining of financing for project development.



Consultation and engagement

Engagement with the host government and key stakeholders is another crucial aspect. Understanding the concerns and priorities of the host state in the context of the investment will be crucial to identify and head off potential disagreements and to structure a mutually beneficial project. Relationships should be built to ensure an open channel for communication as the project develops and issues may arise. However, records should be kept and efforts made to ensure transparency and head off any accusations of impropriety. It is worth remembering that being perceived as too cosy with a particular government can backfire if there are they are

subsequently voted out or otherwise removed from power.

Stabilisation clauses

Stabilisation clauses provide investors entering into long-term contracts with states / state-owned entities with some protection against future changes in law. "Freezing" clauses contain promises from a host state to not introduce new legislation that would prejudice the investment at hand. While this would be greatly beneficial to an investor, such clauses are not common.

An "allocation of burden" style stabilisation clause, which is more widespread, aims to re-allocate fiscal and financial burdens between a host state and an investor if the initial basis for the investment is impacted by a change in law. For example, if the state was to introduce a new law that imposed higher taxes on the mining sector, a stabilisation clause may have the effect of ensuring that, as between the state and the investor for that particular contract / investment, the old tax regime continues to apply.

While stabilisation clauses have a long history in international natural resources contracts, they tend to be resisted by host governments and may be difficult to secure in the current sellers' market. More common may be some kind of adaptation clause, which is aimed at getting the parties to renegotiate contract terms in good faith, should there be a change in law that materially impacts the operation of the contract. These clauses can help to mitigate against the risk and/or the impact of disruptive changes in law, particularly in politically unstable regions.



Investment treaty protection

When considering international mining projects, thought should be given as to whether an investment treaty is in place

between the country from which the investment is being made and the country receiving that investment. This is particularly important where market dynamics, the political situation or nature of the government create risks of expropriation or unfair treatment by a host state.

Investment treaties may be bilateral or multilateral and are international agreements between states for the mutual promotion and protection of investments made by investors between those states. They usually provide two key benefits. The first is to set out the protections and advantages that are made available to foreign investors. The second is to provide a clear framework for investors to bring claims in relation to their investments either in the local courts of the host country or before an international arbitral institution. An investment treaty may therefore afford protection where contractual provisions fall short.

For example, UK headquartered miners might find it useful to note that a bilateral investment treaty is currently in place between the UK and Indonesia. However, there is no such treaty between the UK and Namibia or the DRC. For multinationals, it may be possible to structure investments, so as to take advantage of treaty protections offered to a number of different countries. It will be important to ensure that investments satisfy the conditions of any relevant treaty, and to ensure that any assurances made by host nations, and on which the investor is relying, are properly recorded.

Force Majeure, Choice of Law, Arbitration, Waiver of Immunity



Investors should ensure that their contractual arrangements include a sufficiently wide force majeure clause, to cater for different types of state interference. This is key to protecting them from contractual liability breaches where they have been prevented from performing by a host government.

Where possible, it is also important to choose a governing law that is predictable, reputable and will be enforceable against the counterparty. Irrespective of the governing law of the contracts, though, it is indispensable to be up-to-speed with local legal requirements and government policies, which will mandatorily apply to the project.

When it comes to dispute resolution, international arbitration is often the preferred mechanism for mining projects, providing flexibility and confidentiality for the parties involved. An investor should generally push for the seat of arbitration to be in a neutral jurisdiction outside of the host state, to ensure impartiality.

Where contracting with the state or any state-owned enterprise, contracts should also include a waiver of sovereign immunity clause.

Political risk insurance



Given the significant capital investments required in most mining projects, their long economic life and the fact that a significant proportion of the world's minerals are located in countries with unstable regimes, mining investors should also consider taking out political risk insurance. This can provide investors with additional protection in cases where there is no direct contractual or legal remedy to the problem at hand.



Policies differ considerably in their coverage, exclusions and price, and so insurance brokers should be engaged and policies studied carefully to ensure that they are appropriately tailored and fit for purpose. It is crucial to review the intended policy in conjunction with the negotiation of the project contracts as some insurers will have particular requirements about the contractual protections that are to be included as part of the investment "as a first port of call" before the insurance policy is to apply. Policyholders should then ensure that adequate internal policies are in place, to ensure that policy conditions are complied with, and coverage maintained. Assets may also need to be regularly valued, in connection with the maintenance and renewal of insurance cover.

Conclusion



The current, heated market for battery metals has created a fast-moving geopolitical scenario that presents various challenges for investors in this sector, not least a rising tendency towards resource nationalism. Those investors should continually monitor these risks and consider the various mitigation strategies outlined in this article, to protect themselves from expropriation, and changes to the legislative and policy framework that underpins the economics of their investments.

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