

UNEARTHING TRANSITION MINERAL ACCOUNTABILITY IN THE PHILIPPINES

AT THE INTERSECTION OF
THE CLIMATE CRISIS,
ENERGY TRANSITION LANDSCAPES,
& EXTRACTIVE INDUSTRIES

Unearthing Transition Mineral Accountability in the Philippines: At the Intersection of the Climate Crisis, Energy Transition Landscapes & Extractive Industries

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Executive Summary

The current and looming effects of climate catastrophe have brought about paradigm shifts in how societies across the world operate. Global leaders and international institutions have focused on energy transitions, from fossil fuels to renewable energy sources, as among the primary solutions to addressing the climate crisis. However, renewable technologies require increasingly significant minerals compared to fossil-fuel energy sources. Despite the mining sector contributing 8-28% of global carbon emissions, reports hypothesize that the actualization of a below 1.5°C future requires the extensive and energy-intensive extraction of over three billion tons of transition minerals, such as nickel, lithium, copper, and cobalt. To meet the Paris Agreement goals, the total demand for transition minerals such as nickel and cobalt will rise by 60-70% and copper by up to 40%. However, as critiqued by researchers and civil society, ambitious demand projections have the potential to be self-fulfilling and opportunist, as estimates are not rooted within actualized policy decisions.

Despite business-as-usual approaches to large-scale mining, the mining industry has rebranded itself under savior narratives that promote mining as the solution to climate change. It is essential to raise awareness of the harmful greenwashing rhetoric seen within the extractive industries that continues to evolve alongside just energy transition discourse. Moreover, the energy transition poses a significant risk of exacerbating climate imperialism, further deepening Global North–Global South socio-economic dependencies and inequities. Multilateral agreements and geopolitical relationships are rapidly transforming alongside the insatiable demand for renewable technologies and transition minerals. The proliferation of contemporary forms of neo-colonial extractivist competition is evident within the new global economic order, with hegemonic nations scrambling to secure transition mineral agreements with resource-rich nations such as the Philippines.

The Philippines' energy transition poses an emblematic case for analysis as the nation boasts the fifth-largest nickel and fourth-largest cobalt and copper reserves globally and is recognized as among the leading countries most at risk from the climate crisis. Despite contributing 0.48 percent to global GHG emissions in 2018, the Philippines is one of the world's most climate-vulnerable countries, with estimates of climate-related losses of up to 6 percent of the nation's GDP annually by 2100. To strengthen climate mitigation and adaptation policies, the nation has pledged under the Paris Agreement to reduce greenhouse gas emissions by 75 percent by 2030. Moreover, the Mines and Geosciences Bureau has projected an increase in 190 mining projects within the next 4 years under the transition mineral boom.

This scoping study identifies governance vulnerabilities, maps transition mineral value chains, and examines climate and energy policy landscapes in the Philippines. It also illustrates the nation's status within the global energy transition agenda. Specifically, this report provides an overview of the transition minerals of nickel, copper, chromite, and cobalt in the Philippines.

Under an analysis of the transition mineral boom in the Philippines, the report's main findings highlight an exacerbation of social, environmental, economic, and political issues present in the nation's current extractive landscape. Leading regulatory implications concerning the transition mineral boom in the nation are seen in:

- Geopolitical dependency and economic trade reforms favouring market liberalization;
- Gaps in transition mineral data and lack of financial transparency within government management of mining revenues;

- Current taxation and proposed mining fiscal regime that decrease government shares from mineral revenues;
- The fourth industrialization and the digitalization approach to the nation's development agenda; and
- Regulatory incentives for the accelerated commercialization of e-vehicles and technologies and lack of competitive advantage within the Philippines' transition mineral value chain.

To address the intensifying social, environmental, and economic injustices occurring within the nation's mining industry, pragmatic and action-oriented measures must be adopted urgently. An overview of policy recommendations include:

- Implementation of binding human and environmental rights due diligence mechanisms of accountability within extractive operations that align with international laws and human rights standards.
- Operationalizing diverse legal tools which provide social, environmental, and economic safeguards and social security nets for communities and critical climate-mitigating ecosystems hosting large-scale transition mineral mining.
- Support the enactment of Senate Bill No. 1125, An Act Providing for the Creation of Philippine Extractive Industries and Transparency Initiative (PH-EITI).
- Implement the sub-nationalization of the PH-EITI to the regional and local levels where extractive activities take place.
- Expansion of PH-EITI scope through the operationalization of 2023 EITI Standards on energy transition and creation of the Just Energy Transition-Transition Mineral Accountability Roadmap.
- Propose amendments to the 1995 Philippine Mining Act which include policy reforms which address the social, environmental, and economic impacts of the transition mineral boom.
- Champion the Alternative Mineral Mining Bill (AMMB) to replace the 1995 Philippine Mining Act.
- Research on the impacts of the transition mineral boom on climate-vulnerable communities hosting the raw materials necessary for a low carbon future.

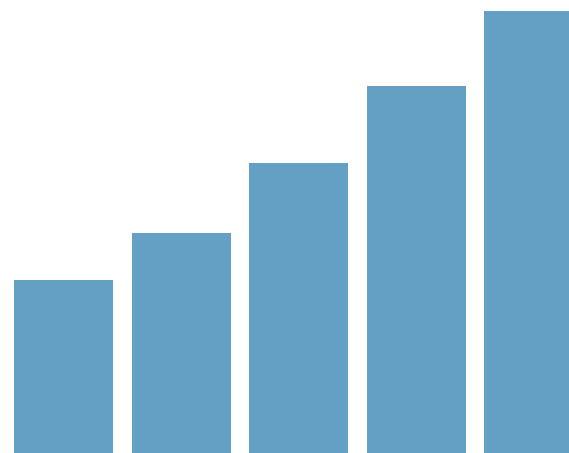
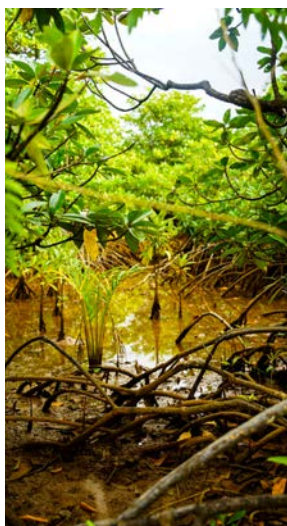


TABLE OF CONTENTS



1.0 What is the Energy Transition & the Transition Mineral Boom?	7
2.0 The Philippines Decarbonization Pathway: Overview of National Energy, Climate & Development Regulatory Instruments	12
3.0 Transition Minerals in the Philippines	20
4.0 Overview of the Transition Mineral Value Chain in the Philippines	29
5.0 Social, Environmental and Economic Implications of the Transition Mineral Boom	31
6.0 Implications of Green Energy Transition & Transition Mineral Mining in the Philippines	33
7.0 Overview of Recommendations	41

List of Figures

Figure 1. Critical mineral needs for clean energy technologies, Retrieved from the International Energy Agency (2021)	8
Figure 2. Timeline of domestic climate and energy policy instruments in the Philippines	12
Figure 3. Philippine Development Plan 2023-2028 Strategic Framework	14
Figure 4. Overview of installed and dependable fuel types in the Philippines, Retrieved from Department of Energy (2022)	16
Figure 5. Map of Caraga Region XIII mining tenements, Retrieved from DENR-MGB (2021)	18
Figure 6. Historical trend in the Philippine mineral industry, Retrieved from MICC (2022)	19
Figure 7. Map of mining tenements in the Philippines	20
Figure 8. Amount of nickel reserves and resources by class from 2013 to 2021, Retrieved from Philippine Statistics Authority (2021)	21
Figure 9. Amount of chromite reserves and resources by class, 2013 to 2021, Retrieved from Philippine Statistics Authority (2021)	23
Figure 10. Amount of copper reserves and resources by class, 2013 to 2021, Retrieved from Philippine Statistics Authority (2021)	24
Figure 11. Major operating cobalt mines in the Philippines, Retrieved from Global Data (2022)	25
Figure 12. Summary of 2017 export data, per commodity and destination, Retrieved from Mining Industry Coordinating Council, (2022)	26
Figure 13. Impacts of mining operations on poverty reduction: Poverty incidence of host municipality, provinces, and regions, Retrieved from MICC (2022)	30
Figure 14. Monetary value of nickel, gold, copper and chromite, Retrieved from the Philippine Statistics Authority (2022)	33
Figure 15. Intersection between the increasing demand for transition minerals, the phase-out of fossil fuels into green economies and the fourth industrial revolution	35

List of Table(s)

Table 1. Key Energy Transition and Mineral Accountability Definitions	10
Table 2. Key Energy Transition and Mineral Accountability Definitions	21
Table 3. Examples of provisions within the Local Government Code of 1991 which can be used to provide safeguards to communities and critical ecosystems in face of large-scale mining.	39

1.0 What is the Energy Transition & the Transition Mineral Boom?

The most significant societal hazard in the world today is climate change. However, the focus on green energy-centred solutions could aggravate the climate crisis' already glaring imbalances. According to reports, approximately 3 billion tons of transition minerals must be extensively extracted if a less than 1.5°C future is to be realized (International Energy Agency, 2021). Although there is no standardized definition, **transition minerals** are commonly referred to as the raw materials needed to develop renewable energy and technology such as nickel, copper, lithium, and cobalt.

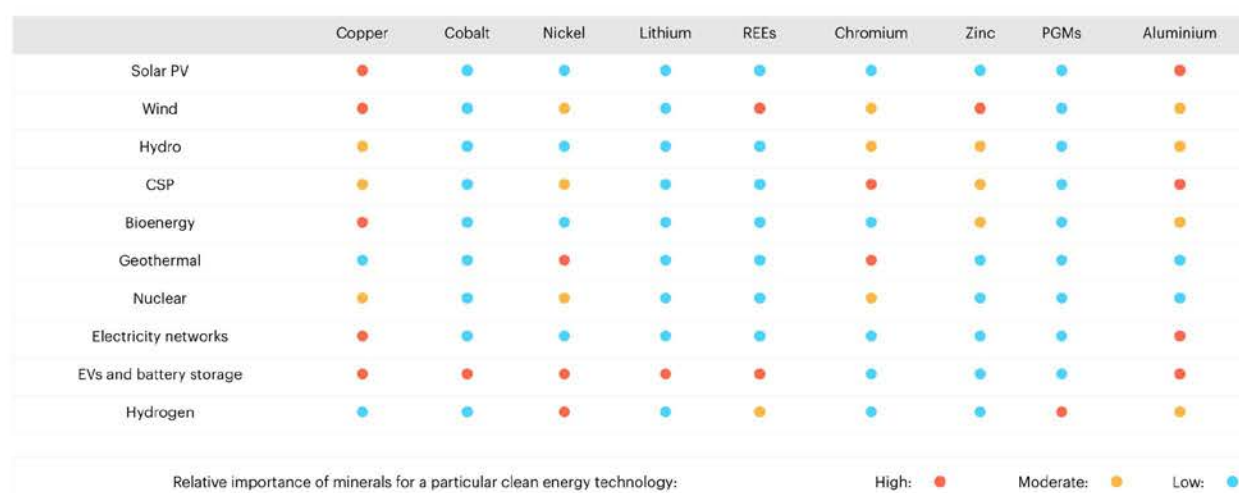
The **transition mineral boom** is characterized by the explosive demand for the mining of transition minerals required for the development of technologies for carbon-neutral economies and a digitizing world.

Governments and institutions around the world are under increasing pressure to address the Paris Agreements through urgent reductions in carbon emissions and increasing demands for renewable energy technology. The demand for transition minerals is surging, and there is enormous pressure on mineral-rich nations like the Philippines to enhance extraction.

According to an International Energy Agency (IEA) study, the current trend in energy transition initiatives will result in a total demand rise for copper and rare-earth elements (over 40%), nickel (60% to 70%), and lithium (almost 90%) over the next two decades (International Energy Agency, 2021). However, as mineral demands directly correlate with policy decision-making at the national and international levels, such ambitious projections have been critiqued by researchers and civil society as having the potential to be tied to private interests and self-fulfilling agendas within the global extractive landscape (Fletcher et al., 2023).

Electric vehicles and photovoltaic plants' battery life and performance rely critically on lithium, nickel, cobalt, manganese, and graphite. In contrast, rare earth metals are essential for making the magnets used in wind turbines and electric car motors (International Energy Association, 2021). Aluminum and copper are also crucial for energy networks. However, the intensification of projected demands can be tied to the estimated increase in the production of rechargeable lithium-ion batteries that require the following minerals: lithium, nickel, cobalt, aluminum oxide (NCA), and lithium nickel manganese cobalt oxide (NMC) for mass production (War on Want, 2021). **Figure 1 illustrates the specific minerals necessary for the development of renewable technologies.**

Figure 1. Critical mineral needs for clean energy technologies, Retrieved from the International Energy Agency (2021)



For example, nickel is of high relative importance for geothermal, electric vehicles, battery storage, and hydrogen energy sources. Identifying global and national trends in such energy sources and their associated downstream and upstream impacts remain paramount to ensuring that safeguards are upheld for communities hosting these critical minerals and infrastructure.

Despite the energy transition aiming to reduce carbon emissions, a report by the International Finance Corporation (IFC) claimed that the increasing demand for copper and nickel could double greenhouse gas (GHG) emissions from copper and mineral production processes if decarbonization efforts are not in place (IFC, 2023). Moreover, the mining industry is a key player in driving the climate crisis. Mining consumes up to 10% of global energy supplies (Earthworks and Oxfam America, 2008) and directly contributes to 8 percent of global carbon emissions (Cox et al., 2022). When indirect emissions are considered, forecasts for mining emissions show an increase of up to 28 percent (Kuykendall et al., 2020). Moreover, renewable technologies require more significant amounts of minerals compared to fossil-fuel energy sources. The IEA states that an average electric car requires six times more minerals than a conventional car.

Compared to oil or gas, energy transition minerals are more regionally concentrated. Due to the uneven distribution and finite nature of mineral deposits, transition minerals are located in the world's most climate-vulnerable, conflict-sensitive, marginalized, energy insecure and economically poor regions. Studies reveal that over half of global transition minerals, or 69%, are concentrated on or within close proximity to the lands of Indigenous and peasant peoples (Owen et al., 2023). The Business and Human Rights Resource Center (2023) has also tracked 495 human rights allegations concerning transition mineral extraction within the past decade, with two-thirds of those allegations concerning socio-environmental violations against communities and CSOs. Moreover, high-income countries often outsource environmentally destructive mining operations to low-and-middle income states with weaker human and environmental oversight.

As the cost of renewable energy sources reduces, solar and wind infrastructures become increasingly attractive. The International Renewable Energy Agency (IRENA) (2022) reported that "almost two-thirds or 163 gigawatts (GW) of newly installed renewable power in 2021 had lower costs than the world's cheapest coal-fired option in the G20, confirming the critical role of cost-competitive renewables in addressing today's energy and climate crises" (p. 4). According to the study, the development of new renewable energy generation became

very economically viable in 2022, releasing nations from the erratic pricing of non-renewable energy while also reducing energy costs and improving market resilience. IRENA predicts that the increase in renewable energy in 2021 contributed to savings of USD 55 billion (P3.1 trillion) on the cost of generating electricity globally in 2022 (IRENA, 2022). The increasing economic viability of renewable energy within global markets remains another signal of the transition mineral boom.

Recently, the **Just Energy Transition (JET)** discourse has exploded in popularity and demand, with multifaceted interpretations of the concept. Although JET lacks a rigid definition, its foundation is expressed under the conceptual umbrella of labor-oriented approaches, integrated frameworks, socio-technical transition theories, governance strategies, and impression management tools (Wang & Lo, 2021). In summary, JET is understood as an institutional and societal framework that focuses on the equitable and ethical transformation of energy use from its reliance on fossil fuels towards a low-carbon economy based on renewable energy resources.

Current mainstream discourse on JET commonly focuses on labor issues concerning energy transitions from coal dependent regions to renewable technologies. There remains a gap in knowledge within JET literature that focuses on the impacts of transition mineral mining within host communities.

Under the umbrella of JET frameworks lies **Transition Mineral Accountability (TMA)**. Bantay Kita calls for the enforcement of Transition Mineral Accountability, which is defined as the need to address the global transition mineral boom alongside democratic principles of community-defined justice and equity that operates through strengthened human and environmental rights due diligence across the length of the green energy supply chain, guaranteeing that frontline communities hosting the raw materials are socially, environmentally, economically, and culturally protected from mining and climate externalities (Asuncion & Ubaldo, 2023). These action-oriented and pragmatic mechanisms must hold corporations accountable for the socio-environmental impacts of their operations, while addressing climate equity and livelihood protection for host communities at the forefront of the transition mineral boom.

An overview of key definitions concerning just energy transitions and transition mineral accountability is seen in Table 1. To be able to achieve a just transition in the age of clean technologies, transition mineral mining value chains should be governed considering the net-positive environmental and socio-economic outcomes for all stakeholders and affected communities.

Table 1. Key Energy Transition and Mineral Accountability Definitions

Just Energy Transition (JET) <ul style="list-style-type: none"> Just Energy Transition (JET) is the institutional and societal framework that focuses on the equitable and ethical transformation of energy use from its reliance on fossil fuels towards a low-carbon economy based on renewable energy resources.
Just Mineral Transition (JMT) <ul style="list-style-type: none"> Just Mineral Transition (JMT) defined by the Legal Rights and Natural Resources Center and based on principles identified by Quirino & Taqueban (2023) is recognized as the production of minerals pursued, "based on: (1) the concept of Eduardo Gudynas's indispensable extraction, where only minerals needed for social wellbeing will be mined; (2) redistribution, where the Global North reduces its material footprint and allow the Global South to catch up; (3) circular economy, to reduce the need for new mining; and (4) a responsible minerals sourcing informed by robust protocols, such as those identified by the International Responsible Mining Assurance Index."
Transition minerals <ul style="list-style-type: none"> Transition minerals, also known as critical minerals, are the raw materials necessary to produce clean energy and technologies such as copper, lithium, nickel, cobalt, and rare earth metals (International Energy Agency, 2021). Bantay Kita's definition of transition minerals is not limited to renewable energies, as transition minerals are also crucial for the creation of technologies associated with the fourth industrial revolution as well as for defense and security, which is discussed in further sections.
Transition Mineral Boom <ul style="list-style-type: none"> The transition mineral boom is recognized as intensified demand to mine for the raw materials (<i>transition minerals</i>) necessary to produce green energy and technology as a response to the rapid transition of the global energy system to renewables.
Transition Mineral Accountability (TMA) <ul style="list-style-type: none"> As coined by Bantay Kita based on principles identified by Asuncion and Ubaldo (2023), Transition Mineral Accountability (TMA) is defined as the need to address the global transition mineral boom alongside democratic principles of community-defined justice and equity which operates through strengthened human and environmental rights due diligence across the length of the green energy supply chain; guaranteeing that frontline communities hosting the raw materials are socially, environmentally, economically and culturally protected from mining and climate externalities.

With the heightened demand for transition minerals, mining companies have aggressively expanded operations in resource-rich areas hosting minerals necessary for renewable technology. Copper, nickel, chromite, and cobalt are some of the Philippines' largest reserves of mineral resources and are among the critical minerals necessary for global energy transitions (International Energy Agency, 2021).

Despite contributing 0.48 percent to global GHG emissions in 2018 (Monsod et al., 2021), the Philippines is one of the world's most climate-vulnerable countries, with estimates of climate-related losses of up to 6 percent of the nation's GDP annually by 2100 (International Labor Organization, 2022). To strengthen climate mitigation and adaptation policies, the nation has pledged under the Paris Agreement to reduce greenhouse gas emissions by 75 percent by 2030.

The 2023–2028 Philippine Development Plan (PDP), as well as a review of policy instruments, government, corporate, and civil society reports, peer-reviewed articles, and grey literature, provide the basis for critical analysis in this scoping study's three main sections. **The aim of this scoping study is to provide an overview of the climate, energy, and transition mineral policy landscape in the Philippines at the national level and examine its compounding social, environmental, and economic implications under the transition mineral boom.**

2.0 The Philippines Decarbonization Pathway: Overview of National Energy, Climate & Development Regulatory Instruments

The Philippines is home to USD 1 trillion in untapped mineral resources, boasting the fifth-largest nickel and fourth-largest cobalt and copper reserves globally (Camba, 2016). With nickel, cobalt, and copper elements fundamental to producing low-carbon technologies, the archipelago remains highly attractive for foreign, domestic, and local investment as global economies phase out fossil fuels and transition towards renewable energies.

As a nation rich in transition minerals necessary for a low-carbon future, it remains critical to monitor, map, and assess the progress of climate and energy policy provisions at the national level. Provisions in such policy agreements remain fundamentally tied to the supply and demand of transition minerals within the nation. This section provides an overview of the Philippine policy landscape concerning renewable energy and climate change. The section probes a deeper understanding of the nation's decarbonization pathway, providing an opportunity to identify the energy transition and climate change legal mechanisms that have significant influence on the demand of transition minerals within the nation.

2.1 Overarching International Framework

The Philippines climate and energy policies are governed under the overarching international framework known as the *Paris Climate Agreement* which was passed in April 2017. The Philippines ratified the nation's commitment to the *Paris Climate Agreement* among 174 Parties to the United Nations Framework Convention on Climate Change (UNFCCC). The Paris Agreement is a legally binding instrument that calls for reducing greenhouse gas emissions to limit temperature rise below 2°C above pre-industrial levels or even further to 1.5°C (National Integrated Climate Change Database Information and Exchange System, n.d.).

The Philippines submitted its first Intended Nationally Determined Contributions (INDC) in April 2021 under the Climate Change Commission (CCC). The Philippines' Nationally Determined Contributions outlines a dedication to, "projected GHG emissions reduction and avoidance of 75%, of which 2.71% is unconditional, and 72.29% is conditional, representing the country's ambition for GHG mitigation for the period of 2020 to 2030 for the sectors of agriculture, wastes, industry, transport and energy" (National Integrated Climate Change Database Information and Exchange System, n.d.).

The nation's INDC commitments have created the conventional framework for decarbonization across the Philippines' legislative instruments concerning climate change, such as the Philippine Development Plan, the Philippine Energy Plan, and the National Climate Risk Management Framework of 2019. To ensure the Philippines NDCs are successfully achieved, national climate and energy policies must be aligned with the Philippines INDC goal of 75% GHG emission reduction by 2030. The Climate Change Commissions (CCC)'s monitoring of the status of the nation's decarbonization progress is crucial as the ability to successfully implement climate agreements remains dependent on the extraction of critical minerals from mineral-rich countries such as the Philippines.

2.2 National Climate and Energy Legislations & Policy Mechanisms

Several climate and energy policy instruments in the Philippines exist which aim to reduce GHG emissions and provide mechanisms for addressing the impacts of the climate crisis.

Figure 2 provides a timeline of key legislative mechanisms which have significant influence in governing the demand for green technology and associated transition minerals.

Specifically, examples of key policy mechanisms implemented by the Philippine government concerning climate change, energy and transition minerals include:

- Republic Act No. 9513 Renewable Energy Act of 2008
- Republic Act No. 9729 Climate Change Act of 2009
- National Framework Strategy for Climate Change (2010-2022)
- National Climate Change Action Plan (2011-2028)
- Republic Act No. 10174 The People's Survival Fund Act of 2012
- Republic Act No. 10771 Philippine Green Jobs Act of 2016
- Department Order No. 2017-011 Public Utility Vehicle Modernization Program of 2017
- The National Climate Risk Management Framework of 2019
- The Philippine Energy Plan (2020-2040)
- Sustainable Finance Policy Framework of 2020
- Republic Act 9513 National Renewable Energy Program of 2020-2040
- Republic Act No. 11285 Energy Efficiency and Conservation Act of 2021
- Republic Act No. 11697 Electric Vehicle Industry Development Act of 2022
- Executive Order No. 12 Customs Modernization and Tariff Act of 2023

Figure 2. Timeline of domestic climate and energy policy instruments in the Philippines



In the Philippines, the Department of Energy (DOE) initiated its National Renewable Energy Program (NREP) of 2011-2030 to “realize the country’s renewable energy (RE) goals by institutionalizing a comprehensive approach to address the challenges and gaps that prevent and/or delay wider application of RE technologies in a sustainable manner; and outlining the action plans necessary to facilitate and encourage greater private sector investments in RE development.” The Philippines has established an ambitious renewable energy goal, set at nearly tripling installed generating capacity from 2010 to 2030 (IRENA, 2017). In terms of carbon neutral technologies, the nation has the following targets set (Department of Energy 2011):

1. Increase geothermal capacity by 75.0 percent.
2. Increase hydropower capacity by 160 percent.

3. Deliver additional 277 MW biomass power capacities.
4. Attain wind power grid parity with the commissioning of 2,345 MW additional capacities.
5. Mainstream an additional 284 MW solar power capacities and pursue the achievement of 1,528 MW aspirational target.
6. Develop the 1st ocean energy facility for the country.

The aggressive push for the development of Renewable Energy (RE) in the Philippines, and globally, puts immense pressure on metallic mineral extraction and production. Demand for transition minerals such as nickel and copper, which are abundant in the Philippines, is expected to increase drastically.

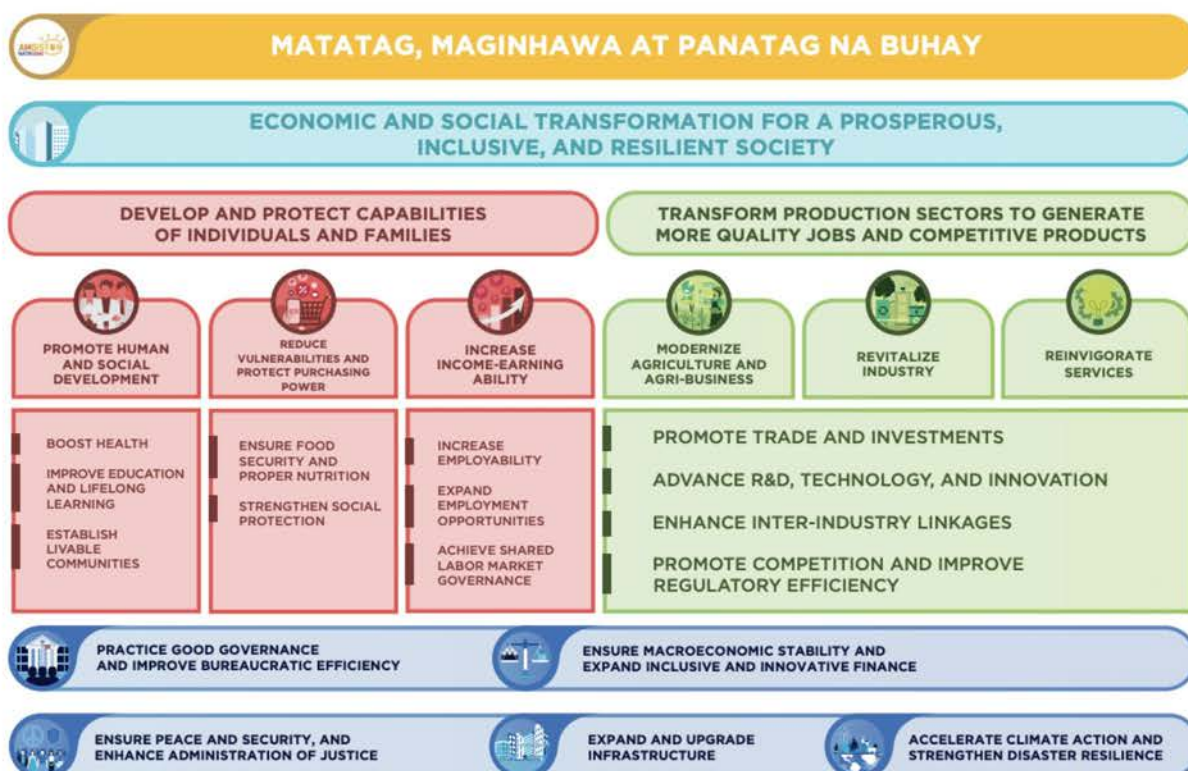
The Philippines Development Plan (PDP) 2023-2028 is the nation's renewed Socioeconomic Agenda under incumbent President Ferdinand R. Marcos. The PDP highlights the Philippine government's regulatory framework for socio-economic growth and security, including the policies, strategies, programs, and legislative priorities tailored towards achieving the nation's long-term development vision under *Ambisyon Natin 2040*¹. The 2023-2028 PDP provides a foundation of analysis for understanding the nation's energy policy landscape and its associated implications on energy transition movements at the international, national, and local levels.

Figure 3 highlights the strategic framework of the Philippine Development Plan (2023-2028). Utilizing a whole-of-society approach, the PDP's Briefer (p. 4) outlines the following socio-economic targets to achieve national development goals:

1. Maintain annual economic growth rate between 6.0 to 7.0 percent in 2023 and between 6.5 to 8.0 percent from 2024 to 2028.
2. Create more, better, and more resilient jobs.
3. Keep food and overall prices low and stable.
4. Enforce fiscal discipline.
5. Transform the production sectors through innovation; and
6. Reduce poverty incidence from 18 percent to 2021 to between 8 to 9 percent by 2028.

¹ *Ambisyon Natin 2040* is defined as "the collective long-term vision and aspirations of the Filipino people for themselves and the country in the next 25 years" (National Economic and Development Authority, n.d.). *Ambisyon Natin 2040* specifically refers to the slogan, "*matatag, maginhawa, at panatag na buhay*" for all Filipinos, which translates into an aspiration for Filipino life that is strongly rooted, comfortable and secure. Conducted by the National Economic Development Authority (NEDA) in 2015, the aspiration of "*matatag, maginhawa, at panatag na buhay*" was identified through a nationwide survey of approximately 10,000 citizens and focus group discussions of more than 300 citizens which aimed to articulate a strategy for the actualization of development aspirations for Filipino citizens.

Figure 3. Philippine Development Plan 2023-2028 Strategic Framework



When addressing climate change risks, the PDP (2023) states, “the government will also ensure that our natural resources are optimally used without compromising healthful ecology for present and future generations” (p. 7). Specifically, campaigns towards attracting foreign direct investment, harnessing Public-Private Partnerships, and enhancing market competition and trade liberalization are prioritized strategies within the nation’s long-term climate action plan.

Aligning with the previous PDP of 2017-2022, the renewed version continues to encompass neoliberal ideologies of growth as the blueprint for the socio-economic revitalization of the Philippines. However, neoliberal economic models have been employed throughout the history of the Philippines’ socio-economic intervention plans yet have repeatedly failed to catalyze economic development. Instead, whole-of-the-nation approaches prioritizing market liberalization have put local communities at greater significant risks for exploitation and environmental degradation.

2.3 Governing the Energy Transition

The Climate Change Commission is currently undergoing enhancements to the National Climate Change Action Plan, the Nationally Determined Contribution, as well as strengthening the operationalization of the National Climate Risk Management Framework and remodeling the National Adaptation Plan to streamline the implementation of the various climate policies, strategies, frameworks, and legislative instruments available in the Philippines within the PDP 2023-2028 agenda.

The identified policy instruments act as pathways for strengthening interconnectivity and collective action between the Climate Change Commission and relevant government agencies addressing energy transition and ecosystem resilience across diverse sectors. Under National Government Institutions, approximately 453.1 billion pesos have been

allotted for climate change expenditure for the fiscal year of 2023 (Climate Change Commission, 2023).

In 2023, the energy sector organized dialogues between the Philippine Electric Power Industry Forum and the Department of Energy, which aimed to strengthen collaboration and forge partnerships among industry participants in support of the objectives of the Electric Power Industry Reform Act (EPIRA), as well as accelerate programs under the Philippine Development Plan 2023-2028. The exchanges between the private sector and the government continue as they try to identify areas for collaboration in line with global energy transition trends.

Financial institutions play a fundamental role within energy governance and energy transitions. As of September 2022, according to the *Bangko Sentral ng Pilipinas* (BSP) (*Central Bank of the Philippines*), 21 percent of the total loans disbursed for this sector had been allocated to renewable energy development, equivalent to P243.6 billion (Lopez, 2023).

In 2021, Ramon Ang announced that San Miguel Corporation (SMC) would shift away from new coal projects toward renewable energy (San Miguel Corporation, 2021). San Miguel Power Holdings Corp. reported receiving up to USD 1 billion in funding to build 31 new battery storage facilities across the nation. SMC's Bulacan's 200-MW solar farm with battery energy storage is another example of recent renewable energy investments (ABS-CBN, 2021).

Ayala Corporation, a major energy producer in the Philippines, which focuses on power generation sourced from coal and renewable energy, is another noteworthy corporate example of altering energy demand. Ayala Corporation wants to use 50% renewable energy by 2025 (ACEN Corporation, 2020).

In contrast to its neighbors in Southeast Asia, which have single-buyer markets, the Philippine Power market has been termed unique because it is open to private investment (CASE, 2021). The Philippines' potential was confirmed by the International Renewable Energy Agency (IRENA), which noted that the country boasts significant resource potential, a stable financial climate, and interest from both the public and private sectors in investing in renewable energy (International Renewable Energy Agency, 2017). The Renewable Energy Act of 2008 was amended by the Department of Energy's Circular No. 2022-11-0034, which grants foreign investors 100% equity in the discovery, development, and use of solar, wind, hydro, and ocean or tidal energy resources (Koty, 2022).

The DOE issued the policy on November 15, 2022, and it came into effect on December 8, 2022. This policy was created because of the drop in power generation of renewable energy in the Philippines from 34% in 2008 to 21% in 2021. As of 2022, 27% of the share of power generation capacity in Luzon is supplied by renewable energy: Geothermal, Hydro, Biomass, Solar and Wind (Department of Energy, 2022). Currently, the Philippines is aiming to fast-track renewable energy projects as evidenced by the government's policy of allowing 100% foreign ownership for projects within this sector.

As of early 2023, the Philippines has successfully dropped coal reliance to 55% but the second biggest contributor to the country's power generation, renewable energy, remains at 28% percent. The Philippines produced 4.3 gigawatts (GW) of hydropower in 2023, 896 MW of solar energy, and 427 MW of wind energy, as well. (Koty, 2023). Coal-fired power facilities continue to provide half of Luzon's electricity.

Similar patterns may be seen in Mindanao, where 30.2% of the island's energy comes from renewable sources, while coal-based power plants account for 50.8% of the island's energy

supply. On the other side, in Visayas, the share of renewable energy is dominant at 45.5%, with coal coming in second at 38.2%. **Figure 4 shows the entire national energy grid disbursement for the Philippines, which has an installed capacity of 8,255 MW for renewable energy sources and 20, 104 MW for non-renewable energy sources.**

Figure 4. Overview of installed and dependable fuel types in the Philippines, Retrieved from Department of Energy (2022)

FUEL TYPE	PHILIPPINES			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	11,684	10,927	42.2	44.4
Oil Based	4,503	3,275	16.3	13.3
<i>Diesel</i>	3,050	2,550	11.0	10.4
<i>Oil Thermal</i>	650	185	2.3	0.8
<i>Gas Turbine</i>	803	540	2.9	2.2
Natural Gas	3,453	3,286	12.5	13.4
Renewable Energy	8,041	7,118	29.0	28.9
<i>Geothermal</i>	1,932	1,757	7.0	7.1
<i>Hydro</i>	3,781	3,527	13.7	14.3
<i>Biomass</i>	501	303	1.8	1.2
<i>Solar</i>	1,385	1,089	5.0	4.4
<i>Wind</i>	443	443	1.6	1.8
TOTAL	27,681	24,606	100.0	100.0
BESS	34	34		

The Chamber of Mines of the Philippines (COMP) hopes that the government will address their concerns and provide support to the sector, allowing them to help meet the critical material requirements of the energy transition (Lagare, 2023). According to COMP Chairman Michael Toledo, their group aims to attract investments in mining and encourage the building of mineral processing facilities and manufacturing plants for electric vehicles and renewable power projects.

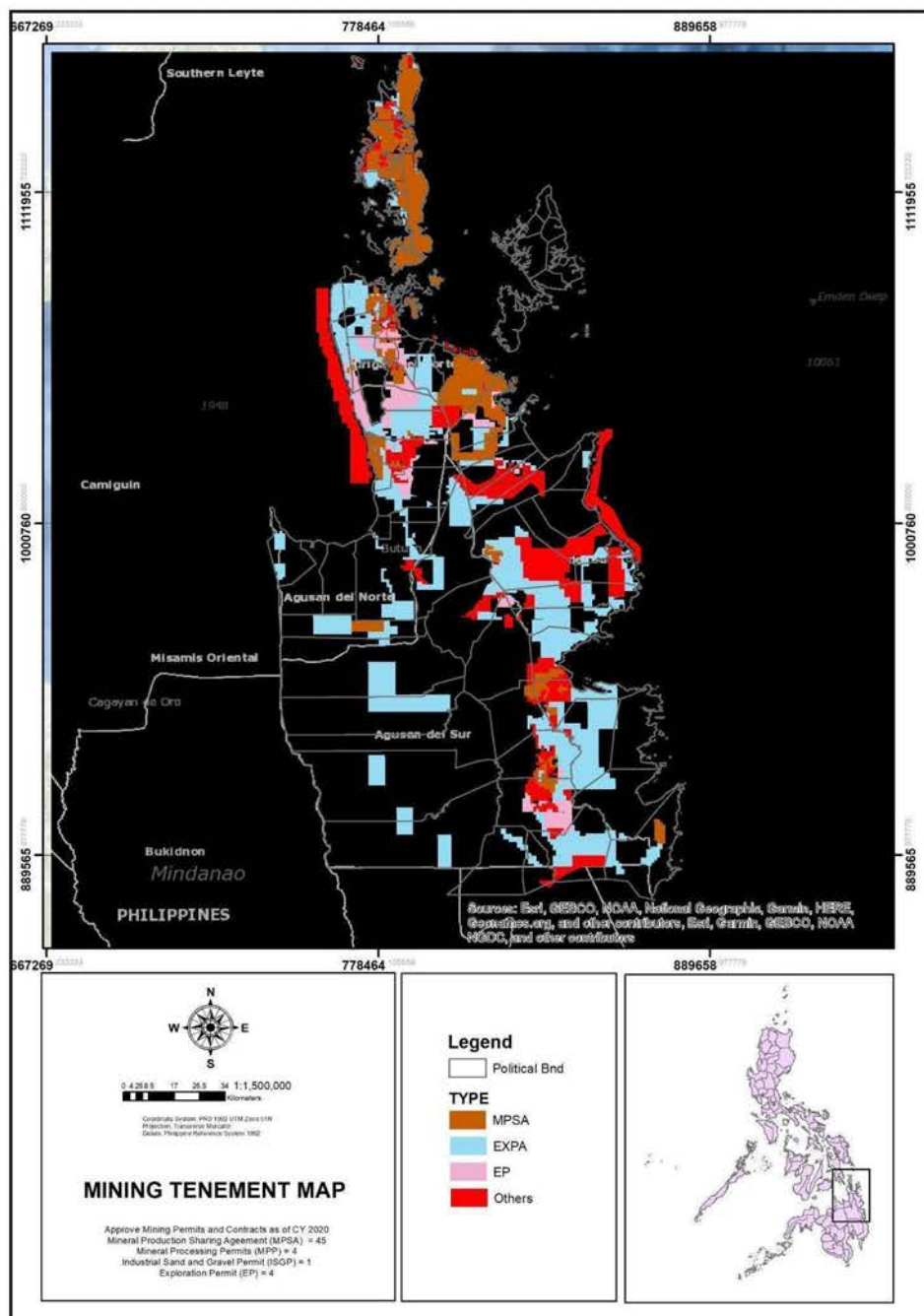
3.0 Transition Minerals in the Philippines

This section provides an overview of the transition minerals found in the Philippines. Specifically, this section maps out the Philippine's mineral wealth in key transition minerals: nickel, chromite, copper, and cobalt. These transition minerals have been chosen for the report due to their existing and significant production as of 2021 and prominence within upstream demands at the international level to produce renewable energy and technologies. Although bauxite, silver, manganese, and zinc are identified transition minerals within the nation (PSA, 2022), these minerals have been excluded.

Recognized as the fifth most mineralized country in the world, the Philippines is ranked fourth for copper reserves, fifth for nickel, and sixth for chromite. The Philippines also possesses the fourth-largest global reserve of cobalt, which is identified as a nickel-by-product (Board of Investments, 2022). The global energy transition has put pressure on the mining industry. The Mines and Geosciences Bureau has projected an increase in 190 mining projects within the next 4 years under the transition mineral boom (Australian Government, 2023).

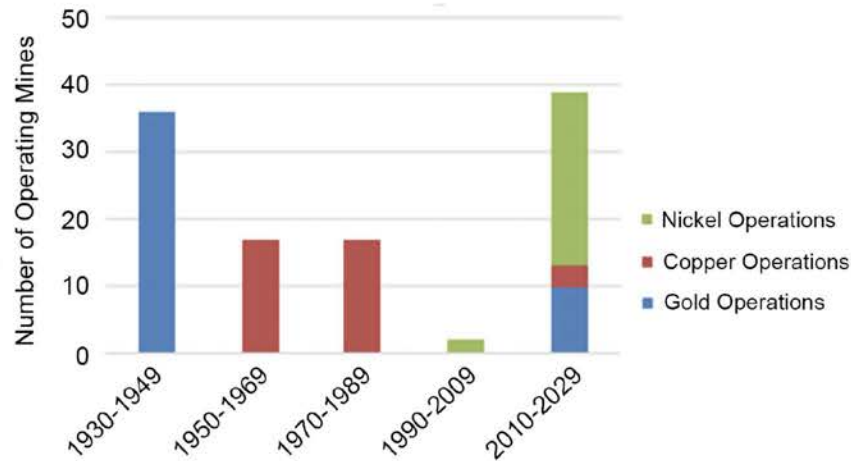
Caraga Region, XIII is considered the mining capital of the Philippines as it hosts 22 mining companies as of 2020 (Mining Industry Coordinating Council, 2022). Caraga region is composed of the following provinces: Dinagat Island, Surigao del Norte, Surigao del Sur, Agusan del Norte and Agusan del Sur. **Figure 5 illustrates the various mining tenements located across the region, with the top northern tip of Caraga region, known as the province of Dinagat Islands, hosting the majority of Mineral Production Sharing Agreements (MPSAs).**

Figure 5. Map of Caraga Region XIII Mining Tenements, Retrieved from DENR-MGB (2021)



Copper was the most popular mineral export from the Philippines from the 1950s through the 1990s, per data produced by the Mining Industry Coordinating Council (MICC) in 2022 (See Figure 6). The top two minerals exported during the past ten years, however, are nickel and gold.

Figure 6. Historical Trend in the Philippine Mineral Industry, Retrieved from MICC (2022)



In 2022, the MICC developed a summary map of the mining tenements in the Philippines to illustrate which areas contain specific kinds of minerals where there are active applications and operations (See Figure 7). The following regions contain nickel, copper, chromite, and cobalt transition minerals (Table 2).

Figure 7. Map of mining tenements in the Philippines

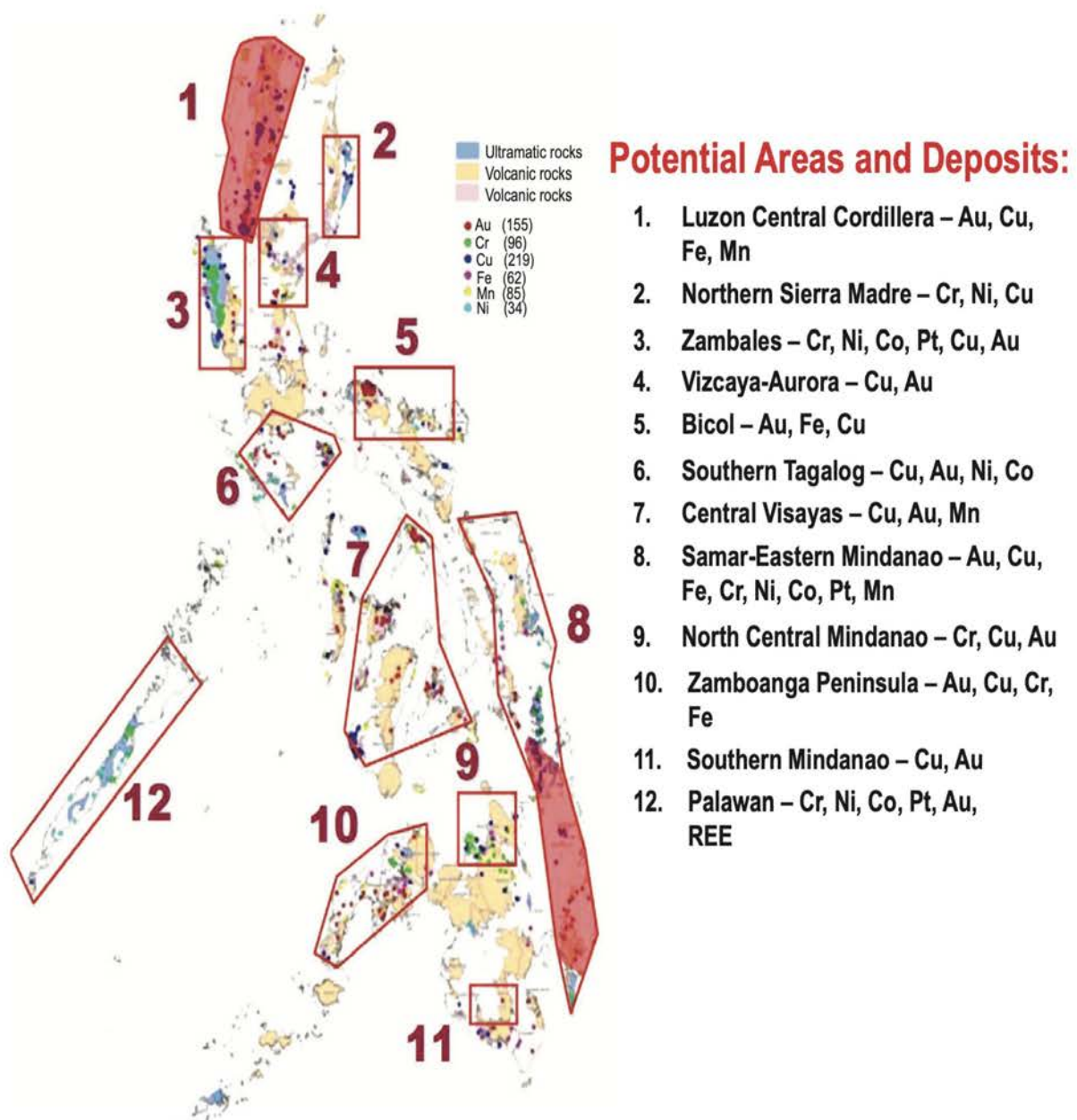


Table 2. Transition minerals found in each region.

Region	Transition Minerals Present
Luzon Central Cordillera	Copper
Northern Sierra Madre	Chromite, Copper, Nickel
Zambales	Chromite, Nickel, Copper, Cobalt
Vizcaya-Aurora	Copper
Bicol	Copper
Southern Tagalog	Copper, Nickel, Cobalt
Central Visayas	Copper
Samar-Eastern Mindanao	Copper, Chromite, Nickel, Cobalt
North Central Mindanao	Chromite, Copper
Zamboanga Peninsula	Chromite, Copper
Southern Mindanao	Copper
Palawan	Chromite, Nickel, Copper

The following subsections provide an overview of the historical mineral and mining trends in the nation concerning nickel, chromite, copper, and cobalt.

3.1 Nickel

Nickel is a significant mineral used within the creation of stainless steel and lithium-ion batteries for electric vehicles (Serapio Jr. & Calonzo, 2023). **Figure 8 shows that the stock of nickel reserves showed a decrease in levels from 2013 to 2017 due to stable nickel production and reclassifications; while an increase was posted in 2018 amounting to more than 119 million MT.** Between 2013 to 2018, nickel production was relatively stable, with peak production recorded in 2014. In 2018, the total nickel reserves in the Philippines increased by 1.5 percent, from 2.02 billion metric tons (MT) in 2013 to 2.05 billion MT (MICC, 2022).

By 2020, the Philippines was the second largest supplier of nickel in the world providing 14% of the total global supply (Cabico, 2023). The MICC identified 28 operating nickel mining companies in the Philippines found in the provinces of Zambales (4), Palawan (3), Davao del Norte (1), Agusan del Norte (1), Dinagat Islands (10), Surigao del Norte (6) and Surigao del Sur (3). It is important to note that Dinagat Islands, located in the Caraga region, is a national leader in nickel ore production, with PHP 4.01 billion in gross output in 2019.

Figure 8. Amount of Nickel Reserves and Resources by Class, 2013 to 2021, Philippine Statistics Authority (2021)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	2,458,810,418	2,424,475,525	2,414,027,386	2,384,748,277	2,357,662,499	2,439,226,305	2,446,878,267	2,443,202,913	2,412,448,856
Class A									
Volume (in metric tons)	730,180,386	605,162,502	547,539,892	519,306,800	458,346,770	450,305,492	428,695,415	498,677,351	474,492,425
Percent to total	29.70%	25.00%	22.70%	21.80%	19.40%	18.50%	17.50%	20.40%	19.70%
Class B									
Volume (in metric tons)	704,057,267	794,740,259	694,209,192	693,163,174	701,738,308	791,343,392	816,781,430	753,141,491	746,572,360
Percent to total	28.60%	32.80%	28.80%	29.10%	29.80%	32.40%	33.40%	30.80%	30.90%
Class C									
Volume (in metric tons)	1,024,572,765	1,024,572,765	1,172,278,303	1,172,278,303	1,197,577,422	1,197,577,422	1,201,401,422	1,191,384,070	1,191,384,070
Percent to total	41.70%	42.30%	48.60%	49.20%	50.80%	49.10%	49.10%	48.80%	49.40%

Karol Ilagan of the Philippine Center for Investigative Journalism (PCIJ) teamed up with NBC News in 2021 to conduct a comprehensive investigation into the Philippines' nickel supply chain. Sumitomo Metal Mining Co. Ltd.'s (part owner of the nickel mines in Rio Tuba, Palawan) quarterly reports were examined. Researchers discovered that the ores from Palawan are shipped to refineries in Japan and then converted into nickel-cobalt aluminum oxide cathode material for Panasonic's lithium-ion batteries (Ilagan et al., 2021). The research by Ilagan also revealed that Tesla and other EV automakers use nickel from Rio Tuba in their batteries.

The fact that nickel ores from the Philippines are being transported directly to China and Japan was also confirmed by MGB Acting Director Wilfredo Moncano (Mitchell, 2022). Since Indonesia began to impose a prohibition on the export of raw nickel in December 2020, the Philippines has emerged as China's primary supplier of nickel ores.

Despite the COVID-19 outbreak, nickel mining revenues across the country increased. The growing demand for minerals required to make metals for renewable energy infrastructure and machinery is correlated with increases in nickel profits (Legal Rights and Natural Resources Center, 2022).

Exacerbated projections for increased mineral demand have also pushed mining companies to explore expansions in environmental frontiers. For example, Rio Tuba Mining Corporation, located in Palawan, proposed an additional 10-mile expansion in mining operations. Community resistance to mining expansion has been seen due to the operations further endangering the forests of Southern Palawan (Rodriguez Jr., 2021). In late 2021, the local government used "land use reclassification" to be able to cater to the mine's expansion (Ilagan et al., 2021).

3.2 Chromite

Chromite is an essential mineral that, when processed, is important in the production of stainless steel. Chromite is the main source of the metal chromium that is vital in various energy transition technologies like solar energy, hydroelectric energy, and wind energy. Solar energy farms are abundant in the Philippines and stainless steel is used in inner and outer shells of water tanks, pumps, frames, and fasteners. It is an essential part of nearly all solar energy generation systems.

Mining of chromite increased from 1988-1990 with extraction growing at an average of 30.1 percent annually. However, a downtrend was experienced starting 1991 due to the eruption of Mt. Pinatubo which affected the operations of one of the biggest chromite producers in the country. The decline in production in the succeeding years is attributable to power shortage and geological factors.

As a result of reduced extraction and positive other accumulation, the stock of chromite ore reserves increased from 27.4 million MT in 1988 to 30.0 million MT in 1994. Chromite significantly contributed to the marked increase in metal productions in 2022 according to the MGB (Lagare, 2023). With China being the top consumer of chromite in the world, China remains the only exporter of chromite from the Philippines.

As of 2023, the Philippines is ranked sixth in terms of chromite mining prospects in the world (Toledo, 2023). There are currently four operating chromite mines in the Philippines. The currently operating chromite mines are found in the provinces of Eastern Samar (3) and Dinagat Islands (1) (MICC, 2022). **As seen in Figure 9, the total chromite reserves in the Philippines increased by 11.21 percent from 2011 to 40.33 million MT in 2013 to 44.86 million MT in 2018 due to an upward reappraisal.** In 2021, Class A chromite reserves were valued at PhP 1.60 billion, a 9.5 percent increase from PhP 1.46 billion in 2020.

Figure 9. Amount of Chromite Reserves and Resources by Class, 2013 to 2021, Retrieved from Philippine Statistics Authority (2021)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	131,138,215	131,091,159	131,075,657	131,921,783	131,791,837	131,746,826	131,389,180	130,796,181	130,778,575
Class A									
Volume (in metric tons)	40,302,317	40,255,261	40,239,759	37,002,841	36,413,992	36,368,981	36,337,238	35,984,440	35,966,835
Percent to total	30.70%	30.70%	30.70%	28.00%	27.60%	27.60%	27.70%	27.50%	27.50%
Class B									
Volume (in metric tons)	53,314,549	53,314,549	53,314,549	54,186,420	54,645,323	54,645,323	54,319,420	54,079,219	54,079,219
Percent to total	40.70%	40.70%	40.70%	41.10%	41.50%	41.50%	41.30%	41.30%	41.40%
Class C									
Volume (in metric tons)	37,521,349	37,521,349	37,521,349	40,732,522	40,732,522	40,732,522	40,732,522	40,732,522	40,732,522
Percent to total	28.60%	28.60%	28.60%	30.90%	30.90%	30.90%	31.00%	31.10%	31.10%

3.3 Copper

Copper is essential for effective energy transitions as the infrastructure for producing renewable energy requires large volumes of metal (Sobotka, 2023). The transmission and distribution network for electricity is particularly dependent on copper. According to Gordon and Clarry (2023), the global demand for minerals in renewable energy technologies is 5.8 megatons, or 24% of the demand for copper, suggesting that an important portion of the global copper demand is sourced from these technologies.

During the 1980s to 1990s, copper mining was the main mineral in the extractive industry in the Philippines. High levels of copper deposits can also be found in Sipalay City, Negros Occidental, which was mined by Maricalum Mining Corporation for five decades until low copper prices and issues of environmental violations forced its operations to close in 2001.

According to the MICC, there are three (3) copper mines in Benguet, one (1) in Nueva Vizcaya, and one (1) in Cebu as of 2020. The value of Class A copper reserves increased by 30.9 percent from PhP 35.43 billion in 2020 to PhP 46.38 billion in 2021. **From 2013 to 2018, total copper reserves in the country remained at the same level, at around 1.14 billion MT (Figure 10).** The stabilization of copper reserves during this time can be attributed to the non-activity of copper reserves (Philippine Statistics Authority, 2021).

Figure 10. Amount of copper reserves and resources by class, 2013 to 2021, Retrieved from Philippine Statistics Authority (2021)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	912,345,537	912,253,615	912,214,850	912,131,201	912,063,045	911,993,112	913,056,362	901,355,404	901,303,818
Class A									
Volume (in metric tons)	8,198,838	3,253,122	3,214,357	3,130,708	3,062,552	2,992,619	2,933,169	3,313,847	3,262,261
Percent to total	0.90%	0.40%	0.40%	0.30%	0.30%	0.30%	0.30%	0.40%	0.40%
Class B									
Volume (in metric tons)	357,225,995	357,225,995	357,225,995	357,225,995	357,225,995	357,225,995	358,348,696	346,267,060	346,267,060
Percent to total	39.20%	39.20%	39.20%	39.20%	39.20%	39.20%	39.20%	38.40%	38.40%
Class C									
Volume (in metric tons)	546,920,704	551,774,498	551,774,498	551,774,498	551,774,498	551,774,498	551,774,498	551,774,498	551,774,498
Percent to total	59.90%	60.50%	60.50%	60.50%	60.50%	60.50%	60.40%	61.20%	61.20%

The Philippines is also home to some of the most controversial copper mines in the world. Mining spills in the past have been attached to several copper mines, such as one of the nation's worst environmental and mining disasters known as the 1990s Marinduque Marcopper Spill².

The Tampakan copper and gold mine in South Cotabato, Mindanao Island, which continues to be a conflict zone between members of the indigenous communities and several other entities claiming ownership of the area, is one of the country's most contentious copper reserves. With an estimated resource of 2.94 billion tons of high-grade ores, the Tampakan mine is one of the biggest copper mines in the world. Since many land-related rules and formal and informal governance processes frequently overlap in regions with mineral wealth, mining areas in the Philippines have become hotly contested.

South Cotabato has passed an anti-open pit mining ordinance that prevented large scale mining companies like Sagittarius Mines, Inc. (SMI), the company that runs the Tampakan mines, from pursuing operations. SMI never received permission to operate since their entry in the area in the early 2000s.

Although not only focused on copper mining, five operating companies declare copper as one of the minerals included in their products. These are in the provinces of Benguet (3) and Cebu (1). Abundant copper reserves in Negros Occidental and South Cotabato were left untouched after the resistance of local community residents. Negros hosted Maricalum Mining Corporation for almost five decades before shutting down.

Negros Provincial government has historically opposed the entry of new mining firms in the province after recurring environmental and labor issues against Maricalum Mining Corp. (MMC) during the 1990s (Ubaldo et al., 2023). From 2013 to 2018, total copper reserves in the country remained at the same level at around 1.14 billion metric tons. This is mainly attributed to the non-activity of copper reserves or the absence of copper mining operations.

3.4 Cobalt

Cobalt is necessary for the energy transition as it is used to make electric cars, wind turbines, and other technologies. Behind Indonesia, Australia, and the Democratic Republic of the Congo, which produces 75% of all cobalt on the globe, the Philippines was ranked as the fourth-largest cobalt producer in the world in 2022 (Global Data, 2022). Around three percent of the world's cobalt supply, or 5,000 tons, was produced in the Philippines in 2022

² The Marcopper spill happened in 1993 that affected thousands of residents. Millions of tons of mine wastes were spilled into the rivers and the effects of the polluted waters are still felt by present day residents who suffer from health risks due to the toxicity in the area (De La Cruz, 2017)

(Cobalt Institute, 2022). With 260,000 tons of reserves as of 2021, the Philippines manufactures considerable quantities of cobalt because of nickel mining (NS Energy, 2021).

It is crucial to remember that there are gaps in the cobalt mineral data for the Philippines. Cobalt is frequently regarded as a minor mineral that comes from ores. The Philippines MGB data displays nickel ore combined with its nickel by-products of nickel-cobalt sulfide (MNCS) and scandium oxalate in place of the MGB displaying explicit cobalt production (Rivera, 2022). Although the Philippines produces nickel-cobalt mixed with sulphide, the opportunity to add value and produce nickel sulphate (needed by lithium-ion battery producers) in the Philippines has yet to be taken. The Philippines Development Plan states that prolonged sanctions on Russian cobalt will likely increase investors' interest in the Philippines. **Figure 11 shows that there are four major operating cobalt mines in the country in four different provinces, with two more pending projects in Oriental Mindoro and Nueva Ecija (Global Data, 2022).**

Figure 11. Major operating cobalt mines in the Philippines, Retrieved from Global Data (2022)

Mine/project name	State	Mine method	Saleable Production (kt)	Owners
Adlay Cagdianao Tandawa Project	Surigao del Sur	Open Cut	3	CTP Construction and Mining (100%)
Pulot Nickel Mine	Palawan	Open Cast	0.74	Oriental Peninsula Resources Group (94%); Citinickel Mines and Development (6%)
Agata DSO Project	Agusan del Norte	Open Cut	0.67	Prime Asset Ventures (41.05%); Undisclosed (34.23%); TVI Pacific (24.16%); Roberto V. San Jose (0.56%)
Santa Cruz Nickel Project	Zambales	Open Pit	0.66	Benguet (100%)

4.0 Overview of the Transition Mineral Value Chain in the Philippines

The transition mineral value chain is operationalized through three major components consisting of the upstream, midstream, and downstream phases. Upstream operations are focused on the identification, extraction, and production of raw transition materials, whereas midstream phases are focused on refining and purification of raw minerals through the smelting and processing of high-quality transition minerals necessary for the creation of electric vehicles, lithium-ion batteries, and renewable energy and technologies. Refined transition minerals are then manufactured into renewable energy, technologies, and infrastructure within the downstream phase.

With some mid-stream operations, the Philippines mostly concentrates on upstream stages of the transition mineral value chain concerning mining and extraction. Transition minerals are not currently being processed downstream in the country, with an absence of manufacturing plants for renewable energy and transition mineral infrastructure.

China and Japan were identified as the main exporters of the Philippines' leading minerals which include copper and nickel (MICC, 2022). **Approximately 44% of the total mineral exports go to China while 35% of the total is distributed to Japan, as seen in Figure 12.** The remaining 21% of the nation's mineral exports are sent to Korea, Australia, Hong Kong, India, Switzerland, and Singapore.

Figure 12. Summary of 2017 export data, per commodity and destination, Retrieved from Mining Industry Coordinating Council, (2022)

Destination	Chromite	Copper	Gold	Nickel	Total	% of Total
China	254,977	6,637,454	2,764,323	24,433,768	34,090,521	44
Japan		21,055,188		5,756,318	26,811,506	34
Korea		3,694,877			3,694,877	5
Australia			3,137,082		3,137,082	4
Hong Kong			7,034,751	180,430	7,215,181	9
India			1,996,704		1,996,704	3
Switzerland			1,151,729		1,151,729	1
Singapore				180,430	180,430	0.2
Total	254,977	31,387,519	16,084,590	30,550,946	78,278,031	
% of Commodity	0.3	40	21	39		

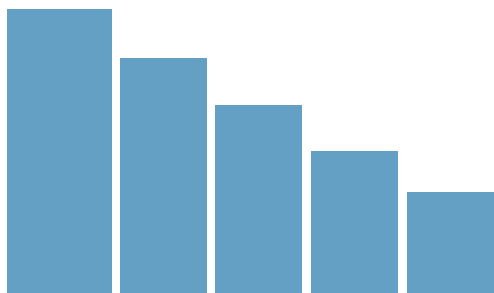
The country has one copper processing facility and two nickel processing units for mid-stream production. The two nickel processing facilities are Coral Bay Nickel Corporation HPAL, which started operations in 2005, and Taganito HPAL Nickel Corporation, which started operations in 2013 (NAC, n.d.). These two nickel processing plants produce mixed nickel-cobalt sulfide, contributing to 18% of metallic mineral production in 2021, with revenues amounting to PHP 32 billion.

In terms of mid-stream copper operations, the only copper smelting and refining plant is seen in the Philippine Associated Smelting and Refining (PASAR) Corporation. PASAR was formally established in 1983 and produces electrolytic copper cathode and refined copper anodes used to manufacture transportation, electronics, and other high-tech products (PASAR, n.d.).

The Philippines has been touted by domestic and international investors as the potential center for renewable energy and electric vehicle production. For example, San Miguel

Corporation (SMC), plans to invest in a USD 500 million battery production facility for electric vehicles in the towns of Cagdianao, San Jose and Basilisa of Dinagat Island, the nation's leading nickel ore producer (Santos, 2022). Envirotech Vehicles, a US-based transportation industry provider focusing on electric vehicles, has signed a lease agreement with the Department of Trade Industry in April 2023 to build a manufacturing plant for electric vehicles in Clark Freeport Zone in Pampanga (Talavera, 2023).

Despite the nation holding great opportunity to innovate the domestic transition mineral industry, the Philippines currently lacks value-creating activities concerning transition mineral processing and manufacturing, with overall low competitive advantage within the green energy and technology supply chain.





5.0 Social, Environmental and Economic Implications to the Transition Mineral Boom

Transitional minerals are frequently found in places with a history of violent conflict and weak governance, such as the Philippines. The growth in transition minerals poses a risk to the escalation of present mining problems.

According to a study by the International Institute for Sustainable Development, large quantities of vital mineral reserves are found in corrupt and unstable countries (Church & Crawford, 2020). This conclusion was supported by research from the Natural Resource Governance Institute (2017) that showed that roughly half of the world's important transition minerals are found in nations with "weak" or "poor" scores on the Resource Governance Index (Tillet and Manley, 2017).

The various dangers associated with investing in transition minerals in countries with lax governance are acknowledged in PWYP's Transition Minerals Advocacy Scoping Paper. According to the report, some of the greatest risks include: "corruption in licensing decisions; a lack of safeguards in environmental and social approvals; opacity regarding revenue flows, contract terms, and beneficial ownership; weak monitoring of mining operations; poor governance of state-owned enterprises (SOEs); tax evasion; and the mismanagement or misappropriation of revenues" (p. 5).

Approximately 60 percent of mining operations are located within the ancestral domains of Indigenous Peoples in the Philippines (Wetzlmaier, 2012). Moreover, due to the lack of harmonization within land administration in the nation, there remain several overlapping tenurial instruments such as Certificate of Ancestral Domain Titles (CADTs), Community Based Forest Management Areas (CBFMAs), and Agrarian Reform Communities (ARCs) over large-scale mining areas. For example, a study found that 28% of Key Biodiversity Areas (KBAs) in the Philippines have existing mining, oil, and gas operations (Simkins et al., 2023). Conflicting land claims and overlapping tenurial instruments remain a significant source of conflict and tension across the nation.

In addition, the transition mineral boom has prompted businesses and governments to explore the last uncharted ecological territories, including deep seabed mining within nearby international waters, to meet the global demand for transition minerals (National Coast Watch Council Secretariat, 2022). Increases in violence, water scarcity, food hardship, and cultural degradation of sacred indigenous lands could result from increased mining in socio-ecologically delicate locations.

The Global Witness (2023) report identified the nation as the deadliest place in Asia to be a land defender and activist for the past decade, with 11 out of 16 killings in Asia taking place in the Philippines in 2022. Research by Global Witness (2019) states that 16 of the 43 environmental activists slain in the Philippines in 2019 were associated with the extractives industry, with half of the murders committed by state forces (Global Witness, 2020). In 2018, the nation was recognized as the world's deadliest country for environmental defenders, with 34 deaths. A third of fatalities concerning land defenders in 2016 were associated with extractives (Global Witness, 2017).

Mining-affected communities and civil society in the Philippines continue to lack a voice to raise concerns and issues around mining activities in their areas due to shrinking civic space as well as human rights issues. Human rights organizations have expressed grave concern over an increase in the enforced disappearances of rights activists under the Marcos administration, with at least four of them including indigenous community leaders. Similarly,

a study on nickel mining operations in the province of Dinagat Islands by Amnesty International (2021, p. 2) details abuses of worker rights, such as "workers being hired without contracts, delayed payment of wages, and non-payment of compulsory employee benefits."

Rather than achieving economic progress, the Philippines' mining industry has been historically notorious for massive ecological destruction, the devastation of critical watersheds, eroding community agency and local livelihoods, and exhausting areas of its social and culturally valuable resources (Coumans, 2019; Simbulan, 2016). Despite the nation's resource abundance and mining regulatory framework being tailored towards foreign direct investment³, mining in the Philippines has failed to catalyze economic development, contributing 0.6% to the nation's gross domestic product (PH-EITI, 2019).

According to the Mining Industry Coordinating Council (MICC), poverty incidence is generally lower in villages (known as barangays) hosting mining operations. However, Social Development and Management Program (SDMP)⁴ projects were often short-lived and unsustainable (MICC, 2022). The same report reinforced that more recently established mining communities struggle with poverty reduction.

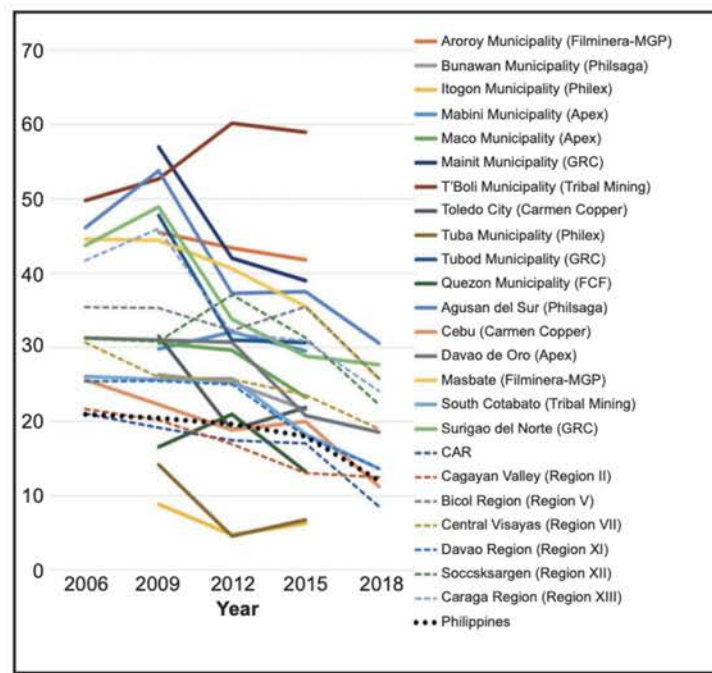
Findings from *Bantay Kita* in 2018 stated that SDMP-funded initiatives and activities do not follow a cohesive framework of sustainable development, citing that many of the identified projects rely heavily on corporate backing and are unlikely to remain profitable or sustainable once mining operations are shut down. In some areas, poverty increased over certain periods despite hosting mining operations between 2006-2018.

According to the same *Bantay Kita* report, SDMP-funded initiatives and activities do not adhere to a consistent framework for sustainable development. This is because many of the projects that were identified are heavily dependent on corporate funding and are not likely to continue to be successful or sustainable after mining operations are shut down. **Despite the presence of mining operations between 2006 and 2018 in some locations, poverty rose over specific time periods (Figure 13).**

³ More information can be found at: https://lawphil.net/statutes/repacts/ra1995/ra_7942_1995.html.

⁴ The 1995 Philippine Mining Act institutionalized the Social Development and Management Program (SDMP) which ensures mining corporations have a five-year strategy implemented during the mine's operational life to enhance the host and neighboring communities' (HNCs) quality of life over the long term.

Figure 13. Impacts of mining operations on poverty reduction: Poverty Incidence of Host Municipality, Provinces, and Regions, Retrieved from MICC (2022)



6.0 Implications to Green Energy Transition & Transition Mineral Mining in the Philippines

This section illustrates the leading regulatory implications concerning the transition mineral boom. There are several regulatory implications to green energy transition and transition mineral mining in the Philippines including:

- Economic reforms favouring market liberalization as the nation's transition mineral strategy and geopolitical dependency;
- Gaps in transition mineral data and lack of financial transparency within government management of mining revenues;
- Current taxation and proposed mining fiscal regime which decreases government shares from mining operations;
- The fourth industrialization and the digitalization approach to the Philippine's development agenda; and
- Regulatory incentives for the accelerated commercialization of e-vehicles and technologies and lack of national transition mineral value chain

6.1 Transition Minerals & Geopolitical Dependency: Economic Reforms Favouring Market Liberalization as the Nation's Transition Mineral Strategy


The institutionalization of foreign direct investment (FDI) reforms has significant implications for green energy transition and transition mineral mining in the Philippines. The nation's industrial development strategies are concentrated on the pursuit of Free Trade Agreements and fostering attractive environments for investments between target-source countries. The liberalization of economic policies will give foreign investors greater incentives for their entry into industries such as electric cars, pharmaceuticals, electronics, and agro processing. The 2023-2028 PDP states,

"Liberalization of foreign ownership of RE generation will be pursued to stimulate investments toward efficient energy transition. The government will revisit the Implementing Rules and Regulations of the RE Act to remove the nationality requirement imposed on businesses engaged in the exploration, development, and utilization of inexhaustible energy resources. The strategy is to allow the entry of foreign capital into the country's RE industry and thereby lower the cost of RE projects and make clean energy more accessible to the public. All these measures will help achieve the targeted 35 percent share of RE in the power generation mix by 2030 and 50 percent share by 2040." (p. 313)

The current administration further created "green lanes" by issuing EO No. 18 s. 2023 (Sec. 2). With the implementation of EO No. 18, the processes and requirements for the issuance of permits and licenses will be streamlined and expedited. One of the areas that the EO will affect is the Strategic Investment Priority Plan, which includes capital equipment for the mining and processing of green metals like copper, cobalt, and nickel.

Multilateral agreements concerning transition minerals are increasingly evolving. Geopolitical ties and the perpetuation of neocolonial economic and political dependency between the Global North and Global South can be seen as an additional threat to the Philippines' resource richness in transition minerals. The European Union's Green Industrial Plan and proposed Critical Raw Minerals Act (European Commission, 2023) as well as the United States Mineral Security Partnership are current policy instruments that have been proposed (IEA, 2022).

There have been several cases that highlight evidence of ongoing geopolitical arrangements concerning transition minerals between the Philippines and Global North countries. In



January 2023, President Marcos Jr. met with Glencore's CEO at the World Economic Forum to discuss Glencore's interest in expanding its nickel and copper mining and processing operations in the country to produce electric vehicle batteries (Gita-Carlos, 2023). To "support the development of a nickel and cobalt processing facility in the Philippines," Vice President Harris of the United States visited the Philippines in November 2022 to introduce the Critical Mineral Supply Chain Initiative (White House, 2022). Ursula von der Leyen, president of the European Commission, visited the Philippines in July 2023 to discuss Free Trade Agreements and Strategic Partnerships regarding the EU Critical Raw Materials Act. According to a press release, her mission was to find "projects that would develop your local mining industry, support your communities, and contribute to a secure global supply of critical raw materials."

On the other hand, multilateral agreements within the Asia-Pacific are seen in the Philippines and South Korea Free Trade Agreement (FTA) and the Regional Comprehensive Economic Partnership (RCEP), two instances of fully enforced foreign trade agreements within the country. The Philippines and South Korea Free Trade Agreement was signed in 2019 with the aim of "enhanced trade flows, facilitating the movement of natural persons, and generating more investment opportunities and, by extension, job generation possibilities" (PDP, 2023, para. 2). Centerino Rodolfo, Undersecretary of the Department of Trade and Industry, states that there are three areas of cooperation that need to be signed with Korea, specifically concerning green metals processing, new generation industries such as electric vehicles and renewable energy, as well as life science-based industries (Isip, 2023).

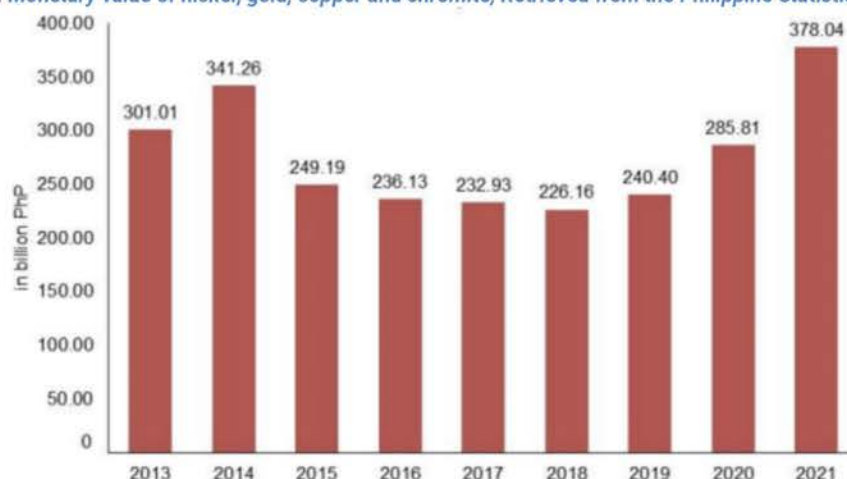
The largest free trade deal in the world is the Regional Comprehensive Economic Partnership. The RCEP covers one-third of the world's population, and member countries account for 30% of global GDP (Medina, 2023). In February 2023, the Philippines approved the Regional Comprehensive Economic Partnership (RCEP). This free trade pact brings together the eleven ASEAN nations of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam with Australia, China, Japan, the Republic of Korea, and New Zealand. One of the main targets of the RCEP in the Philippines is strengthening export coverage for Philippine electronics and semiconductor manufacturers. The RCEP stands as another significant contributor to the increasing demand for transition minerals and technology manufacturing in the nation.

6.2 Gaps in transition mineral data and lack of financial transparency within government management of mining revenues

Data retrieved from the Philippine Statistics Authority in 2022 states that the total monetary value of Class A nickel, gold, copper, and chromite reserves reached PhP 378.04 billion in 2021 (PSA, 2022). This is a 32.3 percent increase from the PhP 285.81 billion (5.14 billion USD) recorded value in 2020 (**See Figure 14 for historical comparison from 2013 to 2021**). Although there is a lack of disaggregated data currently available that showcases the monetary value of cobalt reserves, PSA (2022) outlines the monetary value of the transition minerals of nickel, copper, and chromite as follows:

- **Class A Nickel Reserves:** Increased in monetary value by more than 50 percent from PhP 121.60 billion in 2020 to PhP 186.62 billion in 2021.
- **Class A Copper Reserves:** Increased by 30.9 percent from PhP 35.43 billion in 2020 to PhP 46.38 billion in 2021.
- **Class A Chromite Reserves:** Increased by 9.5 percent from PhP 1.46 billion in 2020 to PhP 1.60 billion in 2021

Figure 14. Monetary value of nickel, gold, copper and chromite, Retrieved from the Philippine Statistics Authority (2022)



Based on the 2018 data gathered by the MICC, 74% of the mining payments went to the Bureau of Internal Revenue in the form of excise and other taxes, 10.7 % to the MGB, and 6.9% to the Bureau of Customs (BOC) (MICC, 2022). The management and plans for the usage of mining revenues collected through taxes, fees, and royalties must be transparent and publicly accessible at the local and national levels to ensure mining proceeds are contributing to net gains for national economic development. However, there remains a lack of data and publicly accessible plans on how these payments are being utilized by the said government agencies.

Under the US Dodd-Frank Act and the EU Conflict Minerals Regulation, for example, businesses and commodity dealers are obligated to disclose whether the goods they sell contain conflict minerals. These insurances therefore require that covered firms conduct due diligence procedures.

The Mines and Geosciences Bureau's data on 11 mining companies revealed that 17 of the buyers are privately-owned commodity traders with offices in China, Singapore, and Hong Kong (MGB, 2023). The data on regional producers and commodities traders, however, lacks transparency when it comes to the owners, sourcing processes, services, payments, and practices.

The Extractive Industries Transparency Initiative (EITI) is the global standard promoting accountability and transparency in the extractive sector⁵. EITI believes that “increased demand for transition minerals is bringing about risks for diverse stakeholders that, if not addressed, could hinder the sector’s contribution to sustainable development and inhibit the fight against climate change” (Sturman et al., 2022). EITI underlines that the increased demand can serve as a catalyst to improve government frameworks and policies governing the extractive sector, specifically on transition minerals management.

⁵ In 2013, the Philippine EITI was created through EO No. 147, Series of 2013, after a commitment made by the Aquino administration in 2012 that also established the Mining Industry Coordinating Council. In 2014, the Philippine EITI became one of four recipients of the “EITI International Chair Award,” and in 2017, the Philippines was declared the first among over 50 implementing countries to have achieved satisfactory progress in the implementation of the 2016 EITI Standard (Philippine EITI, n.d.). Surprisingly, before the end of Duterte’s term, the Philippines withdrew from the EITI over allegations of bias and unfairness by the Department of Finance Secretary Carlos Dominguez III (Manuel, 2022). However, less than three months later, the new Marcos administration re-entered the EITI, led by now-Finance Secretary Benjamin Diokno.

Since its establishment, the Philippines' Extractive Industry Transparency Initiative (PH EITI) has released reports with information on the industry's overall effects and contributions to the economy and development of the nation. The Philippine EITI, however, has not yet been able to offer transparent data on the ownership of extractive industries. Communities have been unable to hold the appropriate individuals accountable for the negative effects of mining on the ground due to a lack of beneficial ownership. Additionally, there aren't enough publicly available statistics on employment, sales, and inventories of metallic minerals, as well as output and revenue from mining.

6.3 Proposed mining fiscal regimes decreasing government shares to mineral revenues

On September 18, 2023, the House approved with amendments House Bill 8937, otherwise known as Committee Report No. 720 on the proposed mining fiscal regime. HB 8937 imposes deliberate measures to decrease the current mining royalties and shadowy provisions on profit-based royalties and windfall tax design. While the current mining fiscal regime lacks strong accountability measures to ensure human, environmental, and economic due diligence within the Philippines' mining industry, this proposed fiscal regime provides more protection from financial risks of mining companies and decreases wealth shares of mining host communities.

Salient features of House Bill 8937 include:

- Lower royalty taxes on operations within mineral reservation areas **from 5% to 3%.**
- Introduces profit-based royalty as opposed to its current output-based structure on operations outside mineral reservations, with a **complex multi-tiered structure from 1-5% tax implementations dependent on profit level,** and
- Introduces profit-based windfall tax ranging from 1-10%. With the high profit threshold proposed, margin-based impositions apply only after companies are secured of at least 35% margins. This provision has **effectively replaced mechanisms which ensure governments obtain at least 50% of mining proceeds under Financial or Technical Assistance Agreements (FTAAs) for foreign companies.**

The increased complexity within the proposed mining fiscal regime poses detrimental consequences for exacerbating social, environmental, and economic inequities across the nation. The proposed tax reforms have the potential to intensify inadequate transparency measures within mineral production and revenue agreements, calling for an increased risk of tax evasion and corruption. Moreover, by alleviating tax burdens for corporations and dispossessing governments and local communities of their revenue share, the proposed tax reforms underline the government's prioritization of corporate profit maximization at the expense of community livelihoods and critical ecosystems.

Mineral reservation areas are in Dinagat Islands, Surigao del Sur, Surigao del Norte, Agusan del Norte, Palawan, and Tawi-Tawi, where the majority of the nation's nickel reserves lie. These areas are host to some of the Philippines' most biodiverse ecosystems yet remain among the most climate-vulnerable and economically marginalized. The decreased government and community shares in the proposed mining bill will challenge the current weaknesses of the government. Specifically, within the government's implementation of safeguards to protect mining-affected communities from the loss of critical ecosystems, watersheds, and livelihoods resulting from the increasing attractiveness of mining in the Philippines under the proposed mining reform.

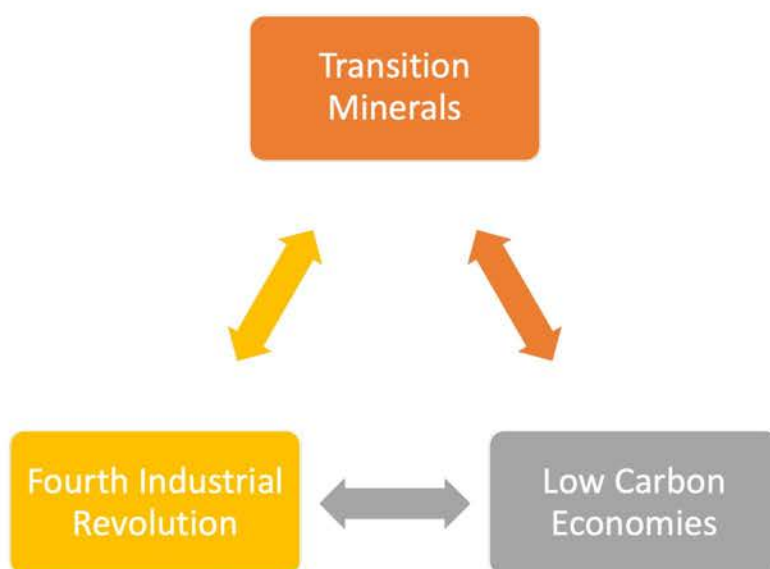
6.4 Fourth Industrialization: The Philippines' Digitalization Development Approach

With the Philippines "open for business", an overarching approach within each of the six identified objectives of the PDP is the mainstreaming of digitalization and technological innovation. The strategic digitalization of the nation's industries and sectors is driven by the need to adapt alongside international technological advances within the private and public

sectors concerning areas such as information and communications technology (ICT), e-commerce, and cross-border data transfers.

Transition mineral discourse commonly focuses on the raw materials necessary to transform the global predominance of energy sources from fossil fuels to renewable energies. **However, few studies on transition minerals highlight the compounding and parallel impact of the fourth industrial revolution and the ancillary businesses and industries dependent on transition minerals to produce their technologies and infrastructures (Figure 15).** A whole systems approach to energy transitions is critical to addressing the multi-faceted, complex, and interconnected issues faced within the transition mineral boom. An analysis of the predominance of digital innovations planned for the Philippines' six-year development plan poses inherent risks at the nexus of the transition mineral boom and technology-driven industries found throughout the global value chain.


Figure 15. Highlighting the intersection between the increasing demand for transition minerals, the phase-out of fossil fuels into green economies and the fourth industrial revolution



The PDP's plan to mainstream digitization across industries remains, at best, ambitious given the nation's challenges with infrastructure, financial access, and a lack of digital skills. Additionally, the thematic plan has important consequences for the Philippines' desire for transitional minerals. The Philippines' identified ancillary sectors, including but not limited to those in manufacturing, transportation, technology, media, telecommunications, health care, and the life sciences, will rely on transition minerals to develop their technologies and infrastructure. The intended modernization of each industry in the PDP will involve a scale-up in technologies, which will require the energy-intensive production of the raw materials required, either domestically or globally, to produce these technologies and data storage facilities.

6.5 Regulatory Incentives for the Accelerated Commercialization of E-Vehicles & Technologies: Lack of Competitive Advantage within the Philippines' Transition Mineral Value Chain

The nation possesses an absence of downstream value-adding activities within its transition mineral value chain. The PDP intends to introduce neoliberal regulatory incentives, though, to hasten the nation's domestic production, manufacturing, and marketing of electric vehicles and technologies. The Comprehensive Automotive Resurgence Strategy Program



and the Electric Vehicle Incentive Strategy are two examples of regional industrialization initiatives pertaining to transition minerals. These government programs seek to promote domestic car production to better participate in international value chains and maximize export possibilities.

With the Philippines holding one of the top four largest cobalt reserves in the world (NS Energy, 2021), the PDP also highlights the opportunities held within the Philippine mining and manufacturing industries for cobalt production. Specifically, the PDP states, “Although the Philippines produces nickel-cobalt mixed with sulphide, the opportunity to add value and produce nickel sulphate (needed by lithium-ion battery producers) in the Philippines has yet to be taken. Prolonged sanctions on Russian cobalt will likely increase investors’ interest in the Philippines” (p. 144).

Reforms within foreign direct investment policies in the nation also have compounding impacts on the manufacturing industry for technologies. For example, the intensified US restrictions on technology exports, such as computing chips, supercomputers, and advanced semiconductors, to China in October 2022 have compounding impacts on the Philippines’ manufacturing industry (United States BIS, 2022). These export restrictions and the Philippines’ investment incentives have led to the relocation of approximately nine multinational enterprises manufacturing facilities from China since 2019 (ASEAN, 2021). A significant portion of the nation’s manufacturing output comes from electronic manufacturing, specifically from the subassembly of different electronic components and electronic data processing products such as semiconductors. Semiconductors are critical for a variety of digital consumer products such as mobile phones, cameras, televisions, washing machines, and refrigerators, with the common raw materials needed for the electronics sector including transition minerals such as copper, lithium, silver, gold, nickel, and aluminum (Investopedia, 2023).

Approximately 60% of the Philippines’ commodity exports come from the electronic manufacturing sector (Statista, 2023). In 2022, the Philippines exported a total of Php 15.7 billion (US\$ 2756 million) in semiconductors, Php 32.3 billion (US\$ 568 million) in electronic data processing equipment, Php 5 billion (US\$ 89 million) in telecommunications, and Php 4.2 billion (US\$ 75 million) in consumer electronics (DHL, 2022). Predictions for electronic and semiconductor exports for 2023 have been estimated to reach Php 2.8 trillion (US\$50 billion), in comparison to Php 2.6 trillion (US\$45.2 billion) in 2022 (Medina, 2023). In addition, cathodes, and sections of cathodes of refined copper stand as the nation’s third most significant export, standing at an export value of Php 13.2 billion (US\$ 231.7 million).

The PDP emphasizes achieving economies of scale by resolving supply chain gaps through the adoption of free trade policies that aim to boost the country’s manufacturing and production industries. It continues to be a global leader in the electronic industry, making the country extremely alluring for foreign investment in its manufacturing sector as society shifts to one that is oriented on renewable energy, digitization, and technology. However, it is crucial to keep in mind the cumulative effects that such legislative incentives regarding technology have on boosting demand for transitional minerals on the social, economic, and environmental fronts.

7.0 Overview of Recommendations

Energy transition discourse within the climate movement is mainly concentrated on urgently scaling up renewables to address GHG emission targets within Paris Agreement goals. However, there remains a significant gap in discourse concerning where raw materials will be sourced to ensure the actualization of a carbon-neutral and technology-driven future. It remains inevitable that the global insatiable demand for renewable energy will lead to the intensification of transition mineral mining in the nation. However, it is critical to note that mining operations contribute 8-28% of global carbon emissions and are also responsible for mass deforestation and the removal of carbon sinks, as well as the devastation of critical climate-mitigating ecosystems such as mangrove forests. ***There remains a need to transform the energy transition and climate change discourse, specifically to address the two dominant issues that must be tackled in parallel: fossil fuel phase-out and the transition mineral boom.***

Ensuring Transition Mineral Accountability and human, economic, and environmental rights due diligence is upheld throughout the length of the green energy supply chain remains among the most urgent and significant priorities concerning transition minerals. Binding social, environmental, and economic policy mechanisms must be implemented to ensure climate-vulnerable communities hosting the raw materials necessary for a low-carbon economy are protected. This section provides an overview of the following recommendations.

7.1 Implementation of binding human and environmental rights due diligence mechanisms of accountability within extractive operations that align with international laws and human rights standards

The Philippine government currently lacks an institutionalized policy framework that upholds the state's duty to safeguard its population from corporate human rights breaches and promotes observance of environmental and human rights in the context of extractive economic operations. Instead, the current regulatory framework of the government encourages a climate of relative impunity for corporate crimes, with no procedures in place for victims to seek timely restitution or remedy. The Philippine government must establish strong regulatory frameworks that follow international standards of human rights law to hold mining corporations responsible for the socio-environmental carelessness of their operations.

The Philippines is a signatory of the United Nations Guiding Principles of Business and Human Rights (UNGPs). However, research reveals that the Philippines' human rights disclosures amongst top-listed companies operating within ASEAN fall substantially below UNGP accepted standards, with most top-listed companies operating with an absence in available human rights blueprints (Mullen et al., 2023).

The Commission on Human Rights in the Philippines (CHR) recommends Congress to take meaningful steps to advance human rights, particularly about the UNGP's second pillar, which addresses corporate responsibility to respect human rights and "do no harm" principles. To incorporate the UNGP human rights conventions into the Philippines' business regulatory framework, the Commission created a position paper on the Corporation Code in 2018 (CHR, 2020). As a result, amendments to the Corporation Code were adopted on February 20, 2019 (CHR, 2020). The policy changes in the revised Corporation Code, however, only affect the formal and technical criteria that corporations must follow.

It is advised that the UNGP principles are enacted into binding law through the creation of a national action plan that operationalizes and harmonizes strategies for land administration

agencies such as the Mines and Geosciences Bureau (MGB), the Department of Environment and Natural Resources (DENR), the National Commission on Indigenous Peoples (NCIP), the Ministry for Indigenous Peoples Affairs (MIPA); Department of Agrarian Reform (DAR), the Land Registration Authority (LRA), and the Climate Change Commission (CCC) to standardize the protection of communities against adverse human and environmental rights impacts by business enterprises that abide to UNGP principles.

It is further recommended that the Philippines adopt international laws and human rights standards under the 2023 updated OECD Guidelines for Multinational Enterprises on Responsible Business Conduct (OECD, 2023); OECD Due Diligence Guidance for Responsible Business Conduct (OECD, 2018); and the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy (ILO, 2017).

7.2 Operationalizing diverse legal tools which provide social, environmental, and economic safeguards and social security nets for communities and critical climate- mitigating ecosystems hosting large-scale transition mineral mining

Diverse legal frameworks should be implemented at the local, regional, national, and international levels to ensure that host communities' rights to land and means of subsistence are safeguarded during the energy transition. In addition, host communities impacted by large-scale transition mineral mining may benefit from the support and protection provided by provincial, municipal, and local legislation and administrative directives. For instance, the Local Government Code (LGU) of the Philippines, Republic Act 7160, functions under the premise of decentralized authority among local government entities and municipalities. **Table 3 highlights examples of specific provisions within the LGU Code that have been used as the legal basis for protecting critical watersheds within large-scale mining areas, such as the Marbel Buluan Watershed, which faces threats from Sagittarius Mines Incorporated (SMI) copper-gold operations.**

Table 3. Examples of provisions within the Local Government Code of 1991 which can be used to provide safeguards to communities and critical ecosystems in face of large-scale mining.

Local Government Code Provisions	Description
Local Government Code, Section 468	Section 468 states that the Provincial Board possesses the power to pass ordinances that protect the inhabitants from the harmful effects of manmade or natural disasters and calamities and to provide relief services and assistance for victims; protect the environment and impose appropriate penalties for acts which endanger the environment; and prescribe reasonable limits and restraints on the use of property within the jurisdiction of the province.
Local Government Code, Section 447	Section 447 outlines that the Municipal Council can pass ordinances that protect the inhabitants from the harmful effects of man-made or natural disasters and calamities and to provide relief services and assistance for victims; protect the environment and impose appropriate penalties for acts which endanger the environment; subject to existing laws, provide the establishment, operation, maintenance and repair of an efficient waterworks system to supply water for the inhabitant; regulate the construction, maintenance, repair and use of hydrants, pumps, cisterns and reservoirs; protect the purity and quantity of the water supply of the municipality; exercise such other powers and perform such other duties and functions as may be prescribed by law or ordinance.

Additional examples of legal avenues which possess provisions that can be used to protect communities and critical ecosystems from the impacts of mining include:

- Republic Act No. 11201 Comprehensive Land Use Plan
- Republic Act No. 4341 Comprehensive Development Plan
- Republic Act No. 7586 National Integrated Protected Areas System
- Presidential Decree No. 1749 Proclaimed Watershed Areas
- Executive Order No. 318 Promoting Sustainable Forest Management in the Philippines
- No. 2012-001 Cabinet Cluster on Climate Change Adaptation and Mitigation Resolution

Future research and development initiatives should collaborate with Local Government Units hosting large-scale mining to identify the various ordinances that are available and pertinent for strengthening and upholding the social, cultural, economic, environmental, and political rights of minorities and vulnerable groups frontline to mining operations. It is also recommended that local councils be identified who can be capacitated to push for administrative orders that provide safeguards concerning large-scale mining.

Ecosystem services-based cost-benefit analyses should be undertaken within mining areas that analyze the overlap of Key Biodiversity Areas, Proclaimed Watershed Areas, as well as disaster risk and hazard assessments over mining tenements. Such cost-benefit analyses within transition mineral mining areas will enable evidence-based research to influence policy implementation concerning potential expansions in transition mineral mining operations guided by the protection of communities, livelihoods, and environmental stewardship.

7.3 Support the enactment of Senate Bill No. 1125, An Act Providing for the Creation of Philippine Extractive Industries Transparency Initiative (PH-EITI)

We urge the passage of Senate Bill No. 1125, also known as An Act Providing for the Creation of the Philippine Extractive Industries Transparency Initiative (PH-EITI), to formalize the PH-EITI as a regulatory body for the extractive industries. Under Senate Bill No. 1125, "the PH-EITI is mandated to disclose all data of material, national and local payments, and revenues sourced from the extractive activities covered by the scope of the PH-EITI; make all concessions, contracts/licenses, agreements, and joint ventures available to the public; and publicly release all data, information, and reports on the extractive industries that allow the public to freely use, re-use, and redistribute them for any purpose, without restrictions" (Senate of the Philippines, 2017, para. 9).

Moreover, the institutionalization of the PH-EITI will ensure a binding commitment to transparency, accountability, and participatory governance mechanisms in the extractives. The PH-EITI is a crucial step in fostering good governance and guaranteeing the responsible management of the country's natural resources.

7.4 Implement the sub-nationalization of the Philippines Extractive Industries Transparency Initiative to the regional and local levels where extractive activities take place

In mid-2023, the Philippine government announced that the PH-EITI is being devolved to sub-national government agencies in line with a broader effort to push national government functions out to local government units (LGUs) (Jocson, 2023). We also recommend that the sub-nationalization of PH-EITI processes from national to local government units be implemented as an Executive Order made through the Local Government Unit Code. The devolution of PH-EITI processes will mainstream more efficient and timely data collection between government units, establish more accessible feedback and grievance mechanisms, and strengthen current multi-stakeholder platforms where CSOs can engage meaningfully.

Alongside Senate Bill No. 1125, we also recommend the passage and approval of an Administrative Order on Credible CSO selection processes at the local level within mining oversight committees such as the Multipartite Monitoring Team (MMT) and the Mine Rehabilitation Fund Committee (MRFC), amongst other regional oversight committees. Currently, there is only one seat available for CSOs within mining oversight committees. To ensure equity and meaningful engagement and representation, there needs to be rationalization of the selection and equal membership of government, industry, and CSOs in all oversight committees.

7.5 Expansion of PH-EITI scope through the operationalization of 2023 EITI Standards on energy transition and creation of the Just Energy Transition-Transition Mineral Accountability Roadmap

We recommend that the PH-EITI expand its protocols to address amendments within the 2023 International EITI Standards concerning energy transition in Requirement 2.1 (Increasing understanding about energy transition policies); 2.2 (Accountability in fast-tracked license awards); 3.1 (A better picture of reserves); and 3.4 (Company disclosure of greenhouse gas emissions) (EITI, 2023). Specifically, we recommend that the PH-EITI establish a Just Energy Transition and Transition Mineral Accountability Committee (JET-TMAC) made up of experts within government, industry, and civil society engaging within the fields of climate, energy, extractives, and community empowerment.

The Committee will also be tasked with ensuring the efficient application of current land administration procedures related to mining and the construction of renewable energy infrastructure. The Committee will be responsible for implementing real judicial reforms with

respect to issues and disputes surrounding mining and the energy transition. The Committee will also oversee the establishment of accessible grievance mechanisms and information hubs, including national contact persons (NCPs) or ombudspersons with judicial authority, which allow victims to seek effective remedy and redress for corporate violations; as well as the transition of mineral mining desks across mineral reservation areas, which provides crucial information to a variety of stakeholders, including investors, community members, and companies regarding energy policies.


The *Just Energy Transition and Transition Mineral Accountability Committee* will be tasked with facilitating the design and implementation of the *Just Energy Transition and Transition Mineral Accountability Roadmap*, which visualizes the key goals and major steps needed for a community-centered equitable energy transition and outlines the actionable objectives necessary to mitigate the upstream and downstream impacts of transition mineral mining. The *Just Energy Transition and Transition Mineral Accountability National Roadmap* will act as a strategic vehicle for:

- Ensuring human and environmental rights due diligence is upheld throughout the length of the green energy supply chain.
- Innovating the national transition mineral value chain and creating opportunities for the establishment of midstream and upstream activities.
- Identifying economic diversification initiatives concerning energy transitions for communities hosting large-scale transition mineral mining and commercial renewable energy infrastructure.
- Lobbying for resource nationalization initiatives which ensure indigenous transition mineral reserves benefit the Philippines, with transition mineral mining prioritized for the achievement of domestic renewable energy targets.
- Guiding and monitoring the mining industry towards the achievement of net-zero emissions.
- Undertake critical research and data collection concerning the mapping of transition minerals and affected communities, disaggregated emissions data from the mining industry and an analysis of the volume of transition minerals which will be needed to address domestic renewable energy target needs.
- Develop informed policy decisions by undertaking ecosystem services based economic valuations and cost-benefit analyses within mineral reservation areas which examine the feasibility of mining operations between impacts on community livelihoods and critical climate mitigating ecosystems.
- Examine alternatives away from new mining such as circular economy initiatives focused on improving recycling of already mined metals, sourcing metals from waste, and overall materials efficiency.

7.6 Propose amendments to the 1995 Philippine Mining Act which include policy reforms which address the social, environmental and economic impacts of the transition mineral boom

Republic Act 7942, the Philippine Mining Act, has only been updated once since its passing in 1995, as seen in the enactment of Executive Order No. 79⁶. The 1995 Philippine Mining Act remains outdated, failing to address the current issues faced alongside the Fourth Industrial Revolution. It is imperative that the 1995 Philippine Mining Act be reformed with

⁶ The most recent reform within the national mining policy is seen in Executive Order (EO) No. 79, enacted in 2012. EO 79 enabled the creation of the Mining Industry Coordinating Council (MICC), which monitors proposed no-go zones in areas that are off-limits to mining activities. However, the effectiveness of the implementation of provisions within EO 79 and the monitoring of MICCs to ensure protection of reserved agricultural, eco-tourism, protected landscapes, and seascapes remains weakly enforced.



updated regulations that align with the social, environmental, and economic issues concerning the transition mineral boom.

The most recent mining reform proposal, House Bill 8937, the Mining Fiscal Regime Bill, was discussed in the House of Representatives in September 2023. The proposed HB 8937 effectively reduces the host communities' revenue share, jeopardizes public sector goals for the country's development and protection against harmful environmental and social threats from mining operations, prioritizes profit maximization over the needs of the public, and creates a regulatory environment for rife mining. Alongside the transition mineral boom, HB 8937 is a serious threat, especially given the current tax laws that have reduced the mining industry's GDP contribution to a pitiful 0.7% and caused widespread social and environmental destruction in host mining regions.

Amendments to the 1995 Philippine Mining Act must be enforced to address the contemporary social, environmental, climate, and political landscape of the transition mineral boom, energy transitions towards renewables, and extractive industries in the Philippines. For example, amendments concerning the tax regime must be made to ensure royalties for operations within mineral reservation areas, which are host to the largest reserves of transition minerals such as nickel in the nation, are increased. An increase in royalty tax within mineral reservation areas will enable the Filipino government and its citizens to reap the economic benefits derived from the exploitation of transition minerals in the nation.

Furthermore, the 2023 Philippine Development Plan must give priority to the nation's finite transition mineral resources for industrialization and development rather than its current push for market liberalization. The monitoring and assessment of the transition minerals in the Philippines should go hand in hand with the country's commitments to renewable energy in terms of the national climate. The country should have a reliable supply of the raw materials required for the green energy commitments outlined in the Renewable Energy and Philippine Energy Plan and NDCs.

7.7 Champion the Alternative Mineral Mining Bill (AMMB) to replace the 1995 Philippine Mining Act

We recommend the enactment of the Alternative Minerals Mining Bill, with its current iteration inclusive of JET and JMT principles, to replace the outdated 1995 Philippine Mining Act. The AMMB remains a promising revitalized mining policy that strays away from the 1995 Philippine Mining Act's current extractivist, neoliberal-oriented approaches. For over a decade, civil society in the Philippines has been lobbying to replace the 1995 Mining Act with the Alternative Minerals Mining Bill (AMMB), also known as House Bill 984 (Legal Rights & Natural Resources Center, 2012). AMMB proposes transformative changes within the current mining regime by weighing the need for minerals against environmental, social, and economic factors alongside climate justice and national industrialization frameworks. A bill filed by Senator Risa Hontiveros has been on hold at the Senate's environmental committee since July 2022 (Cabico, 2023).

7.8 Research on the impacts of the transition mineral boom on climate-vulnerable communities hosting the raw materials necessary for a low-carbon future

Despite numerous studies of themes independently and bilaterally on climate change and mining, a knowledge gap remains that fails to address the compounding and intersecting relationship between extractive industries, the transition mineral boom, the climate crisis, and host communities in the Philippines.

Action-oriented research, which aims to generate knowledge and strengthen understanding of the upstream and downstream impacts of transition mineral mining (TMM) on climate-


vulnerable communities that host the raw materials necessary for green technologies, remains necessary. Studies should be aimed at generating information and data that will build capacity amongst host communities, local government units, and concerned agencies to strengthen advocacy and foster space for host community contribution within Just Energy Transitions decision-making at the local, national, and global level.

Moreover, associated research should amplify and demand accountability concerning current injustices experienced by mining communities pre-energy transition, to ensure that previous and current unresolved community-based mining issues will not be forgotten and that mining industries and governments will not use Just Energy Transition discourse to justify the expansion of mining operations in climate-vulnerable areas.


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