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GEOLOGY STUDENTS SOCIETY
OF NEGROS ORIENTAL STATE UNIVERSITY

"PHILIPPINE MINERAL RESOURCES AND ITS CURRENT ISSUES"

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| I O T W I ?

KABALO BA KA?

NORSU-GSS Webinar Series 2021

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- **Legal and Institutional Framework**
- Issues Facing the Mining Industry
- Debunking the Myth
- Conclusion

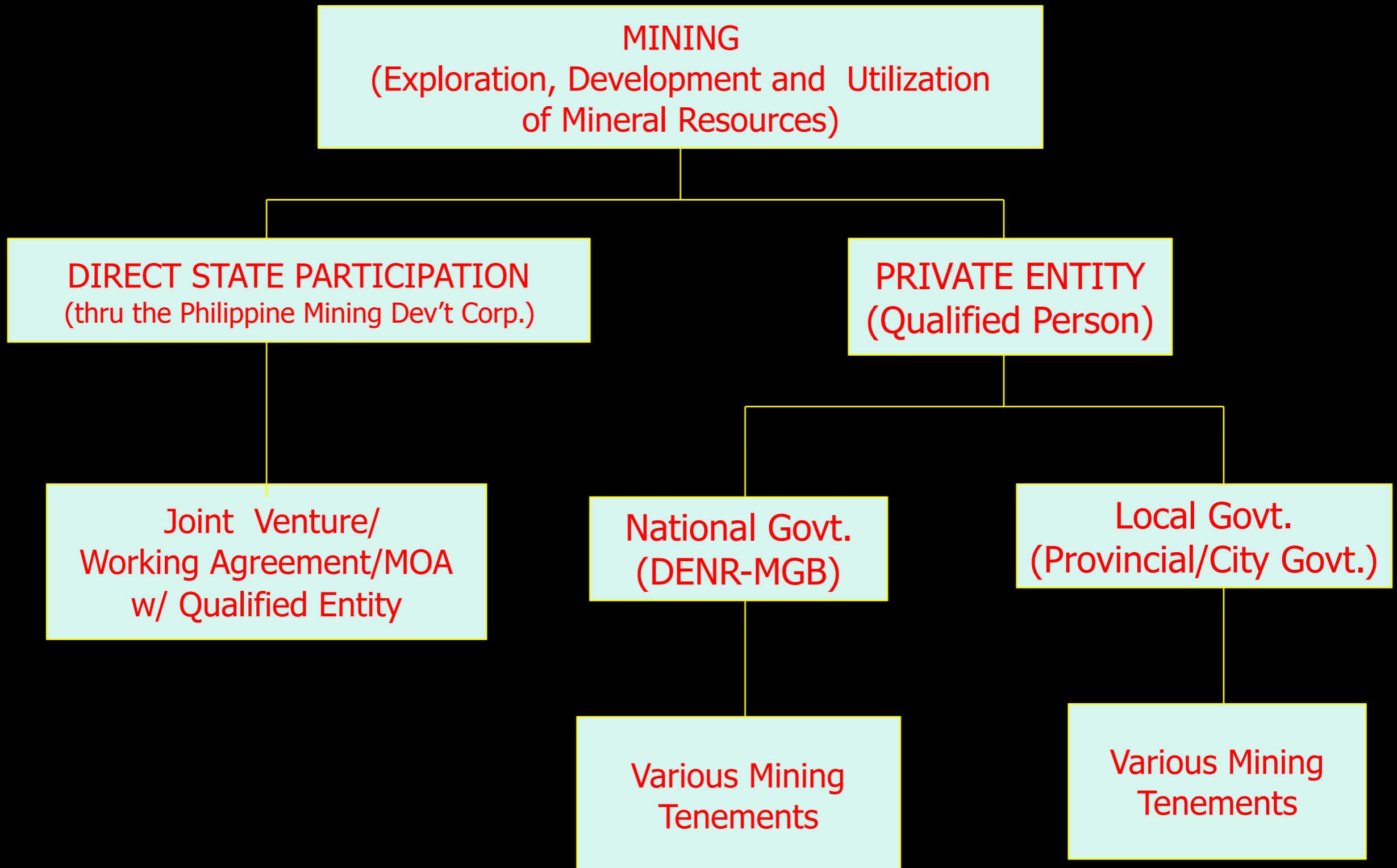
LEGAL AND INSTITUTIONAL FRAMEWORK

- Constitution
- Mining Act of 1995
- Indigenous Peoples Rights Act
- Local Government Code
- Environmental Impact Statement System

CONSTITUTION

- Regalian doctrine - The exploration, development and utilization of these natural resources are under the full control and supervision of the State.
- The State has the option of mining agreements with Philippine citizens or Philippine corporations or associations. At least 60% of the capital of a corporation or association must be owned by Phil. Citizen to qualify as a Philippine corporation or association.
- Exception to the nationality requirement: The Constitution authorizes the President to enter into agreements with foreign-owned corporations involving either financial or technical assistance, for large-scale exploration, development and utilization of minerals, petroleum and other mineral oils.

THE 1987 PHILIPPINE CONSTITUTION



MINING ACT

- Exploration Permit
- Mineral Agreements
 - MPSA
- Financial and Technical Assistance Agreement
- Mineral Processing Permits
- http://www.mgb.gov.ph/images/stories/RA_7942.pdf
- <http://www.mgb.gov.ph/images/stories/CDAO-Final.pdf>

Republic of the Philippines
Congress of the Philippines
Metro Manila

Republic Act No. 7942

**AN ACT INSTITUTING A NEW SYSTEM OF MINERAL
RESOURCES EXPLORATION, DEVELOPMENT, UTILIZATION
AND CONSERVATION**

**CHAPTER I
INTRODUCTORY PROVISIONS**

Section 1. Title. - This act shall be known as the Philippine Mining Act of 1995.

Section 2. Declaration of Policy. - All mineral resources in public and private lands within the territory and exclusive economic zone of the Republic of the Philippines are owned by the State. It shall be the responsibility of the State to promote their rational exploration, development, utilization and conservation through the combined efforts of government and the private sector in order to enhance national growth in a way that effectively safeguards the environment and protect the rights of affected communities.

Section 3. Definition of Terms. - As used in and for purposes of this Act, the following terms, whether in singular or plural, shall mean:

- "Ancestral lands" refers to all lands exclusively and actually possessed, occupied, or utilized by indigenous cultural communities by themselves or through their ancestors in accordance with their customs and traditions since time immemorial, and as may be defined and delineated by law.
- "Block" or "meridional block" means an area bounded by one-half (1/2) minute of latitude and one-half (1/2) minute of longitude, containing approximately eighty-one hectares (81 has).

SMALL-SCALE MINING

- PD 1899 "A Decree Establishing Small Scale Mining As a New Dimension in Mineral Development" allowed local government units to issue mining permits https://mgb.gov.ph/images/stories/PD_1899.pdf
- RA 7076 "People's Small-Scale Mining Act" (1991) mandates that all applications for small scale mining will now be under the approval of the Secretary of the DENR <https://mgb.gov.ph/images/stories/DAO2015-03.pdf>
- PD No. 1899 and RA No. 7076 shall continue to govern small-scale mining operations. For areas not declared as People's Small-Scale Mining area (PSSMA) under RA No. 7076, the pertinent rules and regulations of PD 1899 shall apply.
- PMRB - Accepts, process and evaluate applications and determine administrative charges and fees for Quarry, Sand and Gravel, Small Scale Mining Permits



IMPORTANT LAWS RELATED TO RESOURCES DEVELOPMENT

- Indigenous Peoples Rights Act (“IPRA”) <https://www.officialgazette.gov.ph/1997/10/29/republic-act-no-8371/>
- Environmental Impact Statement (“EIS”) System <http://eia.emb.gov.ph/wp-content/uploads/2016/06/PD-1586.pdf>
- Local Government Code of 1991 <https://www.officialgazette.gov.ph/downloads/1991/10oct/19911010-RA-7160-CCA.pdf>
- National Integrated Protected Areas System Act (“NIPAS”) <https://www.officialgazette.gov.ph/1992/06/01/republic-act-no-7586/>

INDIGENOUS PEOPLES RIGHTS ACT

- Free and prior informed consent
 - right to self determination, respect for IP decision-making process, right to accept or reject projects on ancestral domain



LOCAL GOVERNMENT CODE

- Proponents applying for exploration applications intended for exploration activities are required to conduct consultation with all LGUs concerned, or the legislative councils (*sanggunian*) at the provincial, city/municipal, and barangay levels.



ENVIRONMENTAL COMPLIANCE CERTIFICATE

- Project proponents of environmentally critical projects and projects within environmentally critical areas must obtain an environmental compliance certificate prior to commencement

THE BASICS OF ENVIRONMENTAL IMPACT ASSESSMENT

A PLANNING TOOL FOR ENVIRONMENTALLY SOUND DEVELOPMENT

What's an EIA?

An **ENVIRONMENTAL IMPACT ASSESSMENT** is a process that involves predicting and evaluating the likely impacts of a project (including cumulative impacts) on the environment throughout the length of the project life from construction, commissioning, operation, to abandonment.

Is your project required to have an ECC?
All persons, partnerships, or corporations planning to undertake or operate a project or area should refer to the **Project Thresholds for Coverage Screening and Categorization** in Annex A of EMB Memorandum Circular 2014-005. It has a compiled version of the required document types (CNC, IEE Checklist, or EIS) required by specific project categories and their corresponding parameters.
as mandated by Section 4 of PD 1586

GOVERNING POLICY
PD 1586
The Philippine Environmental Impact Statement System

who are involved in EIA?

- Project Proponent (Owner/ EIA Consultant/ EIA Preparer/ Developer)
- EMB Staff
- Review Committee
- Affected communities

Our issued documents

ECC AN ENVIRONMENTAL COMPLIANCE CERTIFICATE

- Is a decision document issued by EMB after a positive review of an ECC Application
- Is a certification that the proponent has complied with the requirements of the EIS System
- Serves as the proponent's commitment to implement the Environmental Management Plan
- Contains specific measures and conditions the proponent has to comply with
- Is issued after submission of the requirements for IEE Checklist or EIS Document

CNC A CERTIFICATE OF NON-COVERAGE

- Certifies that the project is not covered by the EIS System and is NOT required to secure an ECC
- Is not required by EMB but proponents may secure one, if they are required by other government agencies

Where can you start?
You can go to www.emb7-dnr.com to apply online or give us a visit at the DENR-EMB7

Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU 7

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- Legal and Institutional Framework
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BUSINESS UNUSUAL



MINING INDUSTRY UNDER DUTERTE

- DMO 2016-01, issued on 08 July 2016, mandated the audit of all operating mines and moratorium on new mining projects; The audit strictly covers the environmental, economic, social, legal and technical aspects of the mining operations.
- DAO 2017-10, issued on 27 April 2017, banning the open pit mining method for gold, silver, copper, and complex ores;
- Closure of 28 operating mines and the cancellation of 75 mineral production sharing agreements as they allegedly encroached on watersheds and destroyed marine ecosystems.
- Realignment of Social Development and Management Program Budget raised PHP 402M for COVID-19 response
- The metallic mineral production value ended the year on a positive note with a 1.13% gain from PhP130.74 billion in 2019 to PhP132.21 billion in 2020, a PhP1.47 billion increase.
- Lifting of the moratorium on new mining permits (EO 130); lifting of ban on pit mining in IRR
- Three pending copper developments: Philex's Silangan in Surigao del Norte, Indophil's Tampakan in South Cotabato, and St. Augustine's Kingking in Compostela Valley



“NO TO MINING!”



Legal and Regulatory Issues

Local government units outright refusal of consent

- declaration of mining moratoriums, ban of particular technologies like open pit mining and submarine tailings disposal

Environment

- low level of awareness, understanding and attention, afforded to the complex array of policy, regulatory, technical financing and organizational factors affecting mining projects and their wider economic and environmental benefits.

Foreign ownership

- resource nationalism

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Mining is environmentally destructive

- Mining is not “green” or environmentally friendly.

Fact: Have any of the people who believe this ever reviewed the regulations and licensing requirements for a mine to operate?

That’s not to mention the ongoing checks, reports and submissions to a variety of government departments.

Obviously there are always companies that could have done a better job from an environmental perspective in the past, but in the Philippines, operations are governed by regulations and legislation – and most companies not only comply, but are very keen to do the right thing by the environment.

LEGAL REQUIREMENTS UNDER THE MINING ACT AND ITS IRR

- **Technical and financial qualifications** to engage in large-scale mining in the Philippines;
- **The area being applied for is open and available for mining activities** and is not located within any of the areas where mining is prohibited;
- **An approved ECC**, showing that the impacts of mining in the area can be mitigated and/or remediated through proper environmental protection measures;
- **An approved Project Feasibility Study**, showing that the mine has enough ore reserves to operate profitably, and can give government a fair share in revenues.
- **The endorsement/approval of the local government units** (Province, Municipality/City, and Barangays) that will be impacted by the proposed mining activity;
- **The endorsement/approval of the indigenous peoples**, if the area being applied for is within their ancestral domains.
- **Requirements under EO 79 IRR** - https://mgb.gov.ph/images/stories/DAO_2012-07.pdf

OTHER LAWS RELATED TO RESOURCES DEVELOPMENT

- Ecological Solid Waste Management Act <https://www.officialgazette.gov.ph/2001/01/26/republic-act-no-9003-s-2001/>
- Toxic Substances and Hazardous and Nuclear Wastes Control Act <https://www.officialgazette.gov.ph/1990/10/26/republic-act-no-6969/>
- Clean Air Act <https://emb.gov.ph/wp-content/uploads/2015/09/RA-8749.pdf>
- Clean Water Act <https://emb.gov.ph/wp-content/uploads/2015/09/RA-9275.pdf>
- 1976 Philippine Water Code defines the extent of the rights and obligations of water users <https://www.officialgazette.gov.ph/1976/12/31/presidential-decree-no-1067-s-1976/>
- 1998 Philippine Fisheries Code provides for the sustainable development of fishery and aquatic resources <https://www.officialgazette.gov.ph/1998/02/25/republic-act-no-8550/>
- Pollution Control Law <http://r12.emb.gov.ph/wp-content/uploads/2016/04/presidential-decree-no984.pdf>
- National Environmental User's Fee of 2002 https://mgb.gov.ph/images/stories/DAO_2002-16.pdf
- Palawan Council for Sustainable Development <http://extwprlegs1.fao.org/docs/html/phi19797.htm>
- Incentives granted by the Board of Investments (BOI) pursuant to Executive Order No. 226, otherwise known as the Omnibus Investments Code of 1987 <https://boi.gov.ph/wp-content/uploads/2018/02/EO-226-omnibus-investments-code.pdf>

Mining is environmentally destructive

- Nearly all of the Philippines is covered with applications and titles for mining.

Fact: Mineral titles only apply to 2.42% of the Philippine total land area, a figure that has remained steady for more a long period of time because of the mining application moratorium. Only a tiny proportion is actually disturbed by exploration activities and eventually ends up as an operating mine. However, it should be emphasized that said area is still subject to the mandatory relinquishment by contractors provided by law.



DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MINES AND GEOSCIENCES BUREAU
MINERALS INDUSTRY AT A GLANCE

Philippine Total Land Area

30 Million has.

High Mineral Potential

9 Million has.

727,372.1818 has.

or ONLY 2.42%

of the Philippine total land area
is covered by mining tenements
as of May 31, 2020



**OPERATING MINES
AND QUARRIES 2020**

50 metallic mines
54 non-metallic mines
5 processing plants
3,389 LGU Issued Permits

Mining is environmentally destructive

- **Nowhere is sacred. Nowhere is safe.**

Fact: Mining operations cannot happen in areas identified under the law. Every project is subject to a detailed assessment under the Environmental Impact Statement System under PD 1586 and if they don't meet the strict criteria set out to minimize any impacts on the environment then they are not approved.

Areas for Mining under the Mining Act of 1995

Areas Open to Mining Operations

- all mineral resources in public or private lands, including timber or forestlands as defined in existing laws

Areas Closed to Mining Operations

- a. In military and other government reservations, except upon prior written clearance by the government agency concerned;
- b. Near or under public or private buildings, cemeteries, archeological and historic sites, bridges, highways, waterways, railroads, reservoirs, dams or other infrastructure projects, public or private works including plantations or valuable crops, except upon written consent of the government agency or private entity concerned;
- c. In areas covered by valid and existing mining rights;
- d. In areas expressly prohibited by law;
- e. In areas covered by small-scale miners as defined by law unless with prior consent of the small-scale miners
- f. Old growth or virgin forests, proclaimed watershed forest reserves, wilderness areas, mangrove forests, mossy forests, national parks provincial/municipal forests, parks, greenbelts, game refuge and bird sanctuaries as defined by law and in areas expressly prohibited under the National Integrated Protected Areas System (NIPAS) under Republic Act No. 7586, Department Administrative Order No. 25, series of 1992 and other laws.

EXECUTIVE ORDER NO.79

Areas closed to mining applications – In addition to the areas declared Mining Act and NIPAS Act, the EO disallows applications for mineral contracts, in:

- prime agricultural lands, in addition to lands covered by the Comprehensive Agrarian Reform Law of 1988, including plantations and areas devoted to valuable crops;
- strategic agriculture and fisheries development zones, fish refuge and sanctuaries declared as such by the Secretary of the Department of Agriculture;
- tourism development areas as identified in the National Tourism Development Plan; and
- other critical areas, island ecosystems, and impact areas of mining as determined by current and existing mapping technologies, that the DENR may identify pursuant to existing laws, rules, and regulations, such as but not limited to the NIPAS Act.

Mining is environmentally destructive

- Water supplies should not be put at risk by mining.

Fact: Impacts on water are a central element of the assessment of mining projects by the government. All mining proposals are required to prepare detailed water studies that are independently assessed by government agencies and scientists. Mineral exploration drilling involves the same or very similar techniques to water bore drilling. All drilling requires government licenses, which include specific requirements to protect aquifers.

NATIONAL WATER RESOURCES BOARD

PERMIT UNDER PD 1067

- Authorizes water extraction from surface and groundwater sources
- Application should define the projected annual consumption and source/s of water and competing uses
- Application fee is PhP 7,200 per permit / well / surface extraction point
- Annual water charges is PhP5,000 plus a fee ranging from P12.30 to P30.55/liter/second

Mining is environmentally destructive

- Land is useless when mining is finished.

Fact: Before any mine is started a rehabilitation plan must be submitted and approved by the government. All disturbance must be rehabilitated and environmental funds created and lodged to ensure all rehabilitation is completed to specified standards.

UNDER THE MINING ACT, COMPANIES ARE REQUIRED TO FUND/DEPOSIT TO THE FOLLOWING ENVIRONMENTAL PROTECTION MEASURES:

- Environmental Protection and Enhancement Program
- Annual Environmental Protection and Enhancement Program
- Contingent Liability and Rehabilitation Fund
 - Monitoring Trust Fund
 - Rehabilitation Cash Fund
 - Environmental Trust Fund
 - Mine Waste and Tailings Fees Reserve Fund
 - Final Mine Rehabilitation and Decommissioning Fund

Local communities do not benefit from mining

- Mining companies don't pay enough taxes.

Fact:

PhP15.47 Billion - Amount of national and local taxes, fees and royalties that the minerals industry generated and contributed to the Philippine economy in 2019.

190,000 - Workers currently employed in the minerals industry in 2019. While estimates vary, it is conservatively assumed that for every job in the industry, about four indirect jobs may be generated in the upstream and downstream sectors.

Local communities do not benefit from mining

- Land owners have no rights.

Fact: Mining companies can't compulsorily acquire property (there are no provisions in any legislation that allow for this). Land owners can refuse mining on the surface of their land where it contains agricultural land or other significant improvements. Land owners can negotiate the terms of exploration on their land. Their land cannot be accessed for exploration before an agreement between explorers and landholders is reached. This also applies to ancestral land and domains of indigenous peoples.

Royalties

Free and Prior Consent of Indigenous Peoples/Indigenous Cultural Communities (IPs/ICC) for Mining Operations within Ancestral Domains

- ♦ **not less than 1% of the value of the gross output** of minerals sold in favor of IPs/ICCs if mining operations are conducted within ancestral lands/domains

Small-scale Miners

- ♦ over areas covered by small-scale miners, the contractor shall pay royalties to the concerned small-scale miners upon utilization of the minerals **depending on the agreement with small-scale miners**

Landowners/mining tenement owners

- ♦ Mining operations within private property are **subject to negotiations** between the landowner/tenement holders and the mining companies

Local communities do not benefit from mining

- **Mining companies don't care about their social impact.**

Fact: The last 10 years have been a time of social revolution and seen the rise of a 'social license to operate' for all businesses. There is now an expectation on mining companies to demonstrate social responsibility in a whole range of ways, beyond just providing employment and paying taxes. It is expected that local and indigenous communities, most impacted by mining activities, derive direct and sustainable benefits from their mineral wealth. Positive social outcomes from mining include increased employment for local people, support for local businesses, training and educational initiatives for local communities, and co-creation and collaboration on community development projects.

Mining is a sunset industry

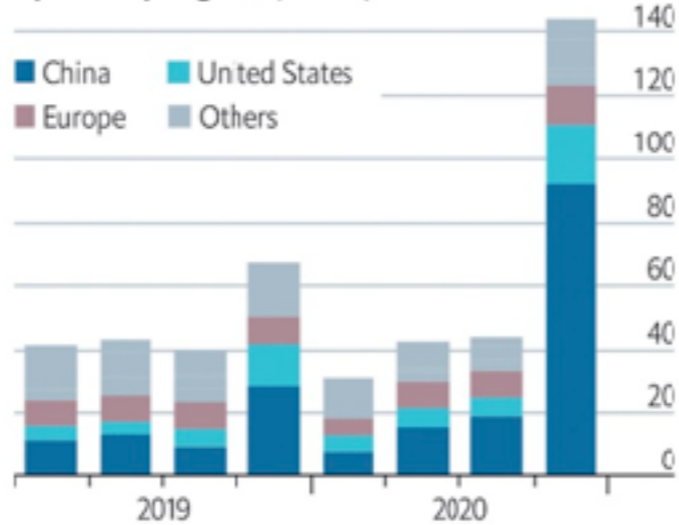
- Renewable energy means the end of mining.

Fact: The transition to renewable energy production and the need to reduce greenhouse gas emissions is effecting the introduction of new clean coal mines, but other areas of mining are set to reap substantial benefits. The move to renewable energy sources presents opportunities for mining and the production of minerals used in the technologies associated with clean energy production.

Green shoots

World, renewable energy capacity additions, MW

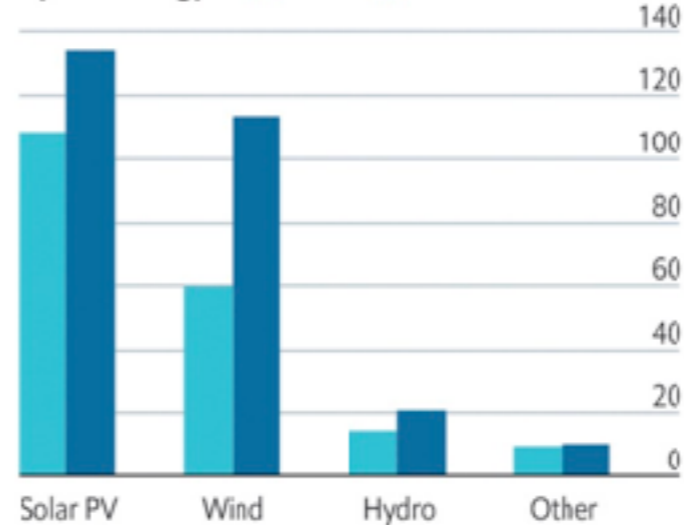
By country/region, quarterly



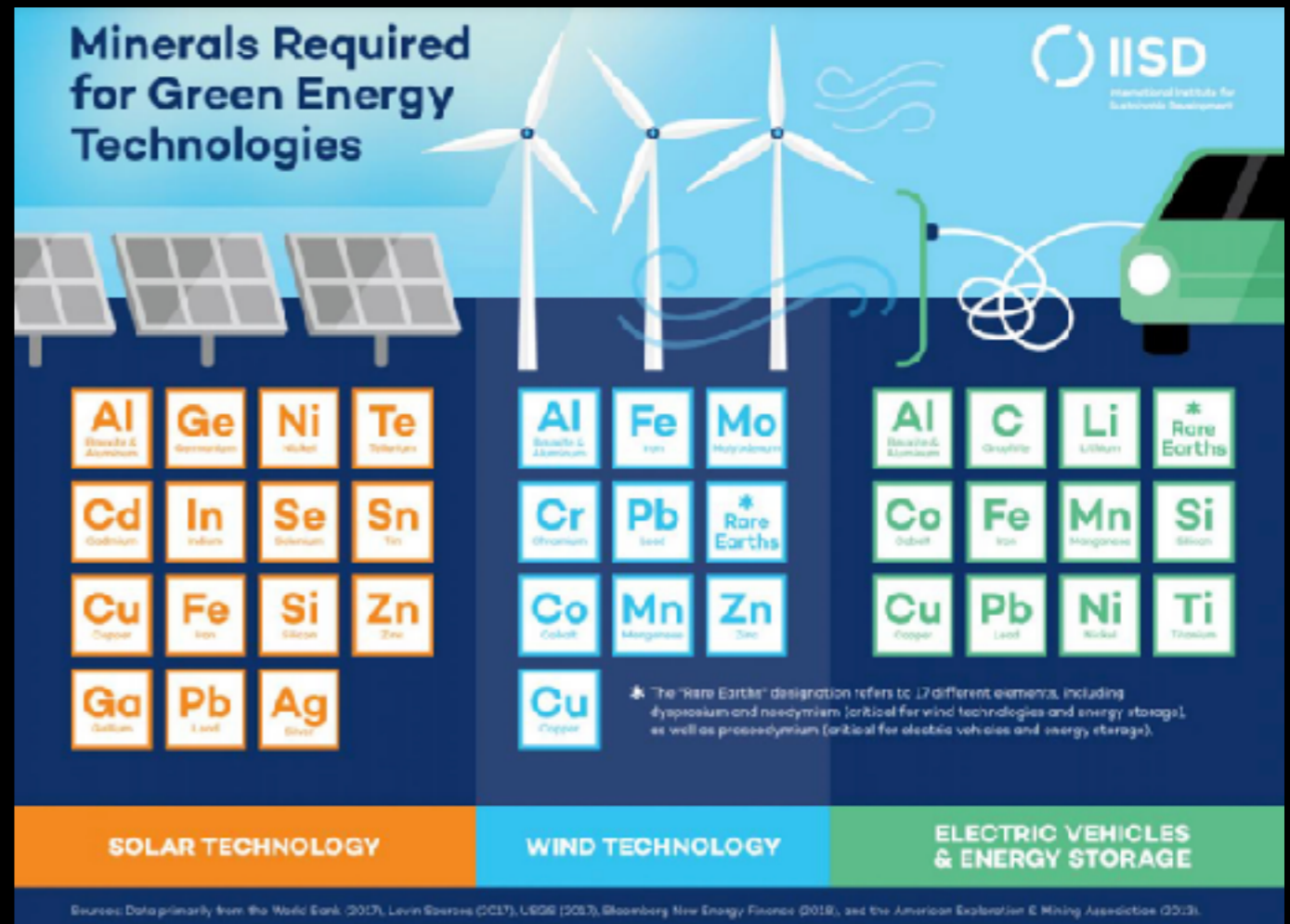
Source: IEA

The Economist

By technology

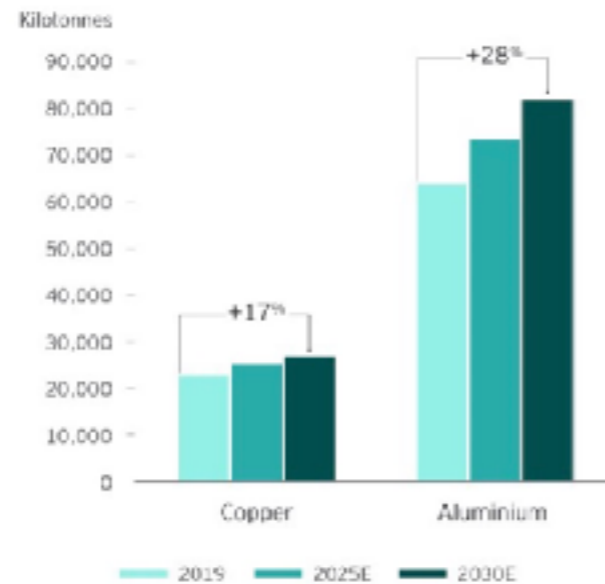


Over 3 billion tons of minerals and metals will be needed to deploy wind, solar and geothermal power, as well as energy storage, required for achieving a below 2°C future in accordance with Paris Agreement/COP21.

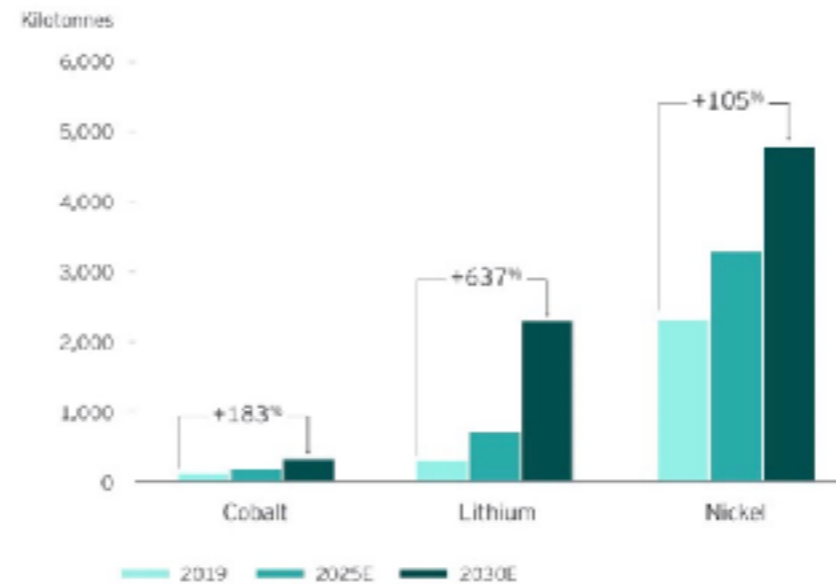


Rising commodity demand (kilotonnes)

Copper and aluminium

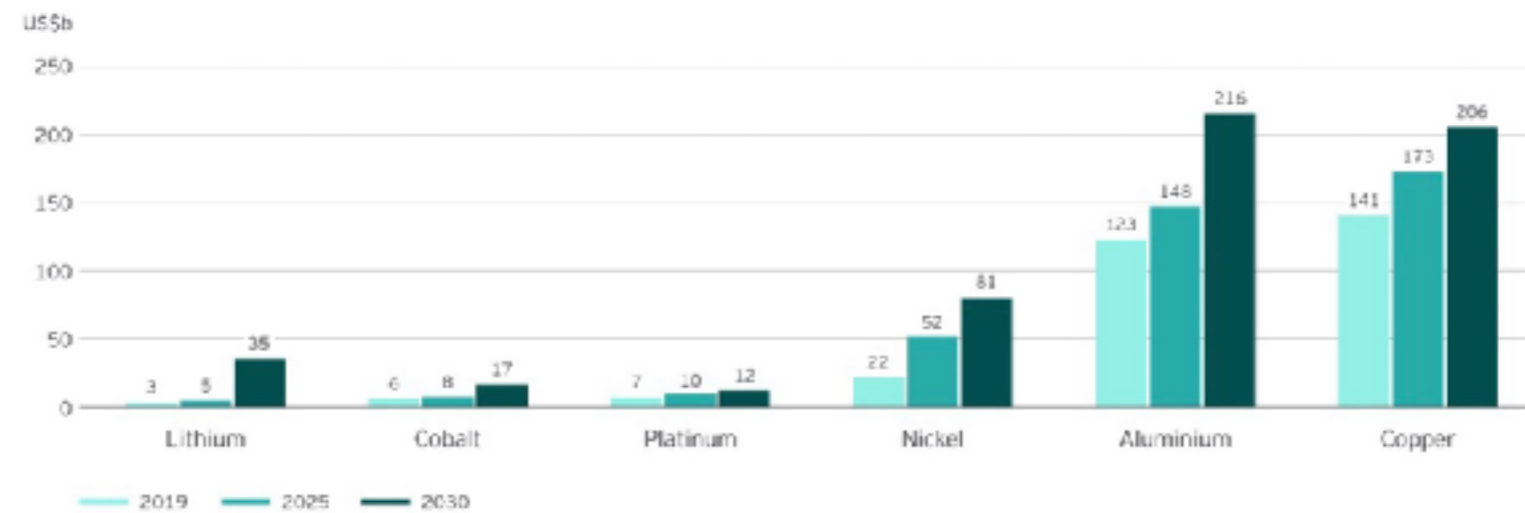


Battery minerals



Source: Morgan Stanley; Cochilco; Canaccord Genuity; Perspectives on Cobalt Supply Through 2030 in the Face of Changing Demand (Xincai Fu, et al).

Annual trade value of cobalt and lithium compared with trade value of other commodities



Source: Morgan Stanley, EY analysis.

Production of minerals, such as nickel, lithium and cobalt, could increase by nearly 500% by 2050, to meet the growing demand for clean energy technologies.

Mining is a sunset industry

- Mining doesn't help the sustainability of the planet.

Fact: Thanks to the growth in popularity of electric vehicles (EV) and renewable energy, there is a rising demand for batteries to power EVs and/or used to store energy. These batteries are made with a significant amount of nickel, copper, lithium and cobalt. Making and storing energy in this way will reduce the reliance on and use of fossil fuels, resulting in sustainable power generation for a cleaner planet.

NEW ECONOMY MINERALS

- Digital technologies have resulted in a change in commodity demand for critical minerals such as cobalt, lithium and copper. These minerals are required to manufacture energy conversion and storage equipment needed to supply the renewable energy industry.
- The rise of electric vehicles and the production of an ever-growing variety of high tech and green technologies, from batteries, smart phones and laptops to advanced defense systems have also boosted demand and competition for new world commodities.



There will be no more jobs in the mining industry

- The mining boom is over; mining jobs are scarce and unstable.

Fact: Job vacancies have recently been increasing as more companies invest in exploration, develop projects and expand existing mining operations. There remains behind a lucrative and vibrant industry which continues to be productive for many years. This productivity and the use of technology that amplifies efficiencies is seeing some exciting times in the mining industry. Mining is alive and well. There are plenty of opportunities ahead!

NEW DIGITAL TECHNOLOGY

- **Mobile access in the mine site.** Mobile technology connectivity between workers and management facilitates communication in the mines, which is vital in ensuring a safe and productive working environment.
- **Data-driven decisions.** Mining companies are revolutionizing how they collect data in the field with the help of the Internet of Things (IoT), which are smart data solutions that help management to relay important data such as water pressure, temperature, concentration of gases and other information.
- **Cloud technology** allows management and employees to quickly access and alter essential information, wherever and whenever needed.
- **Robotics** allow more autonomous vehicles and machinery to make operations smoother resulting in better safety, greater efficiency and cheaper running costs. In engineering industries which require hard labour intensive tasks, robots will be able to take over and do things faster and more efficiently than humans ever could.



NEW MINERS

- With the advent of digital technology and rising demand for new world commodities, the business of mineral exploration, development and production will not be conducted solely by traditional mining houses and junior companies.
- Technology companies may become direct or indirect investors as a way of shoring up and securing supply. With scarce new world commodities supply like cobalt and lithium and other rare earth minerals, cash-rich technology companies will venture into mining to ensure that they can continue to produce their products.
- Using blockchain technology, new technology entrants can engage in mining without owning any mines or distribution infrastructures in the same way that Uber does with no cars and Airbnb, with no real estate listings.



There will be no more jobs in the mining industry

- Technology is replacing jobs.

Fact: Automation and remote-control operations are becoming prevalent throughout the mining industry especially in developed countries. As with any industry, changes in technology require a shift in the type of people being employed. New technologies are changing the face of mining and creating opportunities for graduates. Far from replacing jobs, the technology shift is reshaping the mining industry and requires intelligent, innovative geologists and engineers to help mining take advantages of these changes.

NEW WORKFORCE

- While automation and data analytics technologies may increase efficiency, these will require a workforce that is skilled in data science, analytics, predictive modeling and mechatronics.
- Current workforce will also need retraining as knowledge resources and will be required to possess a new set of skills needed to operate new machinery and technology, or work along-side and support automated systems.
- Universities and data science companies that develop innovations could gain an edge in exploration.
- Mining companies will employ more PhD-level data scientists with geology and mining engineering background.



ROLE OF GEOSCIENCE IN RENEWABLES

- Decarbonization will involve geoscience at every level from straightforward low carbon generation (e.g. geothermal), to energy storage to counteract renewables intermittency (e.g. compressed air energy storage, heat storage), to emissions abatement of fossil fuel generation and industry (e.g. carbon capture and storage).
- Siting of renewable energy projects from hydro electric power or storage to wind farms, both onshore and offshore, is based fundamentally on conditions created by geology.
- New resources required to manufacture the energy conversion equipment needed to supply renewable energy on a global scale will place new demands for resources which already is beginning to constrain and shape the commercial solutions.





GEOLOGICAL SOCIETY OF THE PHILIPPINES

The Philippines Geologist's Contributions

- ❖ Energy
- ❖ Water
- ❖ Mineral Resources
- ❖ Waste Disposal
- ❖ Natural Hazards
- ❖ Geotechnical
- ❖ Research and Development



Mining industry is an inclusive employer

- Mining is just for geologists and engineering types.

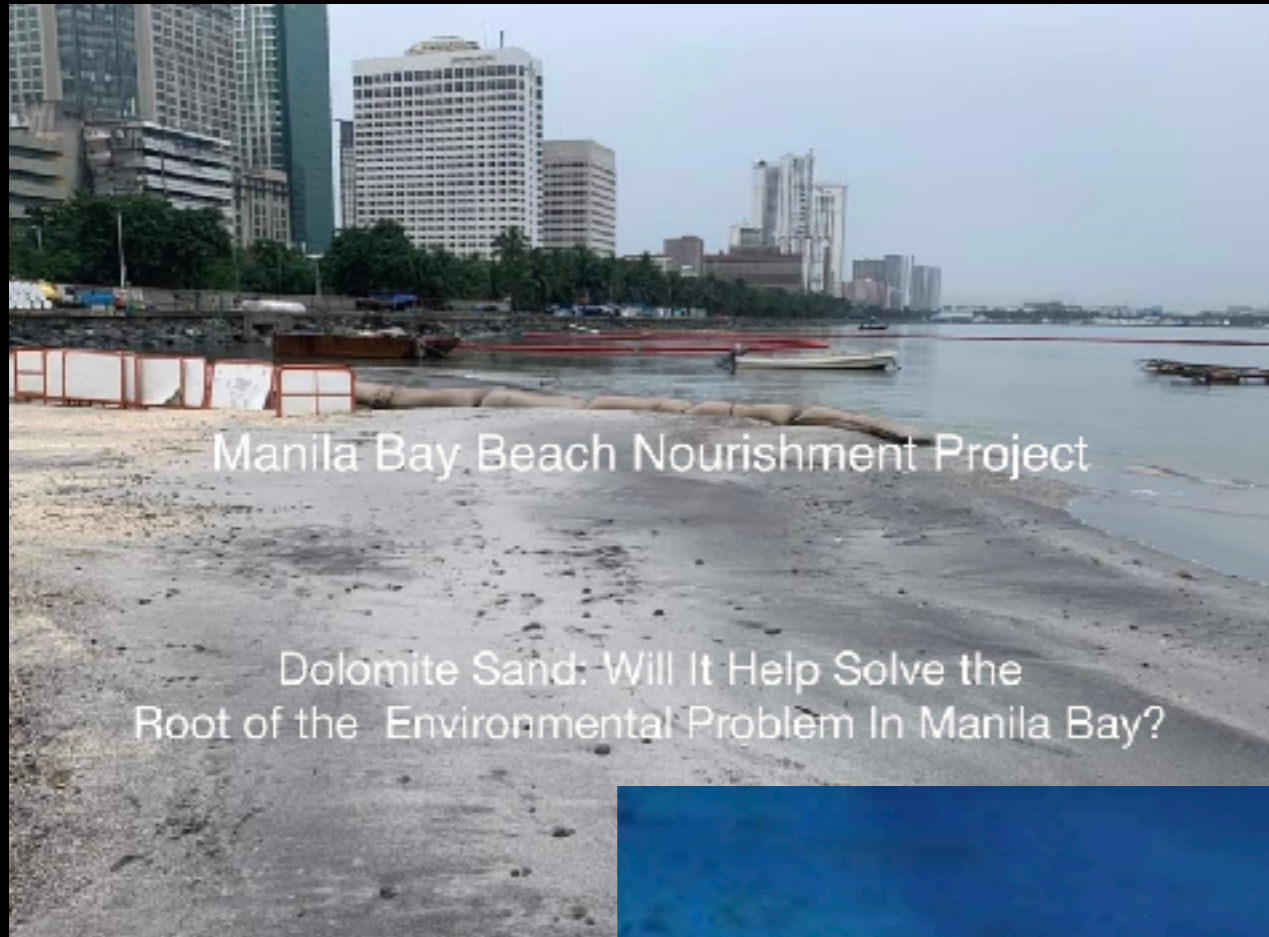
Fact: Mining is a business like any other. It needs everything from accountants, lawyers, administration staff, contract officers, payroll, human resources, safety, health and wellness roles to roles in information technology, robotics and automation, data processing, analytics, financial modeling, corporate communications and many other areas! Technology, innovation, and above all great people, are the backbone of the industry.

Mining industry is an inclusive employer

- Only men succeed in mining.

Fact: While the mining industry still has a long way to go to achieve full gender equity, encouraging progress has been made. In some mines, a good percentage of the workforce is female and some are in senior or management positions. The industry actively supports improvements to the industry's gender ratio by finding innovative ways to attract and retain more females into mining e.g. offering paid parental leave, options to work flexibly and a focus on learning and development to maximize opportunity.

Other Mining Issues



Manila Bay Beach Nourishment Project

Dolomite Sand: Will It Help Solve the Root of the Environmental Problem In Manila Bay?



Zambales mountains being mined for Chinese artificial islands

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Conclusion

“The future belongs to knowledge-based societies.”

- Mining industry will continue to remain relevant in this era of digitization and sustainability.
- **Demand for new world commodities** is going to increase as they become central to the production of an ever-growing variety of high tech and green technologies.
- **Ethical Sourcing of Minerals**
- In the age of digital technology and renewables, **tech companies will invest in if not dominate the resources industry.**
- Redesigned traditional occupations in **geoscience and mining engineering will continue to have a role** to play in the age of digital technology and renewables.
- Can the Philippine mining industry adapt to the “new world economy”?



For more info on the mining industry, visit my website
penarroyo.com

Fernando "Ronnie" Sanchez Peñarroyo

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I'm a lawyer
experienced in risk
mitigation and
business development.

Look around and learn more about my professional blog. Take a moment to comment or we can sit down to discuss mutually interesting matters.



**THANKS!
ANY QUESTIONS?**

You can find me at:
<https://penarroyo.com>