

**REACTION: PIDS STUDY ENTITLED
“*IMPLICATIONS OF LIFTING THE
OPEN-PIT MINING BAN IN THE
PHILIPPINES*”**

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Policy Note: Environmental Disasters caused by Open Pit Mining

Table 1. Environmental disasters caused by open-pit mining operations

Mining Company	Province	Incident
Marcopper Mining	Marinduque	Tailings dam breach at the operating mine in 1993. The resulting spill discharged approximately 3M tons of tailings into the Mogpog and Boac rivers for over 16 years. The collapse directly affected 15–20k residents with heavy metal poisoning. A comprehensive EIA for using mined-out pits as waste storage could have allowed regulators and mine planners to mitigate or prevent the collapse.
Palawan Quicksilver Mines	Puerto Princesa, Palawan	The mine operated between 1955 and 1976 with a 3-ha pit lake area. Degrees of mercury poisoning still affect residents living in nearby villages.
Dizon Copper Silver Mines	San Marcelino, Zambales	The Tailings storage facility collapsed at the nonoperating mine on August 27, 2012, affecting Mapanuepe Lake and Sto. Tomas River. Mine waste flooding forced around 250 families in low-lying villages to evacuate.
Philex Mining Corp.	Itogon, Benguet	The Tailings storage facility breached at the operating underground mine in August 2012. Around 20.6 million tons of tailing spilled into the 2.5 km Balog Creek, which flows into Agno River. The company was fined PHP 1 billion.
Benguet Corp.	Itogon, Benguet	Tailings pond breach at the nonoperating pit mine in October 2016. Mine tailings of around 50,000 tons discharged into Liang, Amalanga, and Agno Rivers. The company was fined PHP 24 million.

km = kilometer; ha = hectare; PHP = Philippine peso

Most of the incidents presented cannot be attributed to the use of the open pit method of mining per se. Major issues concerning open-pit mining method are related to the containment of tailings, and most accidental spillage from open-pit mines are attributable to the failure in the management of tailings storage facility and not the use of the open pit mining method.

Philex Mining Corp. and Benguet Corp. both in Itogon, Benguet, which were included in the table presented are not open pit mining operations.

ISSUE/CONCERN	COMMENTS
<p>Findings (Policy Note)</p> <p>The open-pit mining ban that took effect in April 2017 was meant to protect the country's unique biodiversity and prevent environmental degradation.</p>	<p>Since the lifting of the open pit ban, the Department of Environment and Natural Resources (DENR) has issued important policies to ensure that environmental protection is not compromised.</p> <p>One notable policy is Department Administrative Order (DAO) No. 2022-04 or <i>Enhancing Biodiversity Conservation and Protection in Mining Operations</i>. This policy which promotes responsible mining through the integration of biodiversity management in all stages of mining operation. It aims to provide adequate measures for responsible mining towards ensuring biodiversity conservation and protection including progressive and final rehabilitation of mined-out areas. It also aims to minimize negative impacts on biodiversity and ensure its conservation of biodiversity, thereby promoting the sustainable development and utilization of the country's natural and mineral resources.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p>Policy tools and instruments</p> <p>No environmental and social cost indicators (cost items such as biodiversity, human anthropogenic activities, health and safety, detailed future foregone livelihood, etc.), monetary or otherwise, against which to assess the acceptability or non-acceptability of mining projects.</p> <p>Non-monetary sustainability metrics and indicators must be established</p>	<p>A draft DAO on the adoption, use, and establishment of Natural Capital Accounting in the DENR is currently under review.</p> <p>The draft DAO aims to provide guidelines and mechanisms for the implementation of Natural Capital Accounting within the DENR. It recognizes the importance of valuing and accounting for natural resources and ecosystems in decision-making processes related to environmental management, conservation, and sustainable development.</p> <p>It will provide guidance on data collection, valuation techniques, integration of natural capital accounting with existing economic and environmental accounting systems, and reporting mechanisms.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
Policy tools and instruments: Sufficiency of laws and consistency of policies	<p>The Philippines has one of the most stringent laws, rules and regulations when it comes to mining. There are enough environmental, safety, economic and social safeguards as required by the various mining and environmental laws. The government, however, acknowledges that there is always room for improvement when it comes to policy-making and implementation. Hence, the DENR is in the continuous process of improving and updating our policies, and bridging the gap between policy-making and implementation, to better protect the people and environment. One concrete example is after the MICC Review Phases 1 and 2, the DENR considered the recommendations from the various experts which served as one of the guides in crafting new policies in the public interest.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p>Policy tools and instruments: Sufficiency of laws and consistency of policies</p> <p>Since 2012, the Philippine’s Policy Perception index has always been below the median of the consolidated scores of all jurisdictions being compared each year.</p> <p>As per Fraser Institute Annual Survey of Mining Companies for 2021: This year, the Philippines is the lowest-ranking jurisdiction in Oceania when considering policy alone and second to last in the global ranking (83rd out of 84). All respondents indicated that the uncertainty concerning environmental regulations, regulatory duplication, and inconsistencies, the country’s legal system, its taxation regime, the uncertainty concerning disputed land claims, its political stability, and security were all policy factors that deter investment.</p>	<p>The reported survey is a good tool for benchmarking. However, it was observed that the said survey did not consistently achieve at least five (5) respondents for the jurisdiction of the Philippines. While we consider the results valid, we believe that a larger pool of respondents would have better captured the perception of mining industry stakeholders’ players.</p> <p>MICC has also produced reports like the survey mentioned. However, it may also serve as an opportunity to improve the study.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p>Policy tools and instruments: Capacity to enforce mining laws and environmental regulations</p> <p>If the government has the capability to regulate the mining industry, then it seems that the government itself is not consistent in following the very law it should be enforcing. (Referring to the vetoed resolution of the board of South Cotabato to the approval of the lifting of the provincial ban on open pit mining; legal basis of LGU Code of 1991 versus RA 7942)</p>	<p>It is very important that policies and laws are reviewed thoroughly. We also have capable legal advisors and counsel who can guide us in the legalities of certain laws. However, we have no control over the LGU's decision to declare local laws within their jurisdiction. We, however, believe that national laws should take precedence over local ordinances, hence, LGUs should conform to national regulations and policies.</p> <p>In the case of South Cotabato, the Court of Appeals has issued a ruling on August 22, 2022, declaring the open-pit ban in South Cotabato to be valid, but its application is limited to small-scale mining operations. In addition, large-scale open-pit mining operations are vested in the national government under RA 7942.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p>Policy tools and instruments: Capacity to enforce mining laws and environmental regulations</p> <p>The government lacks the capacity to validate assessments and studies that only proponents can accomplish within allowable timeframes (e.g., water resource studies, tailings storage design studies).</p>	<p>It is the goal of the Bureau to strengthen institutional capacity and enhance the technical knowledge and capability of its personnel by assisting and encouraging them to pursue further studies through scholarships with partner institutions, with the goal of producing enough experts within the organization who will be capable of conducting highly technical activities, without the need to outsource.</p> <p>The DENR-MGB is also currently strengthening institutional linkages with international organizations such as Japan Organization for Metals and Energy Security (JOGMEC), Korea Mine Reclamation Corp. (KOMIR), Energy Resource Governance Initiative (ERGI), etc. to provide our personnel the necessary capability training and technical support.</p>

Development Perspectives on Open-Pit Mining

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<p data-bbox="91 282 996 458">Policy tools and instruments: Capacity to enforce mining laws and environmental regulations</p> <p data-bbox="91 536 1021 836">The government lacks the capacity to validate assessments and studies that only proponents can accomplish within allowable timeframes (e.g., water resource studies, tailings storage design studies).</p>	<p data-bbox="1082 282 2440 708">The Bureau also aims to address the uneven distribution of regular positions across MGB Regional Offices (ROs). Since each office is given about the same number of technical positions, regardless of the number of regulated mines, some ROs are spread too thin, which may have implications on the performance of the agency's technical staff directly involved in actual regulation work.</p> <p data-bbox="1082 786 2440 1022">The MGB is currently seeking DBM's approval of its submitted rationalization program to ensure that organizational structure and staffing is appropriate and would support the identified core functions of the Bureau.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
Policy tools and instruments: Low penalties and violations	<p>Currently, a comprehensive review and preparation are underway for the proposed amendment to RA No. 7942, along with its Implementing Rules and Regulations (IRR), with the intention of addressing overlapping and outdated provisions.</p> <p>Noteworthy amendments being considered include the augmentation of fines and penalties to align them with the severity of the violations committed. By updating these provisions, we aim to ensure a more robust regulatory framework that effectively addresses the evolving challenges in the mining industry.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p data-bbox="89 282 955 392">Policy tools and instruments: Justifying suspensions, cancelations, or bans</p> <p data-bbox="89 472 1049 835">The contradiction of decisions between regulator-agencies regulatory agencies, local government units, and even offices within the same agency does not help boost investor confidence but is frustratingly happening.</p> <p data-bbox="89 915 942 1092">The distinction of the grounds to justify either cancellation or suspension is not specifically established.</p>	<p data-bbox="1080 282 2448 772">To enhance clarity and eliminate any potential ambiguity, one of the proposed revisions to RA 7942 and its Implementing Rules and Regulations is to establish a clear distinction between the cancellation and suspension of contracts and permits. This amendment aims to provide a precise framework that delineates the specific consequences and implications of each action, ensuring a more transparent and unambiguous regulatory environment.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p>Policy tools and instruments: Transparency</p> <p>It may seem that there are more constructive options or better version of the law could have been possible should the objectives and resolutions be discussed with key stakeholders in a more transparent way.</p>	<p>On August 23, 2017, the Mining Industry Coordinating Council (MICC), in its 27th Meeting, instructed its Technical Working Groups (TWG) on Economic Concerns and Environmental Protection and Legislation to deliberate on the (a) legal, technical, environmental, social, and economic aspects of DAO No. 2017-10; and (b) measures to strengthen the enforcement of existing laws, regulations and contracts related to open pit mining.</p> <p>A series of consultative meetings with the TWGs, mining experts and key stakeholders were convened to better understand the pros and cons of the open pit mining ban.</p> <p>Nonetheless, policies are dynamic and the DENR is always open to suggestions, insights and other inputs from stakeholders. Policies can always be improved and revised to ensure that all important issues and concerns will be taken into consideration during the policy-making process.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
<p>Economic Contributions: Expected government revenues from mining</p> <p>But due to non-existence of a common database that allows inter-agency access, a compilation that suits industry performance and related study objectives must be performed manually by the study proponents themselves.</p>	<p>The MGB is slowly working with digitalizing report submissions and database generation. Collaborations with other agencies have been established and harmonizing data and information is one of the priority activities of the Bureau.</p>

Development Perspectives on Open-Pit Mining

ISSUE/CONCERN	COMMENTS
Economic Contributions: Prospective benefits: operating and stalled projects	<p>Through the lifting of the ban on open pit mining, eleven (11) pending projects can readily commence development, and ultimately generate PhP11 billion in yearly government revenue, increase annual exports by PhP36 billion, and generate employment for 22, 880 people in remote municipalities.</p> <p>Three notable large-scale metallic projects alone- the Tampakan Copper-Gold Project, the King-King Copper-Gold Project, and the Silangan Copper-Gold Project will make possible an estimated PhP250 billion worth of required investments and increase the mining industry's contribution to the GDP by 1.5%. These notable open pit mining projects are targeted to propel the economy upon their ready commencement for development and utilization stage.</p>

Development Perspectives on Open-Pit Mining

Economic Indicator	Sagittarius Mines, Inc.	Silangan Mindanao Mining Company, Inc.	Kingking Mining Corporation
Number of jobs generated (direct and downstream economy)	1,800	2,400	820
Government revenue	PhP372 Billion (\$6.642 Billion)*	PhP11.82 Billion (\$211.07 Million)*	PhP60 Billion (\$1.07 Billion)*
Export Value	PhP1.73 Trillion (\$30.89 Billion)*	PhP170.48 Billion (\$3.04 Billion)*	PhP317 Billion (\$5.66 Billion)*

**Exchange rate of \$1=PhP56*

Development Perspectives on Open-Pit Mining

In terms of the financial obligations, the big 3 mining projects will implement their respective plans and programs for Safety and Health, Environmental and Social Development (SHES) Management as commitment pursuant to DAO No. 2010-21, IRR of Philippine Mining Act of 1995:

Plan/Program	Sagittarius Mines, Inc.	Silangan Mindanao Mining Company, Inc.	Kingking Mining Corporation
Safety and Health Program (Annual)	PhP2,291,658.36 (\$ 41,153.97)*	PhP280,000.00 (\$5,028.28)*	PhP1,041,000.00 (\$18,694.44)*
Environmental Protection and Enhancement Program (EPEP)	PhP25.8 Billion (\$460.71 Million)* COA No. 168-2020-11 dated September 21, 2020	PhP1.31 Billion (\$23.41 Million)* COA No. 153-2019 –15 dated September 23, 2019	PhP7.27 Billion (\$129.9 Million)* COA No. 199-2022-03 dated January 05, 2018
Final Mine Rehabilitation and/or Decommissioning Plan	PhP14.29 Billion (\$255.16 Million)*	PhP149.11 Million (\$2.66 Million)*	PhP1.43 Billion (\$25.56 Million)*
Social Development Management (5-Year SDMP)	PhP125,684,434.00 (\$2.244 Million)* COA No. 011-2021-01XII (Amended) dated January 18, 2022	PhP786,489,600.00 (\$14.044 Million)* COA No. RXIII-SDMP-2019-002 dated April 30, 2019	PhP193,000,000.00 (\$3.446 Million)* COA No. 009-2015-01XI –1 st dated January 16, 2015

*Exchange rate of \$1=PhP56

Socioeconomic and Environmental Implications

ISSUE/CONCERN	COMMENTS
<p>Socioeconomic considerations</p> <p>Social programs and livelihood projects do not tap into local development plans despite SDMP's capacity to address a locality's urgent needs</p> <p>No single repository or database that compiles all relevant information used for timely and sounder decision making, i.e., complete accounting and fair distribution of wealth.</p> <p>Other critical information missing is closure guidelines and appropriate metrics to better measure and compare the conditions of host communities over the years.</p>	<p>In practice, there may be challenges in effectively integrating SDMPs with local development plans.</p> <p>One challenge is the coordination and collaboration between mining companies, local government units, and communities. There may be gaps in communication and understanding of each other's priorities and objectives. In some cases, SDMPs may not fully align with the specific goals and strategies outlined in local development plans, leading to a disconnect between the two.</p>

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Socioeconomic and Environmental Implications

ISSUE/CONCERN	COMMENTS
<p>Indigenous Peoples</p> <p>Lifting the moratorium facilitates higher benefits, but it also elevates the need to ensure the same tenets of accountability, traceability, and welfare in the IP/ICC Sector</p>	<p>With or without the lifting of the open-pit mining ban, the MGB agrees that it is imperative to ensure that the same principles of accountability, traceability, and welfare are upheld within the IP/ICC Sector. Hence, the government shall ensure that robust mechanisms and regulations that prioritize the protection of the rights and well-being of indigenous peoples and local communities are implemented through effective monitoring and reporting mechanisms, as well as stringent enforcement of existing environmental and social safeguards.</p>

Socioeconomic and Environmental Implications

ISSUE/CONCERN	COMMENTS
<p>Sustainable development</p> <p>Without the contribution of minerals and metals which fuel the manufacturing sector and create jobs and value added along the supply chains of products, many of the SDGs set by the UN for 2030 could not be reached; however, at the same time, production of mineral raw materials can yield to negative environmental and social impacts, restricting the achievement of other SDGs such as climate action, good health, and clean water.</p>	<p>The Philippine government has implemented various laws and regulations to govern the mining sector and protect the environment, such as the Philippine Mining Act of 1995 and subsequent updates and regulations.</p> <p>Efforts have also been made to promote responsible mining practices, including the requirement for environmental impact assessments, the establishment of mining rehabilitation funds, and the implementation of social development programs.</p> <p>Partnerships and dialogues between mining companies, government agencies, civil society organizations, and affected communities are being encouraged to foster transparency, accountability, and stakeholder engagement.</p>

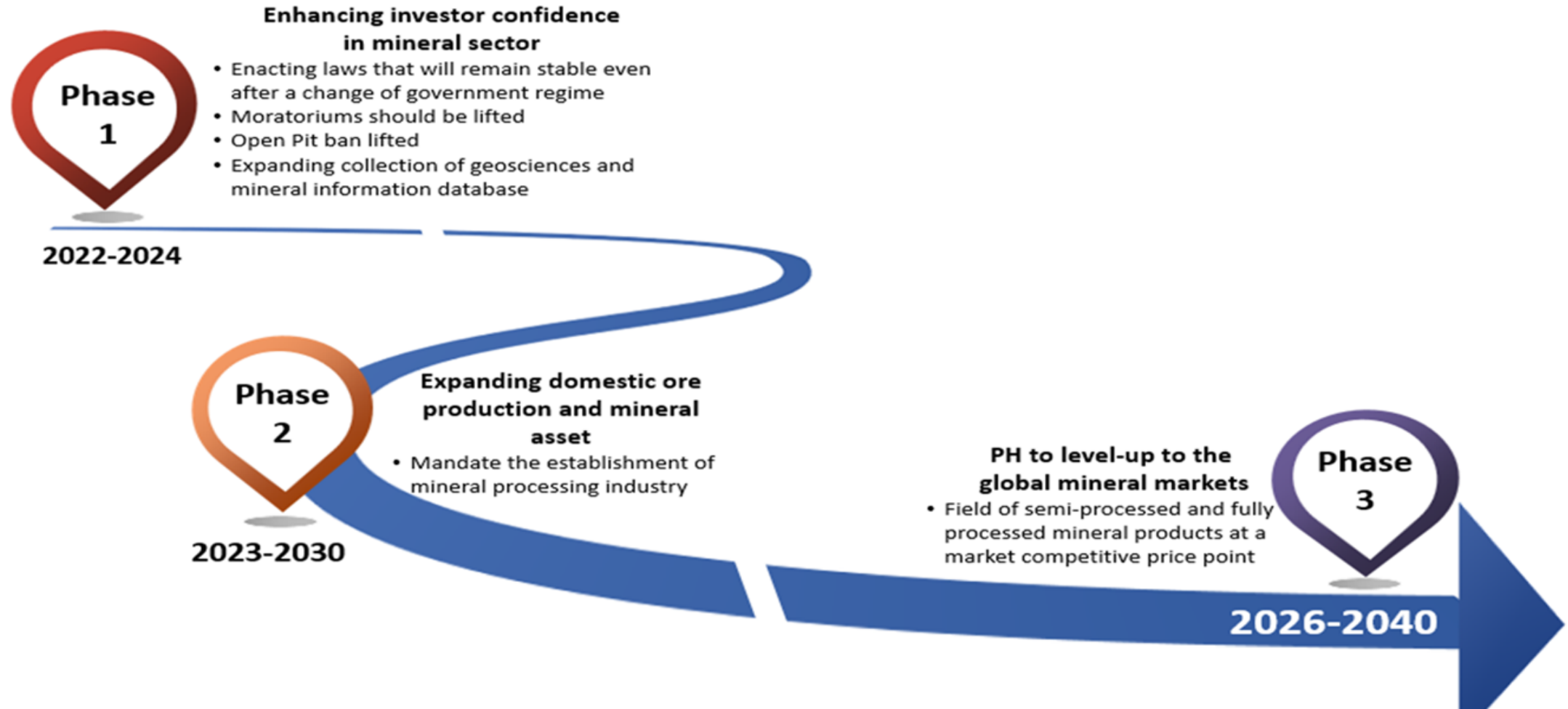
Socioeconomic and Environmental Implications

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Socioeconomic and Environmental Implications

ISSUE/CONCERN	COMMENTS
<p>Value addition</p> <p>The opportunity to produce higher value products from nickel ore is obvious.</p>	<p>As a way forward, the DENR formulated the Philippine Mineral Industry Roadmap which sets the strategic direction of the Philippine mining sector. This roadmap is currently divided into 3 phases:</p> <ol style="list-style-type: none"><li data-bbox="1082 582 2461 696">1. Enhancing investor confidence in the mineral sector (2022-2024);<li data-bbox="1082 711 2372 825">2. Expanding domestic ore production and mineral assets (2023-2030); and<li data-bbox="1082 839 2313 953">3. Philippines to level-up to the global mineral markets (2026-2040).

CHALLENGES AND STRATEGIC DIRECTION OF THE PHILIPPINE MINING SECTOR



Philippine Mining Industry Roadmap

Phase 1 2022-2024

- Design mineral extraction that minimizes environmental footprint
- Identify new mineral reserves and use technology for decision support platform

Phase 2 2023-2030

- Bid out national government mining assets within three years
- Develop and expand support infrastructure going to mineralized areas (roads, power, rails, communication technology etc.)
- Construction of modular processing plants for value addition in the minerals sector
- Conduct researches on the re-use of mining waste and tailings for other industry use, mine rehabilitation, and acid mine drainage management
- Integrate and formalize the small-scale mining sector to the industry
- Implement strictly the Safety and Health Program, Environmental Protection and Enhancement Program, Final Mine Rehabilitation and/or Decommissioning Plan and Social Development Management Program

Phase 3 2026-2040

- Mandate the establishment of mineral smelting and refining facility to expand export of value-added mineral products
- Mandate the establishment of iron making industry and nickel refineries

VALUE-ADDING AND DOWNSTREAM INDUSTRIES

Intensify inter-agency linkages: DENR-MGB, DTI-BOI, and DOST

- for the identification of gaps within the value chain of mining, processing, and manufacturing.
- for the promotion of a strategic investment priority plan which includes awarding incentives to concerned investors.
- Execution of Harmonized National R&D Agenda 2023-2028 with its Industry, Energy, and Emerging Technologies roadmaps, including the mining & mineral processing sector. Such amplifies the role of R&D as a key aspect in properly managing and utilizing our domestic mineral resources and reducing dependence on imports.

Legislative-support Prioritization (2020-2040 Philippine Mining Industry Roadmap)

- Legislate restrictions on exports, impose an export duty but provide incentives to companies who put up processing plants

MGB PTWG drafted a bill, *“An act on promoting the development of mineral processing and value-adding and in the process gradually/partially restricting the direct shipping of nickel laterite ores, magnetite sand/iron concentrates and other raw metallic ores and for other purposes”*, lobbied to and filed by Rep. Shirlyn L. Bañas-Nogralas as House Bill No. 09775 on July 2021 during the 18th Congress, 3rd Regular Session of the House of Representatives and is still currently for consideration under the Committee on Natural Resources.

The gradual/partial restriction of direct shipping ores is believed to be a win-win strategy compared to a total ban in achieving the objectives of increasing the mining sector's socio-economic impacts and impeding the fast depletion of mineral resources by protecting export earnings while promoting investment in domestic processing facilities.

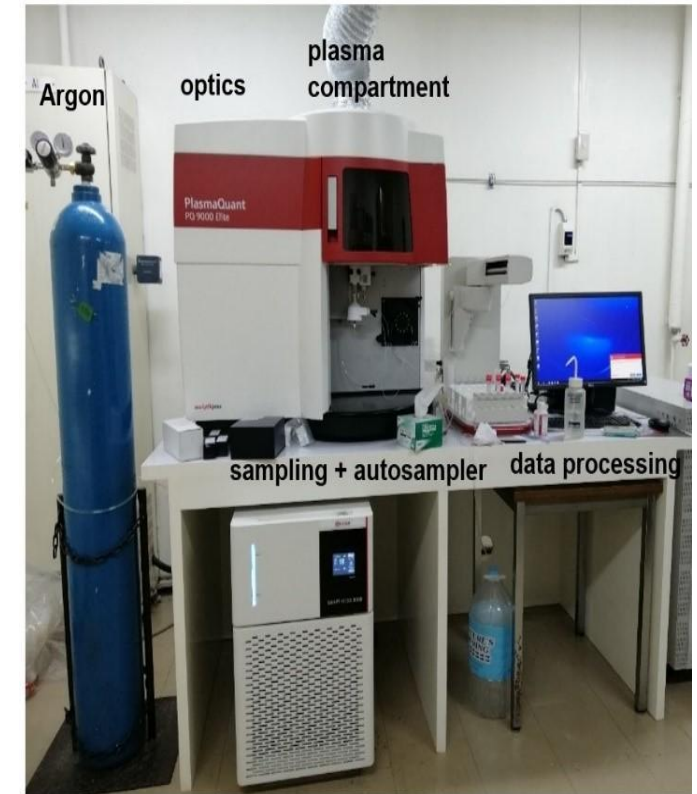
- Reducing the cost of power to reduce the cost of production to one-half of the present cost.

RESEARCH ON VALUE-ADDING MINERALS

MGB is also conducting value-adding research on already identified mineral deposits in the country. This activity includes Rare Earth Elements (REEs) in different deposit types such as laterite deposits, porphyry copper deposits, bauxite deposits and pegmatite intrusions; heavy metals in sand and gravel and dredge fill resources; and possible associated critical minerals in the different mineralized areas in the Philippines. Several exploration activities and geochemical studies have already been conducted to identify the presence of these value-adding minerals. Despite the presence of the identified value-adding minerals in various deposits, these are often not included in the taxed commodities since they are not extracted and are just included in the raw material extracted. Therefore, a policy shall be crafted on the threshold concentration for these value-adding commodities and the corresponding valuation.



Geochemical sampling along the laterite profile for analysis of REEs.



Inductively coupled plasma - optical emission spectroscopy (ICP-OES) of the Geological Laboratory Services Section of MGB which is currently being developed for REE analysis.



Socioeconomic and Environmental Implications

ISSUE/CONCERN	COMMENTS
<p>Value addition</p> <p>The opportunity to produce higher value products from nickel ore is obvious.</p>	<p>The MGB is also currently drafting a national policy on critical minerals, which includes a provision on the establishment of critical mineral processing plants and downstream manufacturing for green technology mineral products. The policy will also mandate the graduated local utilization of processed mineral products and by-products to support the downstream manufacturing sector.</p>

Ways Forward

ISSUE/CONCERN	COMMENTS
Establish sustainability indicators and monitoring and evaluation platforms	<p>A draft DAO (Department Administrative Order) has been prepared to provide additional guidelines for the formulation and implementation of Social Development and Management Programs (SDMPs) in the Philippine mining industry. This draft DAO includes a comprehensive list of indicators aligned with the Sustainable Development Goals (SDGs) and Philippine Development Plan (PDP) goals. These indicators serve as benchmarks to assess the progress and effectiveness of SDMPs.</p> <p>The draft DAO outlines proposed programs, projects, and activities that mining companies are required to implement in order to achieve the established goals. These initiatives are designed to address specific areas of concern and contribute to sustainable development, such as environmental conservation, community development, health and safety, and socio-economic empowerment.</p>

Ways Forward

ISSUE/CONCERN	COMMENTS
Optimize benefits from open pit mines, while addressing ecological integrity	<p>Real-time monitoring of mining activities is already being implemented by certain companies in the Philippines, and there are plans to replicate these monitoring systems across the industry. These initiatives demonstrate a proactive approach towards ensuring responsible and sustainable mining practices.</p> <p>Several mining companies have embraced real-time monitoring technologies and systems to track various aspects of their operations in a continuous and timely manner. By continuously monitoring key indicators in real-time, companies can swiftly identify any deviations from established standards and promptly address potential issues.</p>

Ways Forward

ISSUE/CONCERN	COMMENTS
Optimize benefits from open pit mines, while addressing ecological integrity	<p>The successful implementation of real-time monitoring by pioneering companies serves as a model for others in the industry. Recognizing the benefits and importance of real-time monitoring, efforts are underway to replicate these systems across the mining sector. This includes sharing best practices, providing technical assistance, and facilitating knowledge transfer to ensure that more companies can adopt and benefit from real-time monitoring.</p>

Conclusion

Although economic investments and opportunities, particularly in the aftermath of the COVID-19 pandemic, are often highlighted as a significant rationale and compelling reason for lifting the open-pit mining ban, it is crucial to emphasize that environmental and social concerns will not take a backseat. In fact, cognizant of the prevailing public perception of open-pit mining, the DENR acknowledges the importance of adopting stricter policies and intensifying the monitoring and supervision of mining operations. This commitment stems from our unwavering dedication to safeguarding the well-being of both communities and the environment, which remain our utmost priority.

The DENR also acknowledges that our policies are not perfect and there is always room for improvement and growth. Hence, we welcome and commend studies such as this where we can gather valuable feedbacks and insights from our various experts and stakeholders, as we recognize their importance in helping us craft sound, responsive and science-based policies. By examining diverse perspectives, exploring alternative solutions, and proposing practical recommendations, we are more equipped to finding balanced and sustainable solutions in the field of mining. We believe that it is through open and honest sharing of ideas among stakeholders, and engagement in collaborative endeavors that we can help revitalize the mining industry and steer it towards a more sustainable future.