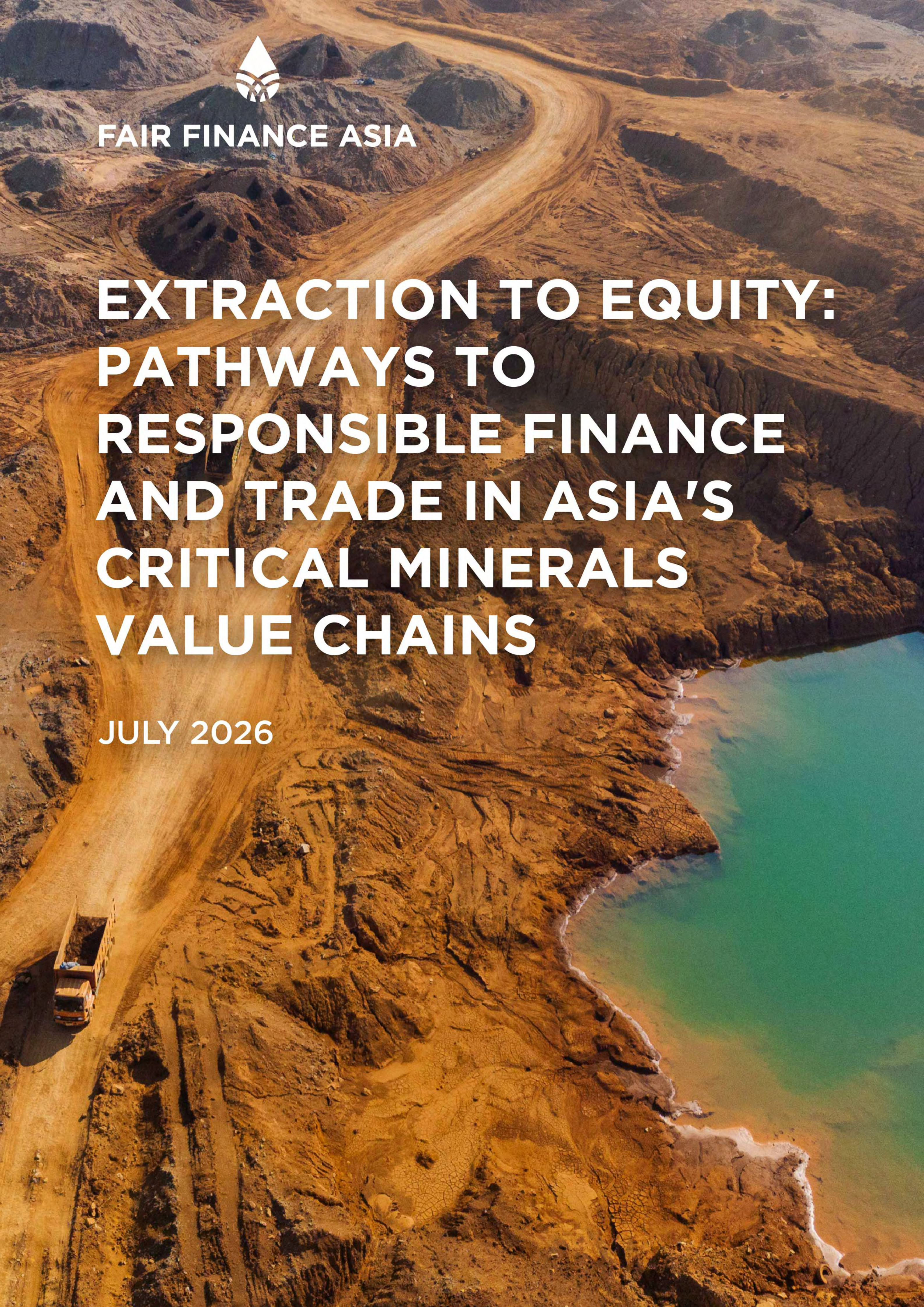
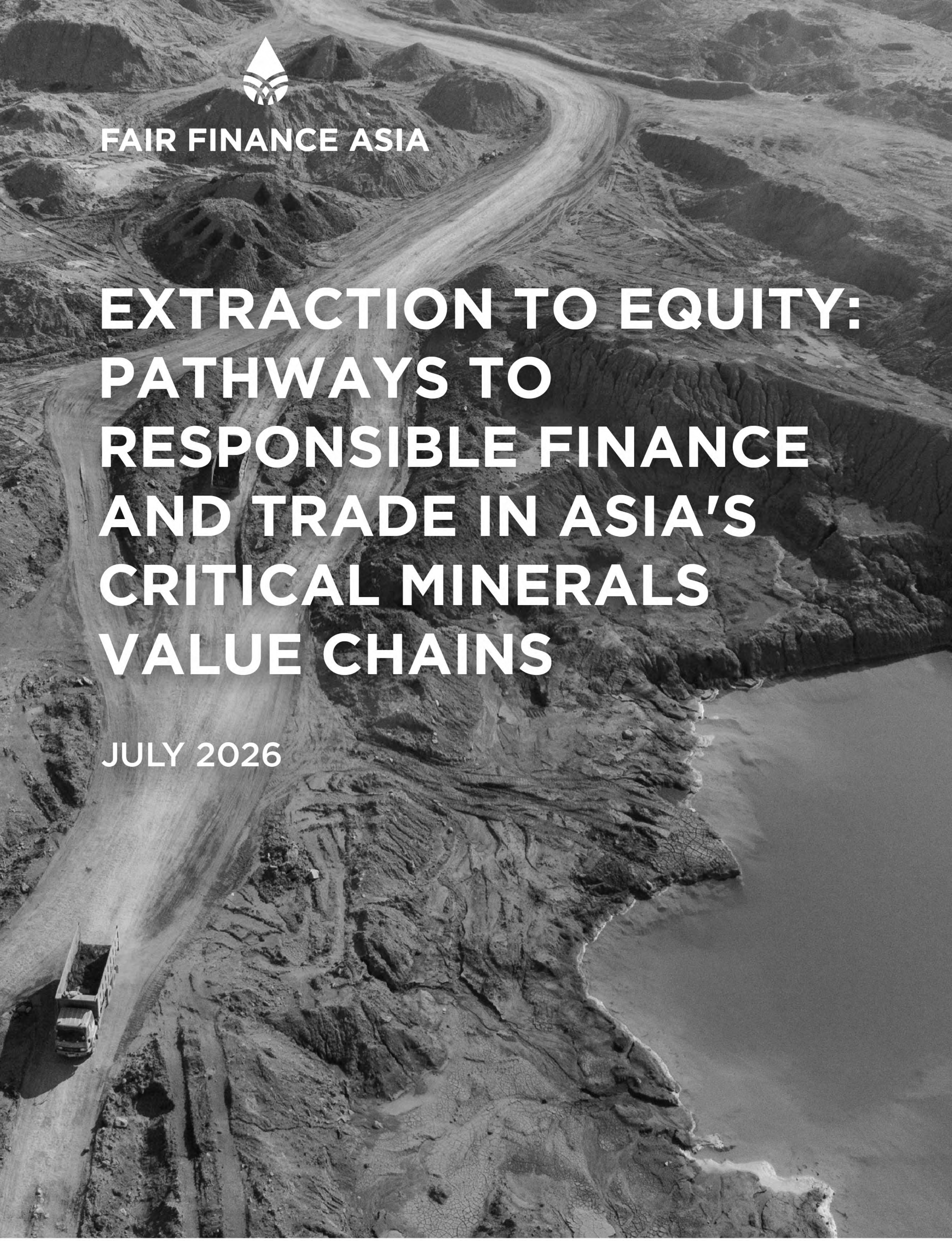


FAIR FINANCE ASIA

EXTRACTION TO EQUITY: PATHWAYS TO RESPONSIBLE FINANCE AND TRADE IN ASIA'S CRITICAL MINERALS VALUE CHAINS

JULY 2026



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EXECUTIVE SUMMARY

"Critical" minerals is a concept largely defined by governments as materials essential to strategic economic sectors or national security that are difficult to substitute and vulnerable to supply disruptions. "Transition" minerals are a subset of critical minerals defined by their importance for low-carbon energy technologies. While energy use still accounts for a small share of demand for minerals such as copper and nickel, others, like lithium and rare earth elements (REEs), are expected to see a sharp rise in demand for technology, defense, and healthcare. At the same time, these minerals are being pushed onto political agendas by concerns over increased demand, price volatility, supply risks, and geopolitical tensions.

In this context, the Association of Southeast Asian Nations (ASEAN), which includes several mineral-rich countries, has become a strategic hub for critical minerals essential to a range of industrial sectors, from clean energy and electric vehicles (EVs) to defense and advanced manufacturing. ASEAN has articulated a Minerals Development Vision (AMDV) to signal its ambition to transform the region into a leading global destination for investment in responsible minerals, including critical minerals, by developing domestic processing and downstream industrial capacities.

Critical transition minerals in selected ASEAN countries

This research focuses on critical transition minerals in five resource-rich ASEAN member states: Cambodia, Indonesia, Myanmar, the Philippines, and Thailand. Eight minerals essential to the EV value chain (bauxite/alumina, cobalt, copper, graphite, lithium, manganese, nickel, and REE) will be examined, including their production, reserves, resource potential, and destination regions and sectors. This assessment will help determine whether these ASEAN countries are capturing domestic benefits or mainly supplying global markets with raw materials, while also considering how changing battery chemistries may shift future mineral flows. All production and reserve figures are indicative due to uneven data availability across sources.

The ASEAN region has established itself as a strategic hub for minerals essential to the global energy transition. Indonesia holds a dominant global position, accounting for 59% of global nickel production and 42% of its reserves in 2024, while also being the world's second-largest producer of cobalt. The Philippines is another significant nickel producer, accounting for 8.9% and 3.7% of global production and reserves, respectively, and it also produces cobalt. Myanmar accounted for 14.8% of global REE production in 2023, and Thailand has recently emerged as a potential major player following the discovery of 14.8 million tons of lithium, which, if found commercially viable, could place it among the top five countries globally for the resource. Lastly, Cambodia's mineral landscape is characterized by a lack of detailed geological mapping and mineral exploration. Reportedly, the country holds reserves of bauxite, copper, and manganese, among other resources.

Shifting from raw exports to domestic processing

Across the region, and in line with the AMDV, countries are pursuing downstreaming policies to capture more economic value from critical minerals by shifting from raw material exports to domestic processing and manufacturing. Indonesia has led this shift by imposing export bans on unprocessed nickel, bauxite, and copper to force investment in domestic refining and battery manufacturing. This strategy has already attracted major projects, such as the Hyundai-LG battery cell plant. In early 2025, the Philippines announced an ore export ban similar to Indonesia's but suspended the decision in June 2025 due to high power costs and infrastructure constraints. Thailand is positioning itself as a regional EV manufacturing hub, aiming for 30% of vehicle production to be electric by 2030, relying on an import-dependent model for mineral processing.

Geopolitical rivalries and regional dependencies

China has maintained a decisive influence across ASEAN as its primary trading partner and a leading source of investment, driving industrial growth in Indonesia and serving as a foundational economic partner for Cambodia and Myanmar. In Cambodia, Chinese state-backed investment through the Belt and Road Initiative (BRI) has played a pivotal role in developing the country's mining infrastructure. Meanwhile, over 90% of Indonesia's nickel and cobalt matte exports are sent to China. The dependency is even more pronounced in Myanmar, where China acts as the sole trading partner for REE exports and provides the essential expertise and chemicals required for local extraction and basic processing.

In response, the United States has aggressively signed a network of partnerships with ASEAN countries, including Cambodia and Thailand, that complements its stronger ties to maritime partners like Indonesia and the Philippines. The European Union (EU) has also signed a partnership agreement with Indonesia.

For China, the EU, and the US, these minerals are not only vital for clean tech but are explicitly linked to national security and defense applications.

Social, environmental, and market challenges for Southeast Asia's Social, environmental, and market challenges for Southeast Asia's critical minerals

Despite this rapid growth, the ASEAN region faces considerable governance and sustainability challenges that threaten the "green" narrative of the energy transition advanced by multilateral bodies and donor countries. A research project by Sadan et al. labelled the unregulated REE mining zones in northern Myanmar as "Just Transition Sacrifice Zones" due to the severe pollution of soil and water and the industry's ties to armed conflict. There is also a significant carbon paradox in Indonesia, where the expansion of the "clean" nickel industry relies heavily on captive coal-fired power plants, although recent commitments have been made to develop large-scale solar and wind projects to mitigate this footprint.

Between 2011 and 2025, the Transition Mineral Tracker developed by the Business and Human Rights Resource Centre (BHRRC) identified over 50 allegations in Indonesia and the Philippines, with 90% originating from Indonesia and 10% from the Philippines, affecting workers, local communities, Indigenous Peoples, and human rights defenders. Workers face unsafe conditions, exposure to chemicals, long hours, low pay, and restrictions on unionization, with women disproportionately affected in informal and low-tier roles.

Communities and Indigenous Peoples face land dispossession, ecosystem degradation, water contamination, and threats or attacks when defending their rights. Environmental harms include deforestation, high CO_2 emissions, pollution, soil erosion, and biodiversity loss, with Indonesia experiencing the largest forest losses from nickel and bauxite mining. In addition, local economic benefits remain limited and unevenly distributed.

Supply chains also face market and political risks, ranging from shifts in battery technology and increasingly unpredictable trade, to civil war in Myanmar, and political instability in Thailand and Cambodia, all of which challenge the sustainable development of transition minerals and a just energy transition in ASEAN.

Growing trade agreements, missing safeguards

The assessment of key trade agreements and Memoranda of Understanding (MoUs) on critical minerals reveals significant inconsistencies between the sustainability rhetoric of governments and actual practice. For Cambodia, Indonesia, the Philippines, and Thailand, key trade agreements and MoUs were reviewed. A critical proviso is that while trade agreements create binding rights and obligations, many of these instruments are MoUs, which are not legally binding and lack enforcement mechanisms. Where public information was available, these documents were assessed against four sustainability criteria considered essential for supporting a just transition and delivering tangible benefits to local workers and communities. The criteria included:

- the presence of local benefits clauses,
- provisions prioritizing domestic needs,
- references to international sustainability standards, and
- mechanisms for fair pricing aimed at ensuring equitable value sharing between extractive companies, resource-rich countries, and downstream users.

The research shows that international cooperation on critical minerals has intensified, as reflected in the growing number of trade agreements and MoUs, particularly since the start of US President Trump's second term. Indonesia has the most established agreements, reflecting its dominant global position in nickel and cobalt production.

The AMDV explicitly mentions implementation of the ASEAN Principles on Sustainable Minerals Development, stakeholder engagement, and community empowerment among key goals. However, it remains a non-binding "shared framework" that depends on national-level enforcement.

Across the analyzed agreements for Cambodia, Indonesia, the Philippines, and Thailand, several core elements of a just transition are consistently missing. While many cite the promotion of local jobs and skills transfer as goals, few require "local value content" for tariff benefits. Concrete measures such as local hiring quotas or contributions to community development funds are missing entirely. In addition, none of the documents prioritize domestic needs for the use of critical minerals.

Fair pricing mechanisms are also absent, save for a vague reference to "price floors" in the US-Thailand MoU. These tools are key to averting a "race to the bottom" in which producers slash environmental and labor standards amid price volatility, leaving resource-rich nations exposed to market manipulation.

While most agreements make general references to sustainability, they rarely include explicit commitments to implementing international sustainability standards. None include binding commitments to uphold human rights standards, such as the process of obtaining the free, prior, and informed consent (FPIC) of Indigenous Peoples.

Recommendations for ASEAN member states, selected resource-rich countries, and regulators

To create incentives for an alternative way forward—beyond the current extractivist model—Fair Finance Asia (FFA) offers the following recommendations for the resource-rich countries covered in this study, ASEAN member states, and financial regulators[1]:

Overarching recommendation

- Endorse and commit to implementing the UN Principles to Guide Critical Energy Transition Minerals Towards Equity and Justice.

Human rights due diligence

- Establish and enforce mandatory environmental and human rights due diligence (EHRDD) requirements for companies and financial sector activities aligned with international sustainability standards, such as the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the IFC Performance Standards on Environmental and Social Sustainability.
- Enshrine the FPIC of Indigenous Peoples and local communities with customary rights in national law, including the "right to say no" and a clear process by which communities can withdraw their consent.
- Ensure meaningful community engagement that is inclusive, transparent, and accountable.
- Implement accessible, culturally sensitive, and effective grievance and redress mechanisms.
- Guarantee a safe and enabling environment for environmental, human rights, and anti-corruption defenders, recognizing their essential role in ensuring accountability in the governance of natural resources.

Mandatory environmental and social impact assessments

- Make environmental and social impact assessments (ESIAs) mandatory for mining permits and mining expansion projects.
- Require cumulative impact assessments (CIAs) for mining permits and mining expansion projects in regions with multiple mines or infrastructure developments, especially where vulnerable populations face cumulative air, water, or soil pollution, or other specific challenges.
- Develop and publish guidance documents based on international good practices and standards and allocate financial resources to ensure these documents reach local communities, including documents translated into local languages.
- Ensure that ESIA mandates meaningful, informed, and inclusive participation of all potentially affected individuals and communities throughout the entire project life cycle, including planning, implementation, and evaluation.
- Actively monitor the implementation of ESIAs in cooperation with affected rights-holders and establish enforcement mechanisms.
- Encourage financial institutions to check that mining companies conduct ESIAs as part of their environmental and social risk management processes.

1 The recommendations are not intended to be applied uniformly by all actors but should be read svelectively, according to each stakeholder's role, responsibilities, and level of influence.

Fiscal policies and benefit-sharing mechanisms

- Adopt robust fiscal frameworks to capture fair value from critical minerals across the entire value chain.
- Require mining companies operating within their territory to publicly report, country-by-country on an annual basis, on their revenues; profits before and after tax; number of employees (full-time equivalent, FTE); payments to governments (including corporate income tax, withholding taxes, royalties, dividends, and license and concession fees); and subsidies and other financial support received from governments (including tax exemptions, deferred payments, etc.).
- Introduce benefit-sharing mechanisms, such as a turnover tax, requiring mining companies to reinvest a defined share of revenues locally in sectors and projects that serve the public good, or to contribute to a dedicated public fund whose expenditures are decided jointly with civil society representatives.
- Allocate revenues transparently to priority areas, including but not limited to public infrastructure, healthcare, education and skills training, and environmental protection.
- Explicitly define benefit-sharing provisions in trade agreements and MoUs.

Local value addition

- Promote downstream industrial development (e.g., processing, manufacturing) and explore ASEAN regional or coordinated approaches, including joint public procurement or long-term offtake agreements, to strengthen negotiating positions and foster investment in regional critical minerals value chains.
- Condition price-based support mechanisms with sustainability goals, ensuring that support mechanisms incentivize adherence to robust environmental and social standards and circularity.
- Define a clear value-addition strategy for mineral development based on a national development plan, economic feasibility, market outlook, and rigorous cost-benefit analysis.
- In MoUs and trade agreements, encourage technology transfer and skills development, ensuring that foreign partners contribute to building domestic capabilities in critical minerals value chains.
- Link preferential terms or incentives to value addition, for example, tax breaks, reduced royalties, or market access conditional on local investment.

Transparency and accountability

- Implement the Extractive Industries Transparency Initiative (EITI) standards and require mining companies to be compliant with EITI reporting requirements.
- Require mining companies operating within their territory to publicly report, country-by-country on an annual basis, on their revenues; profits before and after tax; number of employees (FTE); payments to governments (including corporate income tax, withholding taxes, royalties, dividends, and license and concession fees); and subsidies and other financial support received from governments (including tax exemptions, deferred payments, etc.).
- Establish and enforce mandatory disclosure of environmental and human rights due diligence for companies and the financial sector, aligned with international sustainability standards.

- Regarding the implementation of FPIC of Indigenous Peoples and local communities with customary rights, mandate companies to disclose all informational materials used to obtain consent, as well as the consent document itself, so that communities can demonstrate in case of legal proceedings what they were and were not informed of.

Sustainable finance taxonomies

- Develop or strengthen existing sustainable finance taxonomies to:
  - Move beyond voluntary guidance;
  - Incorporate robust social and environmental technical screening criteria (TSC);
  - Explicitly align with international human rights and labor standards;
  - Set credible, time-bound decarbonization pathways for mining and processing; and
  - Require traceability and public disclosure on the end use of critical minerals.